Language
and its Functions

Pieter A. Verburg

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A historico-critical study of views concerning the functions of language from the pre-humanistic philology of Orleans to the rationalistic philology of Bopp

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PIETER A. VERBURG

Translated by Paul Salmon,
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CONTENTS

FOREWORD

by Jan Noordegraaf

Pieter A. Verburg and the History of Linguistics:
a bio-bibliographical account

1. Academic and historical background

After studying classical languages at the Vrije Universiteit, Amsterdam, and
spending two semesters at German universities, first in Freiburg and later in
Berlin, Pieter Adrianus Verburg (1905-1989) worked in London for some time
as a private tutor. There he started his research for a doctoral dissertation on
metaphor as an essential feature of language in general, using the extensive
library of the British Museum. On his return to the Netherlands, he consulted
his former teacher, Professor Hendrik J. Pos (1898-1955), who informed him
that a dissertation on this subject was already in preparation. This was the
thorough and voluminous study of "The Concept of Metaphor" by Cornelis
F. P. Stutterheim (1903-1991), which appeared in 1941; and it was a result
of these "special circumstances" as he put it, that Verburg was among the
first to publish a review of Stutterheim's work.

In 1938 Verburg, by now a Classics teacher at Wageningen, set out on
another project. Inspired by Dr Anton J. B. N. Reichling, S.J. (1898-1986),
later to become professor of General Linguistics at the Municipal University
of Amsterdam, and his dissertation on "The Word. A study of the basis of
language and language use" (1935), Verburg undertook an investigation into
"The Concept of the Root in Linguistics". During the Second World War he
became involved in the resistance movement—where he was known as 'Piet'
or '(Piet) van Wijngaarden'—and, as a result, his research activities slackened
and eventually came to a standstill. The book was nearly finished, however,
when in the turmoil caused by the Battle of Arnhem in 1944, his manuscripts,
notes and library were destroyed. Remnants of the lost dissertation are still
to be found in an article (Verburg 1951b) dealing with some trends and facts
in the development of the theory of language in the period 1800-1940, in the
course of which the concept of the root in the works of Franz Bopp (cf. also

Verburg 1950), Friedrich Schlegel, Jacob Grimm and August Schleicher is briefly discussed.[1]

Early in 1944 Verburg unfolded his views about the place to be held by the resistance movement after the liberation; to his mind, the resistance should become the centre of a national spiritual revival. He launched a series of five clandestine pamphlets under the title *De Nieuwe Wijnzak*, in which he developed his ideas further. *De Nieuwe Wijnzak* was intended to be an explicitly national and non-political journal for the resistance movement itself.[2] For his activities in the underground resistance Verburg was awarded the 'Verzetsherdenkingskruis' (Cross of the Resistance).

In the papers contributed by him to *De Nieuwe Wijnzak* Verburg stressed, among other things, the moral obligation to support the victims of war and persecution and the surviving relatives of the members of the resistance. In addition to that, he argued for the foundation of a national organization which was to promote the deepening of the national consciousness. The first initiative resulted in the establishment of the 'Stichting 1940-1945', which still exists (cf. Verburg 1951c; Boucher et al. 1985: 17-19); the second one led to the creation of 'Het Nationaal Instituut', a foundation which in the beginning was generously supported by the Dutch government (for interesting details cf. Verheul & Dankers 1990). Verburg became one of the two directors of the Instituut, and sought to put his grand and lofty ideas into the practice of the Dutch post-war society. Among other things, he organized a Congress on the Future of Dutch Culture which was held in Nijmegen in August 1946 (cf. Algra et al. 1946).

Verburg was forced to spend some time in Switzerland from mid-1946 for health reasons; in the meantime the activities of the National Institute stagnated and eventually came to an end.[3] It was only in mid-1948 that Verburg resumed his activities as a teacher, and motivated by Anton Reichling, decided to start research for another dissertation. That Verburg's *magnum opus* was composed in a relatively short time is a fact which the reader may find

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[1] This paper was part of a lecture given at a conference of the Association for Calvinist Philosophy at Amsterdam in January 1944, as Verburg acknowledged in a footnote.

[2] At the SD, the German *Sicherheitsdienst*, the journal was characterized as "Blatt für Intellectuelle zwecks Zusammenschliessung zur politischen Einheit", as Verburg related to Lydia Winkel (letter of 19 May 1950, Rijksinstituut voor Oorlogsdocumentatie (RIOD), Amsterdam). For a concise characterization of these brochures cf. Winkel 1989: 164-165.

[3] The National Institute was officially closed down on 1 March 1947. Its body of ideas, however, lives on in the well-known 'Prins Bernhard Fonds', which stimulates and promotes Dutch cultural life.

reflected in its style. "Reading the book is [...] not reading a polished and reworked final arrangement of scholarly research but a long and always arresting creative discourse", Shetter (1966: 189) commented on the original Dutch version. On 30 November 1951 Verburg received his doctorate *cum laude* at his alma mater having defended his *Taal en Functionaliteit. Een historisch-critische studie over de opvattingen aangaande de functies der taal vanaf de prae-humanistische philologie van Orleans tot de rationalistische linguistiek van Bopp.* The year 1957 saw his appointment as a Professor of General Linguistics at the State University of Groningen, which meant the further enlargement of General Linguistics as an autonomous discipline, a broadly based development which was under way in Dutch universities in the 1950s. In the mid-sixties Philosophy of Language was officially added to Verburg's teaching commitment. On the occasion of his retirement, in 1975, he was presented with a Festschrift under the title of *Ut Videam. Contributions to an understanding of linguistics* (Abraham 1975).

It is obvious that *Taal en Functionaliteit* was not the output of research done by a young linguist, but the work of a secondary school teacher in his mid-forties, a widely-read classical scholar who in the course of the 1930s and 1940s had been engaged in writing two other books, and consequently had had the opportunity to develop views of his own, not only on linguistics and its history, but also on matters philosophical.

2. Formative factors in the genesis of *Taal en Functionaliteit*

Verburg's valedictory lecture in the University of Groningen, *Stand en Zin van de Historie der Taaltheorieën* ("The Condition and Purpose of the History of Theories of Language", 1975), opens with a reference to the courses in general linguistics he had followed when a young student at Amsterdam. These courses were given by Hendrik Josephus Pos, a linguist and philosopher who had been appointed professor of general linguistics and classical philology at the Vrije Universiteit in Amsterdam in 1923. In these (unpublished) lectures (1924-1932) the history of linguistics was discussed extensively. Pos made an attempt to delineate the development of western linguistic thought from the discussions of the Greeks to contemporary linguistics. Verburg recalled how his teacher followed a dual method in his lectures:

> On the one hand, he developed a positive statement of his own theoretical understanding of the essence—or, as it was called then, the idea of language. At the same time, he discussed critically and historically concepts of other linguists, past and present. The two methods were intimately linked. The design and development of his own theory gained depth and perspective by simultaneous confrontation with other basic models and, conversely, in adopting a critical

stance, this historical research in turn drew on the essential criteria from his own theoretical principles, or more specifically, on principles of linguistic philosophy.

[Enerzijds ontwikkelde hij thetisch eigen theoretisch inzicht in het wezen—of, zoals dat toen heette: de idee der taal—, anderzijds behandelde hij critisch-historisch concepten van anderen in verleden en heden. De twee methoden stonden in nauwe correlatie tot elkaar. Opzet en uitbouw van eigen theorie wonnen aan diepte en perspectief door de gelijktijdige confrontatie met andere grondmodellen en, omgekeerd, ontleende die historische onderzoek, om critisch te kunnen wezen, de nodige criteria weer aan eigen theoretische, wil men: taalfilosofische principiën. (Verburg 1975: 3)][4]

Although Verburg did not consider himself one of Pos's disciples in the proper sense of the word, he stated that he had found this "dual method" most instructive, and consequently had sought to apply it in his own academic teachings (ibid). "My dissertation likewise adopted this double approach, both historical and critical" (*Auch meine Doktorschrift ... war 'zweiseitig' kritisch-historisch*), Verburg noted as late as 1983 (1983: 2). Thus it is apparent that Verburg deemed Pos's courses on the history of the theories of language to be most valuable; they may indeed be considered to contain the germs of Verburg's final doctoral dissertation, Pos's biographer recently argued (Derkx 1994: 50), and I would endorse this view. As Verburg himself acknowledged, he actually returned to Pos's lecture notes on several occasions when preparing his book; and as late as September 1951, he wrote a letter to his former teacher requesting more specific information on Knaustinus (1524–c. 1590) and his *Lingua* (1566), referring to Pos's lectures of the late 1920s which included a discussion of this work.[5]

Touched by a cordial and personal letter Pos had written to him following the defence of his doctoral dissertation Verburg replied that as a student he had been captivated "by your inner critical reservation (*epoche*)". Moreover, as Verburg knew, Pos had "decidedly and resolutely made the choice for the resistance" during the Second World War. Therefore, "your appreciation gives me intense satisfaction".[6] In 1954, Pos wrote to Verburg that he would

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[4]   In his 1957 inaugural lecture he had also referred to the approach Pos used in his linguistic and philological lectures.

[5]   For an overview of Pos's unpublished lectures, cf. Noordegraaf 1990: 172-175, Derkx 1994: 521-524. Note that Pos himself did not publish very much on the history of linguistics.

[6]   Letter of 15 January 1952, Archief-Pos, University Library Amsterdam. Note that Pos had secured him a scholarship so that Verburg could spend the winter semester 1932–1933 in Freiburg i. Br. (van Houten 1989: 5; cf. Verburg 1988: 287).

applaud "your possible acting as a 'privaat docent' in the history of (general) linguistics".[7] The next year, however, saw Pos's untimely death.

It was Anton Reichling, Professor at the Municipal University of Amsterdam, who in 1948 had given Verburg a decisive impetus to write *Taal en Functionaliteit*. Even so, he decided to pursue his study as a doctoral dissertation under the supervision of Jacobus Wille (1881-1964), Professor of Dutch Language and Literature at the Vrije Universiteit. Wille, a specialist on the eighteenth century and keenly interested in the history of the study of Dutch, also taught General Linguistics after Pos had left this university to take up the chair of Philosophy at the Municipal University of Amsterdam. Thus, after twenty-odd years Verburg returned to his alma mater, and he did that, I feel, not just for sentimental reasons. The point is the following: the Vrije Universiteit was not a state university or a church university, but a 'free' university, funded by a Society which in the 1950s was still based on rather strictly Calvinist, that is to say Reformed principles with which Verburg had always felt a close affinity. It may be argued then that part of the background to Verburg's studies is to be found in the author's life-long loyalty to these principles. As Verburg himself related in 1983:

> At the end of the 1920s two Amsterdam professors, H. Dooyeweerd [(1892–1978)]... and D. H. T. Vollenhoven [(1894–1977)], advocated a new direction in philosophy. Their philosophy was known as the *Wijsbegeerte der Wetsidee* ("Philosophy of the Concept of Law"), known in the U.S.A. and elsewhere as 'Cosmonomics'.
>
> [...] Pos's philosophy of language seemed to me to be confined to a very indefinite description; hence I was all the more deeply impressed by the Cosmonomists' pronounced tendency towards a creative realism which was totally different from mediaeval realism, but as I came to realize only later, bore a certain resemblance to Nicolai Hartmann's realism—though the latter's secularist principles stood in stark contrast to the Christian inspiration of cosmonomic philosophy.

> [Ende der zwanziger Jahre vertraten in Amsterdam zwei Professoren eine neue philosophische Richtung: H. Dooyeweerd (...) und D. H. T. Vollenhoven, der als Theologe begonnen hatte. (...) Ihre Philosophie wurde bekannt als "Wijsbegeerte der Wetsidee" (Philosophie der Gesetzesidee); in den USA und auch anderswo kam auch der Name "Cosmonomics" auf.
>
> (...) Die Sprachphilosophie von Pos blieb mir zu sehr in einer unentschiedenen Beschreibung stecken. Desto mehr war ich von den Kosmonomikern

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[7] Letter of 14 April 1954, private collection. A 'privaat docent' was an external unsalaried lecturer.

> wegen ihrer entschiedenen Wendung zu einem schöpferischen Realismus beein-
> druckt, der keineswegs dem mittelalterlichen glich, sondern—wie ich freilich erst
> später erkannte—eine gewisse Ähnlichkeit zu Nicolai Hartmanns Realismus
> aufwies, dessen Säkularismus jedoch in einer unversöhnlichen Antithese zur
> christlich inspirierten kosmonomischen Philosophie steht. (Verburg 1983: 2)]

The 'normative' stance the reader will find in this book and, among other things, the idea that language has its autonomy have to do with the fact that Verburg was an adherent of the "philosophy of the concept of law".[8] It was Vollenhoven to whom Verburg owed the distinction between 'scientialism' and 'practicalism',[9] and to whose Festschrift of 1951 he contributed a paper on the history of linguistics; in a contribution to a Festschrift for Dooyeweerd (1965) he expounded his own 'delotic' (expository) linguistic theory (cf. Verburg 1971 and 1983). A member of the Association for Calvinist Philosophy, founded in 1935, Verburg published his first papers on matters linguistic (1941ff.) in the journal of this association. In a lecture given in 1944, he claimed that only the *Wijsbegeerte der Wetsidee* was able to 'place' certain developments in linguistics; it could give excellent service in elucidating linguistic viewpoints (cf. Verburg 1951b: 30-31). Verburg's basic philosophical views, then, took shape under the influence of Calvinist philosophy as it began to develop in the early 1930s. It provided him with the framework he needed to analyse the wealth of linguistic-historiographical data. In this sense, too, one might say that not only Pos's lectures but also a wide variety of other "difficult material [...] has for better or worse been passed through the writer's personal mill" (Shetter 1966: 189).

One of his reviewers thought it salutary that "in opposition to the often rather hollow relativistic attitude of the present day Verburg does not disavow his Calvinist orthodoxy" (de Witte 1954: 514). It goes without saying that not all of his critics shared this type of philosophy of life, but, at any rate, it did not render "the historiography less acceptable to different-minded readers", as Stutterheim (1954a: 219) drily remarked.[10]

3. The intellectual context of *Taal en Functionaliteit*

In the Netherlands at least, Pos's historical-critical approach in his courses on

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[8] For details of this type of philosophy, see Dooyeweerd 1954-1958; [2]1969.

[9] The two terms are rendered in the translation of *Taal en Functionaliteit* as 'axiomatic rationalism' and 'pragmatic rationalism' respectively.

[10] Note, however, that Beth (1953: 94) pointed to the risk of a certain dogmatism, "from which, as it appears to me, the author has not always escaped".

general linguistics seems to have been something of a novelty at the time. At other Dutch universities Hermann Paul's (1846-1921) *Prinzipien der Sprachge-schichte* ([1]1880) or introductions to historical-comparative grammar were used as textbooks for general linguistics. Moreover, as it appeared to Verburg (1975: 10), there was never any keen interest in the history of linguistics among the inter-war generation of linguists. He was of the opinion that the histories of linguistics which had appeared since Benfey's voluminous *Geschichte der Sprachwissenschaft* (1869) had been of slender compass, and in addition gave little more than a recital of facts. It seems that Pos has had similar feelings. Several of his statements reflect this: "A correct assessment of Scaliger's contribution to the development of grammar can only be made when the history of linguistics has been studied methodically", Pos remarked in 1927. A few years later, he spoke about the history of linguistics as something which had been neglected up to that time (cf. Noordegraaf 1990:166).

It should be noted, however, that since the turn of the century the Netherlands have seen a fairly continuous interest in the history of the indivi-dual language disciplines, which yielded various articles and dissertations dealing with specific historical aspects of the study of, for instance, Greek, Dutch or French. In addition, one can point to the noted and frequently practised 'introductory' genre, composed in the wake of Berthold Delbrück's (1842-1922) well-known *Einleitung in das Studium der indogermanischen Sprachen. Ein Beitrag zur Geschichte und Methodik der vergleichenden Sprachforschung* ([1]1880), books offering a concise historical survey, in which the author presents a brief over-view of the development of linguistics from Plato's *Cratylus* to the present day, the main point, however, being the development of nineteenth-century com-parative historical linguistics.

Be this as it may, in the early 1950s the state of general linguistics was such that Stutterheim, who may be considered an expert in the field at the time, was forced to conclude that in the Netherlands "very few studies were devoted to the history of language theory" (cf. Stutterheim on *Taal en Func-tionaliteit*, 1954a). One might seriously doubt whether the situation elsewehere was much more favourable, the more so when one remembers Aarsleff's dictum on the late 1950s: "In those days there was no interest in the history of linguistics" (Aarsleff 1982: 5). At any rate, in the 1950s it appears to have been common practice, "a matter of principle, in fact, to regard all investi-gations and statements made before the time of Wilhelm von Humboldt and Franz Bopp as 'pre-scientific', and utterly unremarkable". There were few exceptions, and, De Mauro (1990: 159) decided, Verburg was one of them.

As a matter of fact, it was R. H. Robins's *Ancient and Mediaeval Grammatical Theory in Europe with Particular Reference to Modern Linguistic Doctrine* (1951) and Verburg's *Taal en Functionaliteit* (of the same year) which have been regarded as the first serious linguistic-historiographical studies in the post-war era, to which Arens's 1955 well-known anthology of texts in the history of linguistics may be added. As one of the contemporary reviewers put it: Verburg's study "should be recognized as probably the most important general treatment of the subject since the basic works of Benfey and Steinthal [...] Yet, it is something more than a supplement to earlier studies of theories of language. It marks an advance in the understanding of the place of theories of language in the history of ideas" (Faithfull on *Taal en Functionaliteit*, 1953: 144). In 1974, Hymes considered the importance of this "pioneering, unique study" to lie in its relevance to those engaged in sociolinguistics and other related approaches, wherein functional questions loom large (Hymes 1974: 27).

Following the rapid expansion of linguistic historiography in the last quarter of the twentieth century the present-day reader may ask other questions or deem other issues of more importance. Certain questions and certain issues, however, appear to be perennial, and these about language and its functions are definitely among them.

References and sources of information

N.B.: For further details of the life and times of Pieter A. Verburg the reader is particularly referred to Abraham & Stuart 1975, and to Verhaar 1989. References to writings by Verburg himself cited in the Foreword are omitted here, but included in the list of his works given below (pp. xvi–xx).

AARSLEFF, HANS (1982). *From Locke to Saussure. Essays on the Study of Language and Intellectual History.* London: Athlone.

ABRAHAM, WERNER, ed. (1975). *Ut Videam. Contributions to an understanding of linguistics. For Pieter Verburg on the occasion of his 70th birthday.* Lisse: de Ridder.

ABRAHAM, WERNER & DON GRAHAM STUART (1975). "A brief biography of Pieter A. Verburg, professor of general linguistics in the National University at Groningen". Abraham 1975, 8–15.

ALGRA, H. et al. (1946). *De toekomst der Nederlandse beschaving. Verslag van het Congres van 28–30 Augustus te Nijmegen, gehouden door Het Nationaal Instituut.* Amsterdam.

ARENS, HANS (1955). *Sprachwissenschaft. Der Gang ihrer Entwicklung von der Antike bis zur Gegenwart.* Freiburg & Munich: Alber. (2nd ed., revised and enlarged, 1969).

BENFEY, THEODOR (1869). *Geschichte der Sprachwissenschaft und orientalischen Philologie in Deutschland seit dem Anfange des 19. Jahrhunderts mit einem Rückblick auf die früheren Zeiten.* Munich: Cotta. (Repr. New York & London: Johnson, 1965.)

BOUCHER, FLORINE, ELS KALKMAN & DICK SCHAAP, eds. (1985). *Woord gehouden. Veertig jaar Stichting 1940–1945.* 's-Gravenhage: Staatsuitgeverij.

DE MAURO, TULLIO (1990). "Nachwort". *Iter Babelicum. Studien zur Historiographie der Linguistik, 1600–1800.* Münster: Nodus.

DERKX, PETRUS H. J. M. (1994). *H. J. Pos, 1898–1955: Objectief en partijdig. Biografie van een filosoof en humanist.* Hilversum: Verloren.

DOOYEWEERD, HERMAN (1953–1958; ²1969). *A New Critique of Theoretical Thought* [Translation of *De Wijsbegeerte der Wetsidee* (1935)]. 4 vols. Amsterdam: H. J. Paris & Philadelphia: Presbyterian & Reformed Publishing Co.

FAITHFULL, W. GLYN (1953). Review of Verburg 1952a. *Archivum Linguisticum* 5, 144–150.

H[OUTEN], T. B. VAN (1989). "Prof. Dr. P. A. Verburg". *Mededelingen I.C.F. Nederland* 33, 5–6.

HYMES, DELL (1974). "Introduction. Traditions and paradigms". Dell Hymes (ed.). *Studies in the History of Linguistics. Traditions and paradigms.* Bloomington & London: Indiana Univ. Press., 1–38.

KOERNER, E. F. KONRAD (1978a). "Linguistic Historiography till 1970". *Towards a Historiography of Linguistics. Selected essays.* Amsterdam: Benjamins, 3–20.

———— (1978b). *Western Histories of Linguistic Thought. An annotated Chronological Bibliography, 1822–1976.* Amsterdam: Benjamins.

NOORDEGRAAF, JAN (1990). "Pos als geschiedschrijver van de taalwetenschap". Saskia Daalder & Jan Noordegraaf (eds.). *H. J. Pos (1898–1955). Taalkundige en geëngageerd filosoof* . Amsterdam: Huis aan de drie Grachten, 153–175.

———— (1991). "Hendrik J. Pos (1898–1955) and the History of Linguistics". Elisabeth Feldbusch, Reiner Pogarell und Cornelia Weiss (eds.). *Neue Fragen der Linguistik. Akten des 25. Linguistischen Kolloquiums, Paderborn 1990.* Band 1: Bestand und Entwicklung. Tübingen: Niemeyer, 55–63.

NOORDEGRAAF, JAN & FRANK VONK (1996). "An 'Anatomy of Melancholy'. Writing the History of Linguistics in the Netherlands, 1900–1990". Herbert Brekle, Edeltraud Dobnig-Jülch & Helmut Weiss (eds.). *A Science in the Making. The Regensburg Symposia on European Linguistic Historiography.* Münster: Nodus, 137–163.

PARRET, HERMAN & ROGER VAN de VELDE (1980). "Structuralism in Belgium and the Netherlands". *Semiotica* 29, 145–174.

ROBINS, ROBERT H. (1951). *Ancient and Mediaeval Grammatical Theory in Europe with Particular Reference to Modern Linguistic Doctrine.* London: Bell.

STUTTERHEIM, CORNELIS F. P. (1941). *Het Begrip Metaphoor. Een taalkundig en wijsgerig onderzoek*. Amsterdam: H. J. Paris. (Doctoral dissertation, Municipal University, Amsterdam).

———— (1954a). Review of Verburg 1952a. *Levende Talen* 174, 218–220.

———— (1954b). Review of Verburg 1952a. *Museum* 59, cols. 113–116.

———— (1988). "Reminiscenses of an old language researcher". *Historiographia Linguistica* 15, 317–329.

VERHAAR, JOHN W. M. (1989). "In memoriam P. A. Verburg". *Studies in Language* 13, 253–255.

VERHEUL, JAAP & JOOST DANKERS (1990). "Het Nationaal Instituut". *Tot stand gekomen met steun van .... Vijftig jaar Prins Bernhard Fonds, 1940–1990*. Zutphen: De Walburg Pers, 44–93.

WINKEL, LYDIA E. (1989). *De ondergrondse pers 1940–1945*. Geheel herzien door Hans de Vries. Amsterdam: Veen (1st ed. 's-Gravenhage, 1954).

Publications by Pieter A. Verburg

N.B.: This list does not claim to be complete in respect either of Verburg's unsigned papers or of his papers concerning the Nationaal Instituut.

1941

Review of Cornelis F. P. Stutterheim, *Het begrip Metaphoor*. Amsterdam 1941. *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 6, 85–87.

1942

"Steekproeven" (Review of Karl Bühler, *Sprachtheorie*. Jena 1936). *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 7, 59–61.

Review of Karl Vossler, "Benedetto Croces Sprachphilosophie". *Deutsche Vierteljahrsschrift für Literaturwissenschaft und Geistesgeschichte* 19 (1941), 121–138. *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 7, 113–116.

1944

De Nieuwe Wijnzak. Leidraad tot verdieping van het staatsburgerlijk denken—door en voor werkers en verzetters. s.l.e.a. Nos. 1–4 (Febr. 1944–August 1944); plus one special issue. [In these brochures one also finds anonymous papers written by other authors; cf. Winkel 1989: 165].

1945

Het Nationaal Instituut, Department voor Volksvoorlichting, dat ... geen departement is; waarom? waartoe? hoe? Amsterdam: Het Nationaal Instituut. 12 pp.

Gedachte en doel van het Nationaal Instituut. Het probleem van ons nationaal bewustzijn en onze nationale gemeenschapszin. Amsterdam: Het Nationaal Instituut 19 pp. [original stencilled ed. 1944].

[Address]. *Kort Verslag van de Constituerende Vergadering van het Nationaal Instituut gehouden op Vrijdag 12 en Zaterdag 13 October 1945 te Amsterdam,* 16–22. [Amsterdam: Het Nationaal Instituut].

"Steekproeven. K. Bühler (vervolg)". *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 8, 15.

1950
"The Background to the Linguistic Conceptions of Bopp". *Lingua* 2, 438–468.

1951
(1951a). *Taal en functionaliteit. Een historisch-critische studie over de opvattingen aangaande de functies der taal vanaf de prae-humanistische philologie van Orleans tot de rationalistische linguistiek van Bopp.* Wageningen: H. Veenman & Zonen. Doctoral dissertation Vrije Universiteit Amsterdam, 1951. xx, 464 pp.: 27 'stellingen' [theses, or points to be defended] appended on a separate sheet, 4 pp.

(1951b). "Enkele lijnen en feiten in de ontwikkeling der taaltheorie". *Wetenschappelijke bijdragen door leerlingen van Prof. Dr. H. Th. Vollenhoven aangeboden ter gelegenheid van zijn 25-jarig hoogleraarschap aan de Vrije Universiteit.* Gebundeld door S. U. Zuidema. Franeker & Potchefstroom: Wever, 13–32.

(1951c). "De Stichting 1940–1945". *Het grote gebod. Gedenkboek van het verzet in LO en KP.* Ed. by H. van Riessen et al. Two vols. Kampen: J. H. Kok. Vol. 2: *Het verzetswerk in de LO en KP,* 546–555. (⁺1989).

"Zonsopgang". *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 15, 11–13.

1952
(1952a). *Taal en functionaliteit. Een historisch-critische studie over de opvattingen aangaande de functies der taal vanaf de prae-humanistische philologie van Orleans tot de rationalistische linguistiek van Bopp.* Wageningen: H. Veenman & Zonen. (Commercial edition of 1951 dissertation. With an English summary, chronological table, index rerum, addenda.) xvi, 490 pp.
Reviewed by [Antonius] J. J. de Witte, O.P. (1952), *Tijdschrift voor Philosophie* 16, 513–514; Evert W. Beth (1953), *Algemeen Nederlands Tijdschrift voor Wijsbegeerte* 46, 94; A. Carnoy (1953), *Leuvense Bijdragen* 43, Bijblad, 108–110; R. Glyn Faithfull (1953), *Archivum Linguisticum* 5, 144–150; Walter Couvreur (1954), *Revue Belge de Philologie et d'Histoire* 32, 864; Cornelis F. P. Stutterheim (1954a), *Levende Talen* 174, 218–220; idem (1954b), *Museum* 59, cols. 113–116; William Z. Shetter (1966), *Foundations of Language* 21, 187–189.

"De humanistische taaltheorie van Juan Luis Vives (1492–1540)". *Handelingen van het twee en twintigste Nederlands Philologen-congres te Utrecht.* Groningen: Wolters, 69–70.

"Taal en wet (I)". *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 16, 17–18.

1953

"Taal en wet (II)". *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 17, 22-24.

1954

"Model-gedachte, sub-functie, betekenis". *Handelingen van het drie en twintigste Nederlands Philologencongres te Nijmegen.* Groningen: Wolters, 65-66.

1957

Algemene taalwetenschap en encyclopaedie. Rede uitgesproken bij de aanvaarding van het ambt van hoogleraar in de Algemene Taalwetenschap aan de Rijksuniversiteit te Groningen op 26 november 1957. Groningen & Djakarta: Wolters. (Inaugural lecture, State University of Groningen). 23 pp.

1961

"Bacon als vernieuwer van de encyclopaedische idee". *Algemeen Nederlands Tijdschrift voor Wijsbegeerte en Psychologie* 53, 169-180.

"Het optimum der taal bij Wittgenstein". *Philosophia Reformata* 26, 161-172.

"Het schaakspel-model bij F. de Saussure en L. Wittgenstein". *Wijsgerig Perspectief* 1, 227-234.

"Hearer-Speaker Relation in Language Theory". Henk C. Huizing et al. (eds.). *Proceedings of the 2nd International Course in Paedo-Audiology, June 13 – June 16, 1961.* Groningen, 29-35.

1962

"Some Remarks on 'Communication' and 'Social' in Language Theory". *Lingua* 11 (*Studia Gratulatoria* dedicated to Albert Willem de Groot in the year of his seventieth birthday), 453-468.

"Een boek over moderne Engelse taalfilosofie" (Review of Maxwell John Charlesworth, *Philosophy and Linguistic Analysis.* Pittsburgh & Louvain, 1959). *Bijdragen. Tijdschrift voor filosofie en theologie* 23, 12-22.

1963

Review of Arno Borst, *Der Turmbau von Babel. Geschichte der Meinungen über Ursprung und Vielfalt der Sprachen und Völker* (6 vols.). Stuttgart 1957-1963. *Lingua* 12, 309-319.

1964

Vicissitudes of Paradigms. Paper prepared in advance for participants in the 25th Burg Wartenstein Symposium (August 15-12, 1964) on the theme "Revolution vs. Continuity in the Study of Language". Groningen. 31 pp.

1965

"Delosis and Clarity". *Philosophy and Christianity: Essays dedicated to Prof. Dr. Herman Dooyeweerd.* Kampen: Kok, 78-99.

"Albert Willem de Groot (Groningen, 13 januari 1892 – Laren N.H., 14 december 1963)". *Jaarboek van de Maatschapij der Nederlandse Letterkunde te Leiden 1964–1965.* Leiden: E.J. Brill, 66–74.

1966

"The Background to the Linguistic Conceptions of Bopp". *Portraits of Linguists. A biographical sourcebook for the history of Western linguistics, 1746–1963.* 2 vols. Vol. I. *From Sir William Jones to Karl Brugmann.* Ed. by Thomas Sebeok. Bloomington & London: Indiana Univ. Press, 221–250. (Reprint of Verburg 1950).

1967

Review of J. A. Hutchinson, *Language and Faith, Studies in Sign, Symbol and Meaning.* Philadelphia 1963. *Linguistics* 34, 118-123.

1968

"Ennoësis of language in 17th century philosophy". *Lingua* 21 (In Honour of Anton Reichling on the occasion of his seventieth birthday), 558–572.

Review of Nikunja Vihari Banerjee, *Language, Meaning and Persons.* London 1963. *Linguistics* 39, 109–113.

1969

"Hobbes' Calculus of Words". *ITL. Tijdschrift van het Instituut voor Toegepaste Linguistiek te Leuven* 5, 62–69.

"Computational Linguistics en de buitenlandse samenwerking". *Universiteit en Hogeschool* 16, 77–82.

1970

"Hobbes' Calculus of Words". *Statistical Methods in Linguistics* 6, 60–65.

1971

(1971a). "De mens in de taalkunde". *Truth and Reality. Philosophical perspectives on reality dedicated to Professor Dr. H.G. Stoker / Waarheid en Werkelikheid. Wysgerige perspektiewe op die werklikheid opgedra aan Professor Dr. H. G. Stoker.* Braamfontein: De Jong, 262–282.

(1971b). "Het lege woord". *De Gids* 134, 156–158.

1974

"Vicissitudes of Paradigms". Dell Hymes (ed.). *Studies in the History of Linguistic Traditions and Paradigms.* Bloomington & London: Indiana Univ. Press, 191–230.

1975

Stand en zin van de historie der taaltheorieën. Afscheidscollege gegeven op 28 oktober 1975 bij zijn aftreden als hoogleraar in de Algemene Taalwetenschap en de Wijsbegeerte der Taal aan de Rijkuniversiteit te Groningen. Groningen: Wolters-Noordhoff. (Valedictory lecture, State University of Groningen). 20 pp.

1976

"The Idea of Linguistic System in Leibniz". Herman Parret (ed.). *History of Linguistic Thought and Contemporary Linguistics.* Berlin & New York: de Gruyter, 593–615.

1980

"Discipline versus Philosophy". Dick J. van Alkemade et al. (eds.). *Linguistic Studies offered to Berthe Siertsema.* Amsterdam: Rodopi, 137-154.

1981

"Ars oder Scientia, eine Frage der Sprachbetrachtung im 17. und 18. Jahrhundert". Horst Geckeler et al (eds.). *Logos Semantikos. Studia linguistica in honorem Eugenio Coseriu, 1921-1981.* Vol I: *Geschichte der Sprachphilosophie und der Sprachwissenschaft.* Berlin: de Gruyter / Madrid: Gredos, 207-214.

1982

"De plaats der taal bij onderwijs en filosofie in de Westerse cultuurgeschiedenis (tot 1700)". Lodewijk F. van Driel & Jan Noordegraaf (eds.). *Studies op het gebied van de geschiedenis van de taalkunde.* Kloosterzande: Duerinck-Krachten, 11-34.

1983

"Die Philosophie hinter einer Sprachtheorie: eine Skizze". Manfred Faust et al. (eds.). *Allgemeine Sprachwissenschaft, Sprachtypologie und Textlinguistik. Festschrift für Peter Hartmann.* Tübingen: Narr, 1-10.

1988

"Soph. Oid. Kol. 939: λέγω oder λέγων?". Jörn Albrecht (ed.). *Energeia und Ergon: Sprachliche Variation—Sprachgeschichte—Sprachtypologie. Studia in honorem Eugenio Coseriu.* 3 vols. Band III
(ed., with introduction by Jens Lüdtke): *Das sprachtheoretische Denken Eugenio Coserius in der Diskussion* (2). Tübingen: Narr, 287-291.

TRANSLATOR'S INTRODUCTION

PIETER VERBURG's study of *Taal en Functionaliteit* was well received when it first appeared in 1952, and it has continued to be cited with admiration and respect. In its time it was a pioneering work, having been written well before interest in the history of linguistics had been kindled, largely by the appearance of Chomsky's *Cartesian Linguistics* in 1966. There has inevitably been a great deal of activity in many of the areas which interested Verburg, and it would need years of devotion from one as well-qualified as he was to bring the work up to date. Since the book was written, indeed, journals devoted to the history of linguistics have become established, the earliest of them almost a generation ago; societies devoted to the subject have been established, for example, in France, in Germany, in the United Kingdom and in North America, and not least in the Netherlands, where Verburg's compatriots are deeply conscious of the contributions made to linguistic scholarship by Dutch scholars over the years. Although the text now has to be seen in the light of more than a generation of specialized scholarship, it can still offer a highly individual approach to its subject, as defined in its subtitle, "A historico-critical Study of Views concerning the Functions of Language, from the pre-humanistic Philology of Orleans to the rationalistic Philology of Bopp". There is much here that has still not been fully explored, even if the main landmarks in the history of linguistics are more widely known than they were when the book appeared. While this translation does not attempt to rewrite the text, but rather to treat it as a historic document, more recent secondary sources have in some cases been consulted, and many bibliographical and other references have been brought into line with modern practice, though others have proved elusive.

Much of the terminology used is still unfamiliar, and rests on neologisms which are hard to reproduce in translation. Indeed, the literal translation of the title involves a word which has no official existence in English, for there is no entry under 'functionality' in the second edition (1989) of the Oxford English Dictionary. For all that, the word does exist in the mouths of sellers

of computers, and means the number of different things the machine can perform, i.e. its versatility. This meaning is one which might be expected, and it is one which is implicit in Bühler's use of *Leistungen* for the various semantic functions noted in his *Sprachtheorie* of 1934 as *Ausdruck*, *Appell* and *Darstellung*, which may be rendered as 'expression' by the speaker, 'address' to the hearer, and 'representation' of the matter under discussion. The opening words of the introductory chapter do, indeed, invoke Bühler, and the unwary reader might be led to suppose that these functions are the subject of Verburg's book; but after comparing Bühler's three-function system with rival systems of two or four or more systems at some length Verburg speaks of language itself as a function of humanity, and reduces Bühler's triad to the status of "sub-functions". It is important to note that Verburg regards language as an autonomous entity in its own right, not subject to alien rules, notably those of logic.

This is a point of view which is commonplace enough to modern linguists, who are aware of the vast differences between individual languages, differences which can extend to such typological features as, for example, a relationship between agent and verb which is totally unfamiliar to speakers of the main Indo-European languages. This is an insight which has become available only in the light of the examination of the many "exotic" languages which have been studied and codified since the times of which Verburg is writing, but before the study of languages developed it was all too easy for Europeans to imagine that the structure of their languages coincided with the structure of human thought, as is shown by the semantic range of the word λóγος, or the overlapping terminology of the grammatical sentence and the logical proposition, or in the meanings of present-day German *Satz*.

It is not surprising, then, that a recurrent theme, perhaps the dominant theme of this book is the relationship between logic and language; indeed, it might be said that this study throws into relief an alternation between times when logic predominated, and others when language attained a comparative independence. There are secondary themes, such as the rivalry between the study of grammar and that of literary texts, the "philology" (in the European, non-insular sense of the word) of the subtitle, associated with the relative value given to grammar, rhetoric and logic, the three arts of the Trivium, and in the later chapters, the influence on thinking about language of developments in science, and their implications for the creation of universal characters and diachronic approaches to language, including speculations into its origin. The links which are traced between these various factors give the work a dense texture and a highly complex structure.

After a brief introductory chapter which goes into the principle of lin-

guistic function, the book continues with a sketch of the grammatical tradition
of Classical Antiquity and the earlier Middle Ages. There follow two chapters
on the linguistic ideas of the eleventh and twelfth centuries, two on deve-
lopments under humanism, one on the Renaissance, four on rationalism, div-
ided into deductive or "axiomatic" rationalism, followed by a "pragmatic" or
practical phase. There follow a chapter devoted to a post-rationalist, pre-
romantic phase, and a final one on Bopp, who is seen, in contrast to Jacob
Grimm, as a continuator of earlier tradition. While the chapters in the
translation are numbered in sequence from 1 to 13, the "paired" chapters are
numbered III (A) and III (B), IV (A) and IV (B), etc. in the original text. This
numeration has its justification, in that the two chapters on medieval
linguistic scholarship, for example, deal in turn with an early phase in the
realist tradition, and a second, more extensive one on nominalist (or non-
realist) grammarians. As the subtitle of the whole book indicates, the earlier
of these chapters deals first with a more literary tradition at Orleans, and
more especially at Chartres, a pre-humanistic phase inasmuch as the culti-
vation of a fluent Latin style was valued. The characteristic grammatical
tradition of the Middle Ages was, however, so-called "speculative" grammar,
relatively unfamiliar when the book was written, but the subject of renewed
interest since. This subjects language to logical criteria, making it, indeed, a
reflection in a *speculum* of the data it deals with, but doing so in accordance
with the various "modes" in which words may be considered, modes of being,
of understanding and of signifying, i.e. establishing a relationship between an
object, the mental image of the object and the verbal expression for the
object. Against this, Ramón Lull's device of using rotating discs to generate
thoughts from words is seen to give more weight to language, while still
maintaining a close relationship, indeed a reciprocity, between thought and
expression. A further development, associated with the nominalist tradition,
is that of "supposition", which examines from a rather different angle the
various ways in which words can be used, e.g. in general or individual appli-
cation, or in self-reference, the last of which may be said to anticipate what
has come to be called "mention".

   Humanism reasserted the primacy of language as a vehicle of expression;
its manifestations in Italy, which are discussed in the first of the two chapters
on linguistic development under the humanists, is shown to have depended
on a growing self-confidence and pride in being heirs of the Romans. A
manifestation of this pride was the effective use of language, which formed
the background against which the works of Petrarch and Boccaccio were
written. Humanism came to the north rather later, but had the advantage of

the availability of previously unknown Greek texts, and also the invention of printing. It was characterized by an explicit interest in language, and by the aim of imitating, or rather, in the hands of Erasmus at least, emulating the models of classical authors. It was also an age of intense Biblical study in which patristic views could be discarded in the light of textual criticism. However, authority still rested in the written word rather than in observation. There was also a foretaste of the comparative study of languages which was to be taken up in the Renaissance and in the rationalist era.

The Renaissance itself is differentiated here from humanism largely by its dependence on observation, most noticeably in the person of Bacon, with his advocacy of induction and his dismissal of the "idols", most noticeably those of the market-place, the source of false preconceptions which made language once again a part of the process of thought, and a misleading one at that.

Although the four chapters devoted to rationalism are divided into two pairs, it may be convenient to look at them together, for there are features which carry over from one to the other. The earlier phase is seen as having developed from the insights gained in the natural sciences through measurement and calculation, and proceeding, like mathematics, from fixed premisses or axioms. Words, too, came to be thought of as counters which could be manipulated in much the same way as numerals and geometrical figures. What prevents language from working as a calculus, however, is the ambiguity of verbal expression, and from a realization of this there arose the interest in a scientific or "philosophical" language, expressed both by Descartes and by Leibniz. Leibniz is given the greatest prominence of any of the authors treated in this book, and he certainly had a wide range of linguistic interests, of which his universal character is no more than a small and relatively unsuccessful part. Work on this project is of a piece with his interest in symbolic logic, and no doubt contributed to his "rational" grammar and the view that languages could be simplified, that the inflection of Latin was excessive in comparison with, say French; and he suggests further, for example, that the characteristic of tense might be detached from the verb and that the verb itself could be reduced to an adjectival expression. He also used the affinities of languages as a clue to the history of their speakers, a further step in the development of comparatism. More importantly for the purposes of this book, he combined the two views of language as a record and as a component of thought. A short supplementary chapter on deductive rationalism discusses further projects for artificial languages, notably that of Wilkins (another figure who has been given much greater attention since the book was written), and successors of Leibniz like Christian Wolff and

Süssmilch, included here presumably on account of his dependence on Wolff, and also discusses Meiner's distinction between rational and "harmonic" grammars, the former attempting to describe universal principles of grammar (*grammaires rationelles*), the latter explaining the peculiarities of natural languages (*grammaires raisonnées*). The distinction becomes important for the chapters on pragmatic rationalism, which, however, is not as far as grammar is concerned a development from deductive rationalism, but a movement which had grown up alongside it, the earliest example being the Port-Royal grammar of 1660. So far from looking at universal features of language, attention now turned to the idiosyncrasies of individual languages and their implications for the people who spoke them. (It is surprising that the work of Michaelis on the influence of thought on language and of language on thought of 1759 is not even mentioned.) This links up with a growing interest in linguistic origins, associated with Monboddo and Condillac in this chapter, with Süssmilch in the previous one, and with Herder in the next but one, but not a central theme of this book. The section of this chapter which represents the greatest departure is the materialistic system of de Brosses, with his interest in sounds, and his rather less well-founded onomatopoeic association of sounds with meanings. After a further brief chapter on later rationalists, attention turns to a post-rationalist phase represented by Diderot and Rousseau; their near contemporaries Hamann and Herder are ruled out of consideration here as anticipators of the spirit of a later age, specifically that of the nineteenth century; the final chapter rounds off the book by examining Bopp as an heir of deductive rationalism, but only after a description of literary studies in the Netherlands in the eighteenth century, a period when the Low Countries enjoyed pre-eminence in the humanities, forming in a way a counterpart to the early chapter on Orleans and Chartres.

It is not easy to give a précis of a book so full of detail as this one; I am far from certain that the points I have mentioned are necessarily those which merit the greatest prominence, or even that they have been fairly represented. Although there is a considerable amount of repetition and recapitulation in the course of individual chapters, the views of the author do not always emerge sharply, partly, no doubt, because of the complexity of individual paragraphs and sentences, partly because of the continuing unfamiliarity of much of the philosophical structures which the author brought with him to his undertaking. The language is certainly difficult; abstractions abound, and there are many neologisms (and many "-isms", such as "renaissancism", "scientialism" and "practicalism"), and idiosyncratic or variant usages, such as a "functionalism" which has nothing to do with Le Corbusier, but means

according to the context either a set of functions or an analysis on functional lines. Such terms I have tried as far as possible to paraphrase. Most notable are the terms *ennoesis* and *metanoesis*, approximately language as part of thought or an instrument of thought, and language as the expression of thought carried out abstractly. These distinctions have a bearing, of course, on the relative importance of logic and grammar, and are central to the work. There are also unfamiliar terms, such as "philosophemes", which I have tried to avoid, and some distinctions which are difficult to comprehend, such as that between "lingual" and "lingualistic", a difficulty compounded in this case because the English 'lingual' is used almost exclusively in physiological contexts.

There are numerous quotations in the text, in Latin, French, German, Italian and (once) Spanish. Where these occur in the body of the text they have been translated into English. If they are brief (usually not more than a line), they are accompanied by the original text in brackets; longer quotations are supplied in an appendix at the end of the volume. Sometimes two or three phrases or short sentences from the same source quoted close together in one paragraph, sometimes two or three short extracts are reproduced as though they were a continuous text in the source; in these cases the quotations are collected under the same reference letter in the appendix. One or two very brief and unambiguous phrases have been silently translated without comment. Quotations in the footnotes are given in English translation, and have been given in the original language only exceptionally, but the page references which accompany them refer to the editions used by Verburg.

I have been greatly helped in the business of translating by the advice of Tony Klijnsmit, who was not only able to save me from many pitfalls I encountered in the Dutch text, but was also an invaluable source of information, particularly on medieval and early modern grammatical theory, and on the philosophical background to Verburg's thinking. The errors which remain are, of course, my own. I should also like to thank my wife, an eminent historian of linguistics in her own right, for advice, encouragement and much practical help in preparing this translation for the press, and also for putting up with domestic chaos while the work was in progress.

*   *   *   *   *   *

Taal en Functionaliteit was written in difficult circumstances; it was the third dissertation Verburg had undertaken; the first had had to be abandoned because it overlapped with another scholar's work, and the second was

destroyed by fire. This one was written when the author was a schoolmaster, and had little opportunity for lengthy visits to libraries. He was also writing before photographic reproductions of early texts and private photocopying were readily available, and hence was unable, for example to consult Monboddo in the original, but had to rely upon the German translation sponsored by Herder. The original texts have been substituted in this case, but it may be noted that nothing was in fact lost by Verburg's recourse to the translation.

All in all, a comprehensive work like this is an astonishing achievement, the more so in the light of the circumstances in which it was written. It is not surprising that the early reviewers called for an English translation, a call repeated in a belated review of 1966. A translation was, in fact, made in about 1970, but it did not achieve publication, perhaps because the translator was not a linguistic scholar and did not realize all the linguistic implications, though his command of Dutch was perfect. When I started on my translation, I had seen what I thought were a couple of specimen chapters; they were completely literal, and I thought that they could be turned into more idiomatic English. It was only when my own version was well advanced that I learnt that the complete translation was in existence, and the carbon copies were passed to me by the author's son, Dr C. A. Verburg. I have not made great use of them in my own work, partly from a desire to be self-sufficient, partly because of the difficulty of identifying passages in the sheaves of flimsy paper, even though they do record the relevant page numbers in Verburg's text. What was most interesting was the sketch of a new beginning for Chapter 5. The passages in this version which do not tally with the Chapter printed in 1952 are reproduced as an Appendix to the present translation, but unfortunately no copy of a Dutch original seems to have been preserved. It does, however, show that Verburg was conscious of the accessions to the knowledge of his subject which had become available since the work was written, and he would, no doubt, have wished to amend and update his text had a fresh translation been made in his lifetime.

*   *   *   *   *   *

As noted above, there has been great activity in the field of the history and philosophy of linguistics since *Taal en Functionaliteit* appeared, and it is impossible to provide an exhaustive bibliography. Only a few salient works are

listed here, first some general surveys, and then specialized treatments of topics discussed in detail in Verburg's work.

General works, with extensive bibliographies:

AUROUX, SYLVAIN (1989-1992). *Histoire des idées linguistiques.* Two vols. Liège & Brussels: Pierre Mardaga.

DASCAL, MARCELO; DIETFRIED GERHARDUS, KUNO LORENZ & GEORG MEGGLE (eds.) (1966). Sprachphilosophie — *Philosophy of Language* — *La philosophie du langage.* Two vols. Berlin and New York: de Gruyter.

LEPSCHY, GIULIO (ed.) (1994). *A History of Linguistics.* Two vols. London & New York: Longman, 1994. (Vol. II deals with classical and medieval views on language; Vols. III and IV will deal with later periods. The whole is a translation and adaptation of Lepschy's *Historia della linguistica.* Three vols. Bologna: Il Mulino, 1990-94.)

PADLEY, G. ARTHUR (1976-1988). *Grammatical Theory in Western Europe.* Three vols. Cambridge, etc. Cambridge University Press.

PARRET, HERMAN (ed.) (1970-1976). *A History of Linguistic Thought and Contemporary Linguistics.* Berlin & New York: de Gruyter.

ROBINS, ROBERT H. (1951). *Ancient and Medieval Grammatical Theory.* London: Benn.

——— (1990). *A Short History of Linguistics.* 3rd edition. London & New York: Longman (Longman Linguistics Library).

SEBEOK, Thomas A. (ed.) (1975). *Historiography of Linguistics.* The Hague & Paris: Mouton (Current Trends in Linguistics, 13).

Specialized works (listed in chronological order of their topics):

HENNIGFELD, JOCHEM (1994). *Geschichte der Sprachphilosophie. Antike und Mittelalter.* Berlin: de Gruyter.

BURSILL-HALL, GEOFFREY LESLIE (1971). *Speculative Grammar in the Middle Ages: the Doctrine of partes orationis of the Modistae.* The Hague & Paris: Mouton.

——— (ed.) (1972). Thomas of Erfurt, *Grammatica Speculativa.* London: Longman (Classics of Linguistics).

COVINGTON, MICHAEL A. (1984). *Syntactic Theory in the High Middle Ages. Modistic Models of Sentence Structure.* Cambridge, etc.: Cambridge University Press.

FORMIGARI, LIA (1988). *Language and Experience in 17th-Century British Philosophy.* Amsterdam & Philadelphia, Benjamins (A translation of *Linguistica ed empirismo nel seicento inglese.* Bari: Laterza, 1970).

HÜLLEN, WERNER (1989). *„Their manner of Discourse". Nachdenken über Sprache im Umkreis der Royal Society.* Tübingen: Narr.

SUBBIONDO, JOSEPH L. (ed.) (1992). *John Wilkins and 17th-century British Linguistics. A Reader.* Amsterdam: Benjamins.

ISERMANN, MICHAEL (1991). *Die Sprachtheorie im Werk von Thomas Hobbes.* Münster: Nodus.

KNOWLSON, JAMES (1975). *Universal Language Schemes in England and France, 1600-1700.* Toronto & Buffalo: University of Toronto Press.

DASCAL, MARCELO (1978). *La Sémiologie de Leibniz.* Paris: Aubier Montaigne.

DUTZ, KLAUS D. (1983). *Zeichentheorie und Sprachwissenschaft bei G. W. Leibniz. Eine kritisch annotierte Bibliographie.* Mit einem Anhang: ULRIKE KLINKHAMMER, *Sekundärliteratur zur Sprachforschung im 17. Jahrhundert.* Münster: Institut für allgemeine Sprachwissenschaft.

POMBO, OLGA (1987). *Leibniz and the Problem of a Universal Language.* Münster: Nodus.

SCHULENBURG, SIGRID VON (1973). *Leibniz als Sprachforscher.* Frankfurt am Main: Schulenberg.

RICKEN, ULRICH (1988). *Sprachtheorie und Weltanschauung in der europäischen Aufklärung.* Berlin: Akademie-Verlag.

To the reader

Owing to the untimely death of the translator, Professor Paul Salmon, the editorial tasks were completed by Andrew Barker and Vivian Salmon, who ensured that all alterations made by the translator in the penultimate text were incorporated in the final version. The indices were composed by me; regrettably, I had to complete them without the expertise of the translator, with whom it was a pleasure to co-operate.

Amsterdam, 29 April 1998
Anthony J. Klijnsmit

AUTHOR'S PREFACE

A N ENQUIRY into the current position of an academic discipline and
the direction in which its practitioners are developing it, or should be
developing it, is tantamount to an enquiry into its nature. And the acquisition
of awareness of the nature of a discipline inevitably entails the acquisition of
an awareness of the nature of the phenomena which the discipline treats—in
the present case linguistics and language. Looked at in this light, an appraisal
of this kind is not a superfluous examination of the past, or even a gratuitous
investigation in philosophical terms, but a primary desideratum—or even a
necessity—if we are to establish conscious and consistent practice in the
discipline at the present day. Such reflection has, indeed, great importance
for our own times; it offers us the possibility of effectively deepening our
insight into the principles which underlie the standards we have to apply to
the discipline when we examine and evaluate the many views, methods,
trends and appraisals which we meet in it. It can also arm us and defend us
against misinterpretation, misjudgment, contamination, or even misplaced
adulation from more fashionable extraneous disciplines and intellectual
currents. By giving expression to a sense of independent scientific value it
may perhaps also help to create the promotional zest and enthusiasm which
will gain new adherents to a discipline for which these days the requirements
are regrettably all too often thought to be barren remoteness from life, dreary
impracticality, or skill at making pedantic points about letters or collecting
trivial data.

The general aim of the present study is to investigate language and the
study of language. In such an undertaking, as in the acquisition of any know-
ledge, there resides an underlying component of comparison; and comparison
can, broadly speaking, take on of two forms: on the one hand, the object of
enquiry—in this case language and linguistics—can be compared transcen-
dentally, as it were, by setting it up against some totally different discipline,
and on the other hand it can be compared internally by making a study of

reciprocal distinctions within the field under investigation. The first method, which to some extent is comparable with the methods of encyclopedists, has in the recent past produced some surprising results—it is necessary only to consider the convergence between psychology and linguistics. The second method lies, with a greater or lesser degree of consciousness, at the root of the practice of the history of linguistics, where, remaining within the bounds of the discipline, linguistics is compared with itself by juxtaposing various stages in its development.

The method of historical reflection has virtually fallen into abeyance since the 1860s, when of Benfey and Steinthal were writing. This neglect lasted for almost half a century, with von der Gabelentz as the most obvious exception. The contributions to the history of linguistics which were made in the second and third decades of the twentieth century are, indeed, imposing in compass, but deficient in critical insight; they consist of chronological accounts with limited conclusions, mainly in the field of Indo-European languages. Some "Introductions to General Linguistics" produced in this period, in so far as they are at least concerned with history, do, indeed, give some inkling of a rather more critical approach, but nevertheless their significance as enquiries into the principles and investigations of the background of the subject is extremely slight. On the other hand, two studies made by philosophers in this period, those of Cassirer (1923) and Croce (1930) do go far beyond the histories of the discipline written by linguists themselves. The great objection to the accounts of these two scholars, however, is that the interpretation they provide of the history, principles and achievements of linguistics is designed to support their own philosophical predilections, which are alien to linguistics. These studies are subject to the danger—one which threatens all encyclopedic studies in much the same way—that the individual quality of the subject under investigation is overshadowed by extraneous matter, that is to say, in the present case, that language and the study of language lose their autonomy by being subsumed into another species, into a discipline of a non-linguistic order.

While the autonomy of language has been something like an article of faith for genuine linguists, scholars have frequently been content to give expression to a vague, if deeply-rooted hope that they were giving an account of this autonomy, for the benefit of themselves and others, supported by well-considered deductions from the basis and principles of language. For this reason, the investigation and description of language continually gives the impression, as no other discipline does, of having make concessions and capitulated to extralinguistic requirements and standards. The significance of

language has been misunderstood in turn in the interests of aesthetic, ethical, social, economic, even physical and mechanical or psychological and biological criteria. There has also been an apparently ever-present unbalanced tendency to evaluate language in terms of mental processes and cognition. The only legitimate interest, the linguistic interest, was often stifled at birth or prevented from developing—a state of affairs which the more sensitive practitioners have had to accept quite frequently, and often for long periods, without being able to call on the resources of theoretical principles of their own. The winds of every theory have constantly blown—and continue to blow—over language. In the recent past phenomenologist and behaviourists have presented their views of language, and existentialists, too, have addressed the matter. And the thoughts of modern logic, including symbolic logic concerning language and representative signs are more than superficial tinkering. And so things will probably always remain.

In the midst of these changing currents the old question of defining the nature of language has been revived, and the question has been taken up with renewed energy, especially in the most recent past. By means of a language-based analysis of language linguistics has set about disengaging itself from the burden of judgment by extraneous criteria, and to approach a purely linguistic vindication of the autonomy of language. The Netherlands have been by no means slow to adopt this development, it is necessary to name only H. J. Pos, Antonius J. B. N. Reichling and C. F. P. Stutterheim,[1] but many others come to mind.

This renewal of self-examination has become possible above all because we have recently once again become aware that in language we are dealing with a form of behaviour, a human function or activity, or perhaps with a self-contained complex of functions. It is for this reason that this study sets itself the specific task of investigating the various ways in which the notion or awareness of this function has been viewed in the course of time, and also the accounts given of it in the area of Western culture in the period from

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[1] These three are specifically mentioned on account of their relevance to the present study. Professor Pos in earlier days, while he was still at the Free University of Amsterdam, introduced me to linguistics by the coursed he gave on the Encyclopedia and the History of General Linguistics; I became a grateful follower of Professor Reichling, even before he gained his chair, through his dissertation on *The Word: a Study on the Basis of Language and Linguistic Usage,* and since then through many years of close relationship to his ideas and teaching. Dr Stutterheim's work on *Metaphor* aroused my profound admiration, and served in many respects as a model. — The present dissertation was presented at the Free University in November 1951; my supervisor was Professor J. Wille, and this study is indebted to his conscientious criticism for many improvements and additions.

approximately 1100 to approximately 1800. The attempt will be made to do this critically in the light of the criteria which have grown up with, and out of, recent insights, in the hope that these insights themselves will be deepened in the course of the study.

INTRODUCTION

THE NOTION OF 'FUNCTION' is one that came close to becoming popular in the 1930s among linguists—and indeed among general readers interested in the workings and manifestations of language—through the writings of Karl Bühler. He will be remembered for the distinction he made between the various *Leistungen* or functions of utterances, or rather of sound waves, namely *Kundgabe* ('exposition') or *Ausdruck* ('expression') in respect of the speaker; *Auslösung* ('elicitation') or *Appell* ('appeal') in respect of the hearer, and their *Darstellung* ('representation') in respect of the matter or state of affairs under discussion. He similarly distinguished three types of sign: *Symptom*, *Signal* and *Symbol* (or *Ordnungszeichen*, i.e. 'classificatory sign'). While Bühler set representation apart from the two other functions as *Zuordnung* ('assignment'), he had an inherent tendency, at least in the first formulation of his theory, to co-ordinate the functions, to give them equal weight. He held (1927: 41) that the whole sphere of language consists entirely and exclusively in the semantic dimensions of expression, effect and representation.[1] According to Bühler, language was characterized by its three component functions, much as space is characterized by its three dimensions.

The proposals set out in Bühler's system provoked criticism, and since they were rejected or modified it cannot be claimed that they achieved total acceptance; but we can at least assert that even his opponents and critics became accustomed to working with the concept of function in linguistics, a concept which had never been asserted with so much force and effect until Bühler set up his three-function system. We remain indebted to him for the

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[1] Bühler does not actually promulgate such a co-ordination, but he does suggest it. The remark quoted is an example, but no more than an example, of this suggestion. See Stutterheim 1949: 109.

power—and the consequent effect—of his theory in general, and of his concept of linguistic function in particular.

The Egyptologist Alan Gardiner had set out from a similar basis in his book on general linguistics, *The Theory of Speech and Language* (1932), even before he made the personal acquaintance of Bühler, and in the course of the work he came to adopt Bühler's scheme in its entirety.[2] Langeveld (1934) offered greater criticism; Reichling (1935: 18–40 and *passim*) discussed Bühler in great detail, demonstrating that Bühler's distinctions are not borne out by linguistic fact, and that his concept of functions had been anticipated by earlier linguists and psychologists. Duijker (1946) re-examined the work from the standpoint of psychology and indicated clearly that Bühler's system of functions is in this light an amalgam of three distinct unanalysable viewpoints.

Others had, indeed, anticipated Bühler in setting up theories of functions. His first critic, Dempe (1930), gave a lengthy list of scholars, mainly drawn from the German intellectual tradition, who had all dealt theoretically with the essential and characteristic factors of language before Bühler's time,[3] for the most part speaking of two linguistic functions. There were, however, instances of tripartition (Müller-Freienfels, Schingnitz and Gerber), and an isolated analysis into four functions (H. Schwarz). Dempe also notes in many cases an aim of combining the proposed functions to establish the "special character of language, i.e. its underlying principle" (*die besondere Eigenheit der Sprache, also ihre Idee;* 1930: 17), thus resembling Bühler's notion of exclusivity. But should this be taken to imply, should it have been taken to imply, that the functions must necessarily be present in the speech act? And were they given equal weight or not; are they seen to be given equal weight, or not?

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[2] *Translator's note:* The terminology which Gardiner took over from an early article by Bühler (1918: 16) is described as follows (Gardiner [2]1951: 188): *Kundgabesätze* ('proclamatory sentences'), *Auslösungssätze* ('evocative sentences'), and *Darstellungssätze* ('descriptive' or 'depictive sentences'). Gardiner goes on to note alternative simpler names from Kretschmer (1913: 61ff.): (*a*) *Gefühlssätze* ('sentences of feeling'), (*b*) *Aufforderungssätze* ('demands'), and (*c*) *Aussagesätze* ('statements'). On the following page ([2]1951: 189), he divides utterances as they affect the speaker only (*exclamations*), refer to things (*statements*), or involve a listener; subdivided into demands calling for information (*questions*) or action (*requests*). The acceptance of the third group as a single class is confirmed by the use of the common root *quest-*. Bühler's terms in *Theorie der Sprache* (1936: 28) are: *Ausdruck, Appell* and *Darstellung*, reproduced in English translation (1990: 35) as 'expression', 'appeal' and 'representation'. The language sign "is a *symbol* by virtue of its co-ordination to objects and states of affairs, a *symptom* (*Anzeichen, indicium:* index) by virtue of its dependence on the sender, whose inner states it expresses, and a *signal* by virtue of its appeal to the hearer, whose inner or outer behaviour it directs as do other communicative signs" (ibid).

[3] Runze, H. Maier, Jaberg, Güntert, Lork, Twardowski, Husserl, Meinong, Freyer, Porzig, O. Dittrich, Vossler, Ammann, Martinak, Marty, Wegener, H. Wolff, O. Kohnstamm.

Bühler's inclination to put them on a par has already been mentioned, and it is on this very point that Dempe takes issue with Bühler—and with great effect.[4] For Dempe the principal function is representation. Kainz (1941) stands on the shoulders of Bühler and Dempe in the context of these issues, but he proposes to solve the problem in yet another way.

All these theories, those of Bühler, of his predecessors, of Dempe himself and also of Kainz, grapple with the mutual relationships of the functions and, alongside the differences between the three named, each scholar has his own individual position on this issue. Indeed, if one starts by regarding the functions of language as subordinate to the totality, or import (*Idee*) of language, or whatever its underlying principle may be called, it becomes difficult to establish the further hierarchy of the functions which apparently becomes necessary. To subordinate them to language as a single all-embracing concept seems to point inevitably in the direction of giving each of the functions equal weight as a constituent part; but do not the facts of language show that this cannot be so? On the other hand, does not a hierarchical arrangement sometimes produce a certain scale of subfunctions? And how, then, does the basic principle relate to this scale?

Whatever the answer, the factor common to all these theories and the questions they raise is that they are concerned with the functions which may be observed in linguistic utterances. Since it is also perfectly reasonable to regard language itself as a function—a function of man or of the human intellect, for example—we will make a provisional distinction and classify the issue raised by the cases mentioned so far as a matter of 'sub-function'. A sub-function may be defined as a function *within* language or *applied to it*; it is language-internal. In other words, a sub-function is something which language produces adventitiously, not an intrinsic part of the working of language. If we look upon language itself as a function, we may say that it functions in its own right; that is to say, it is 'ipso-functional'. Further investigation is needed to establish whether this distinction is useful or satisfies the strict demands of comprehensiveness. In any case there is little or no need to apply this distinction in the early stages of our discussion; theoretical interest in language was slow to develop in the culture of Western Europe, and it was not until centuries had elapsed since the beginnings of discussion in Greece that the major questions of principle concerning the nature and workings of language as such were asked at all deliberately.

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[4]   Bühler never explicitly replied to Dempe's criticism, but he clearly took account of it.

Bühler's views, and most of the theories discussed further by Dempe in the light of these views, share more or less common ground in treating functions *in* or *of* language as subordinate to the major principle. Close in time, but independently of Bühler's theories, there developed in Anglo-American linguistics various theories of function based on behaviouristic principles, where language as such tended to be studied in relation to the sum total of human behaviour, that is to say, where language itself was seen as a factor of or in the conduct of life. The views of Grace Andrus de Laguna (1927; see Reichling 1935: I, 11ff. and *passim*) and George Kinsley Zipf (1936), however, or even those of Bloomfield, the doyen of American linguistics (1933 and later reprints), had no direct influence in linguistics as theories of function as such, while those of Bühler *did*. Troubetzkoy (1939) based his system on Bühler's; and in the intervening years sub-functions were the topic on which all scholars concentrated their greatest attention.

A much earlier examination of language in a wider context will lead us in the course of our discussion to use a special term; the discussion of language as part of behaviour is a recent development, but language *per se* had been regarded in many earlier centuries with greater or lesser emphasis as part of intellect or reason. This principle may be termed "en-noesis"[5].

The concept of language itself as a function is naturally not dissociated from that of sub-functions; indeed, the investigation of the relationship between them might be considered the principal object of our entire enquiry. Let us say for now that association presupposes differentiation. Dempe, however, makes no distinctions, and names proponents of systems of two, three and four functions alongside the theorists of a single function in the same breath (1930: 14–18)—in the same breath, although it is precisely here that the difference I have in mind emerges: whenever a single-function theory is proposed, the whole concept of function as found in multifunction theories is displaced, and loses its hierarchical character. Dempe implicitly criticizes this displacement when he observes of the opinion of those "who represent the nature of language by calling it 'expression'", that "the term 'expression' is too general, is far too inexplicit, and therefore unable to deal with the specific nature (!) of language"[A] (1930: 14). But he makes no further comments in his concluding remarks. And while Kainz indeed has a special name for

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[5] Stutterheim, who operates, in admittedly rather free dependence, with Bühler's three functions, does, however, add a fourth function: language *within* logical thought (see Stutterheim 1949: 590f.). Stutterheim's fourth function is not greatly different from the distinction my historical investigation imposed on me.

single-function theories (*Singularitätstheorien*), he goes no further in his criticism. He immediately weakens the force of such theories by claiming that "nobody proposes genuine 'singularism'". The upshot of all this is that single-function theories differ from multifunction theories only in ranking functions in such a way that one function comes to preponderate. For Wundt, for example, the dominant function is expression, for Wegener effect, for Dempe representation. Among the many faults of all theories of function, according to Kainz, is a lack of system (*Unsystematik*); this he observes where "elements of different levels are brought together haphazardly" (1941: I, 174). Kainz himself also provides a theory: he adopts Bühler's tripartition, but makes a significant modification. Instead of Bühler's 'representation' (*Darstellung*) he suggests *Bericht* ('report'), *Verständigung* ('explanation'), *Information*. Thus he removes the concept of representation from the category of what we have called a sub-function and what he calls the "collection of functions" (*Funktionenkapitel*), "in order to define the central characteristic component of language". This is done, by implication, "so that language may give a symbolic representation of actuality by means of its signs, may conceptualize the content of actuality, i.e. may achieve representation" (p. 176).[B] From this it can be seen that Kainz regards representation purely as ipso-functional. For him, representation is not a function, but an intrinsic component of language, a component which nevertheless carries out (*übt*) representation. But in doing so, it does, of course, operate functionally. It looks as though Kainz himself did not quite succeed in avoiding the lack of system that he reproved in others. In any case, the structure of his system is in no way different from that of a so-called single-function theory, which sets up one or more additional secondary functions alongside a primary function.

Kainz was apparently unable to speak of his intrinsic component without lapsing, through the use of the term *üben*, into the terminology of functions. If we attempt to determine how language as a whole may in its turn derive from a superordinate or more comprehensive system, we seem to find a relationship which bears close affinities to that between the sub-functions and language. Once we accept this perspective, we encounter such questions as the following: Is language an innate function of man? Or, more precisely, is it an innate function of the human mind? Or must language first be generalized as a sign or a symbol, and is it only one example of these among others? And in that case, what is the relation between language and the other token functions? If a semiology or sematology is developed, in homage to Saussure, is the role which language occupies in it that which Ipsen, to give just one example, sees in it? Ipsen observes that

There is a danger of leaving the field of language prematurely, and of setting up, in place of the concrete structural concept of the sign, an abstract concept of class which is general only in so far as it includes items which differ in kind or in quality. *For it is the case that the sign in the concrete sense of a categorical form has its true locus in language. Linguistic expression is the original manifestation of the sign, and it is upon this that the concept should be based.* Any other items which we call signs are no more than derivative or arbitrarily applied fragments or expansions of the intrinsic possibilities of the linguistic sign. And it is also certain that the function of signifying and meaning is a constituent component of human consciousness, not however as a conjectural pre-linguistic general basic function of pure consciousness, but as a subjectively mental parallel to the objectively mental world of language. (1930: 15-16; emphasis supplied)[C]

Or is language no more than one "semie",[6] i.e. one system of signs, among other systems of signs, one which has no more than a "quantitative superiority"? This is the view taken by Buyssens, who notes (1943: 92) that:

The classification of semies has shown that there is no intrinsic difference between language and other semies. Acoustic facts are simply the ones which are best adapted to our need for communication, and among those the sounds of speech provide *the greatest number* of different sounds which may be obtained without recourse to an instrument to produce them.[D]

The same view of the problems gives rise to many other questions, for example: What is the role in these discussions, e.g. in Haecht (1947), of the medieval notion of "standing for" (*stare pro*), still vigorous in modern linguistic theories? What, in this connection, are we to think of the interest in the concept of representation adopted by Cassirer (1929; 1923ff., etc.), following in the steps of Leibniz and Humboldt? Or what of the concept of language as an instrument, which is even older—deriving from Plato, in fact—renewed even more recently in behaviourist linguistic theories, for example, and also by Bühler and Reichling? What is the relationship between language and the psyche? Although Husserl had in principle freed language from associationism, American views of language current in the mid-twentieth century[7] seem to have returned to this apparently superseded point of view. The function of language also lies in, or at all events very close to, the focus of

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[6] *Translator's note:* Buyssen's word is *sémie:* the nearest English equivalent, 'seme', according to the OED, is 'a sign', 'a unit of meaning', 'the smallest unit of meaning', rather than the system of signs implied by Buyssens.

[7] *Translator's note:* Verburg speaks, in 1952, of "the latest views".

interest of existentialism. How does this movement view language, and where does it place it? Is language in the service of art and beauty (Croce, Vossler)?

The definition of the individual nature of language, of the ipso-function of language, clearly also entails the definition of the place of language in the world order. Indeed, nothing in the cosmos is independent; one thing is involved in another; and in language we encounter non-linguistic phenomena on all sides and on all occasions. But never without *order*. This order is what matters. The various theories of function summarized by Dempe, Kainz and others all entail the presence, as a sub-function of language, i.e. intra-linguistically, of something which is essentially and originally extraneous to language; and they do so, indeed, in such a way that the sub-functions appear to constitute language. But this conclusion, again, is not ultimately sustainable. The individual quality, the ipso-function of language, is nevertheless maintained. "The term 'function' must not be restricted in linguistics to the syntactical function of signs within discourse; every function must be considered, including that of discourse seen as a whole" (Buyssens 1943: 92).[E] This remark is better founded than the one previously quoted from the same author.

I propose to investigate the ipso-function and sub-functions of language in close association with one another, and entitle the present study *Language and its Functions*, where 'function' is taken to cover both sub-function and ipso-function.

The range of problems sketched above is so vast and carries such extensive implications that it is desirable to prefix a historical survey, which will, as it were, set matters in perspective. This is all the more desirable, since histories of linguistics which have appeared since Benfey's work of 1869 have been of slender compass, and moreover have given little more than a recital of facts. These considerations determined the organization of the present work, which therefore gives a historical description of the gradual development of the problem of function, beginning with the views of language held in the initial years of European culture, in Ancient Greece. Philosophy, rhetoric and linguistics, always in interrelation though not always in interdependence, extended the concept of function. We cannot, however, assume that views about linguistic functions began to receive direct expression. The view of language from which the Greeks set out was initially practical rather than theoretical, a general idea rather than a critical concept. The concept of linguistic functions remained largely implicit. Hobbes is not the first theorist of functions, for all that he was the first expressly to question what purpose is being served (*quid praestat?*). Renaissance humanism and classical

rhetoric, much earlier on, had more or less clear notions of the way language works. And even a time when linguistic functions were not considered at all, when language was subjected to nothing more than a static survey of its nature, cannot be omitted from an examination of the development of the investigation of functions, since it serves as a background and negative factor for the very reason that it frequently provoked a reaction from a functional point of view.

Once the historical investigation is completed it will be found to provide fresh opportunities to assess and analyse contemporary linguistic viewpoints. It may be very doubtful whether, even in general terms, the assessment of any contemporary theoretical position, at least in what may be generally called humane studies, can have any validity or depth if it does not take account of the historical dimension. At all events, this study has been written with an eye to the current linguistic theory of its day and an evaluation of it.

It has to be admitted that it is not complete; *it extends to about 1800.* This cut-off point may seem to be rather arbitrary; after all, rationalistic linguistic theory did not entirely lose its dominant position in the latter decades of the eighteenth century, though it lost its monopoly. A different approach to language came to the fore in Hamann and Herder, but it is preferable to treat them as pioneers of a new period. On the other hand, while Bopp undoubtedly initiated the professional study of language, he was at the same time very reactionary in his view of language (see Verburg 1950), and I shall therefore devote a few concluding remarks to him, although he in fact belongs to the post-1800 generation. Thus 1800 is chosen as marking a turning of the tide.

The *method* I shall use is basically simple; *in investigating authors and movements I shall look for the criteria they applied to language:* what conditions did they consider language should fulfil? If we find an answer to this question, we shall also gain the basis, at least, of an insight into their view of linguistic function, the object of our enquiry. Unfortunately, the answer given to this question by the authors under investigation is frequently so unclear, or even non-functional, and for other reasons anything but straightforward, that it is often, regrettably, impossible to use simple methods to establish criteria.

The application of a criterion entails measuring language against a law, and indeed against a law which it is generally held that language should follow. If it becomes necessary to criticize the applications of the criteria which have been described, criticism will begin from the fundamental conviction that we are confronted in language with an autonomous entity, an entity in which the fundamental principle is one of appropriateness, and not, for example, a regularity imposed by natural law; and that language and its use

are part of the responsibilities imposed on man by decree at creation; that language, in structure and use, is a human commitment which has to be carried out according to its own standards, its own internal rules.

It is precisely in theories of function that various views of the autonomy of language are to be found: language may be seen to be subjected to extra-linguistic control, i.e. regarded as heteronomous; it may be accepted as it stands as being 'regular' in following its own devices in every respect, i.e. as being subject to no law; it may be seen to owe its ability to normalize entirely to the whim of the verbalizing individual, with the result that language, for such a user, becomes a law unto itself, i.e. 'heautonomous' or arbitrary.

Linguistics tends to proceed from the principle of the autonomy of language without too much concern for justifying this principle. There are even linguists who are silent about principles, and thus seem to imply that there are none, and that scholarship, specifically linguistic scholarship, has no need of preconditions, but consists exclusively in the collection and arrangement of facts, with no underlying principles (see Hockett 1942: 2; Bloch and Trager 1942: 8-9). There are also linguists who, as linguists, set out with pure linguistic intent to form an association with another discipline; proponents of this tendency have repeatedly spoken in recent decades about the fundamentals of language, even before establishing the association, even before making themselves ready to establish it, and seem to have been so greatly infected with the idea of heteronomy and to have lost the ground from under their feet to such a degree that their approach ends in the complete surrender of linguistic principles to extralinguistic theorizing (Johansen 1950: 17ff.).

It is to be hoped that readers will not expect, just because this Introduction gives a preliminary account of the problems to be expected, the distinctions to be applied to them as well as of the methods and principles adopted in this work, that all these points will be dealt with on each page of the present enquiry. Not all of the questions of principle mentioned here come under discussion in the periods under investigation, but this does not detract from their value as landmarks in the general view which informs this study. In any case, the method employed gains appreciably in effectiveness as the concepts of function become more firmly established; this is less apparent in the earlier chapters than in the later ones. A phenomenon such as 'ipso-function' does not come into its own until late in the day.

Language and its Functions is thus a linguistic study carried out on historical, categorial and theoretical principles. To give a clearer indication of this, and also of the periods investigated, it has the sub-title *A historico-critical study of views*

concerning the functions of language from the pre-humanistic philology of Orleans to the rationalistic philology of Bopp.

Although Steinthal (1863) dealt with the history of linguistics in classical times, it is not superfluous to preface the present investigation with a survey of this topic; for excellent as Steinthal's work is, it is now antiquated, and is likely to be regarded as obsolete in the near future. Further, this chapter is necessary, since classical antiquity effectively set the context for the medieval view of language from the very beginning—not least at our own starting-point, the revival of classical literature at Chartres and Orleans.

CLASSICAL ANTIQUITY

(A synoptic view)[1]

T O DEAL WITH Classical Antiquity only in summary outline is not to suggest that antiquity, at the time of the Fathers, of Hellenism, or of Aristotle and Plato or their predecessors, presents no views which can be brought to bear on a study such as the one in hand. But while lasting influence of classical philosophical systems on modern thought—not least in the seventeenth and eighteenth centuries—and also on post-renaissance linguistic thought, would seem to justify extensive prolegomena on ancient ideas about language, the limitations set by the nature of the present undertaking render a more detailed exposition unnecessary. A brief overview of the many practical and theoretical views of language in the context of classical culture as a whole is sufficient for our purposes.

The Pre-Socratics

At the cradle of western thought stands myth, the sacral account of pseudo-revelation. The wisdom of Musaeus and Hesiod still reveres this word as handed down in religion, but Homer undermines its acceptability by making these sacred traditions the plaything of his poetic imagination. By the time of Thales, Xenophanes and Heraclitus the secularization of thought is complete, and all traces of mythical authority have disappeared. Xenophanes' hostility towards anthropomorphism is well known. The complex advocacy of universality (ἑν καὶ πᾶν) against opinion (δόξα) leads him to produce a primitive

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[1] Details may be found in the standard works of Christ & Stählin ([5/6]1912), Schanz (1898-1920), Steinthal (1863), Volkmann (1885), Norden (1898), Sandys (1906), Kroll (1909), Wilamowitz-Moellendorf (1921, for language and literature); the (mostly brief) histories of linguistics of Benfey (1869), Porzezinski (1921), Jespersen (1922 & 1949), Thomsen (1927), Schrijnen (1924), van Hamel (1945). For philosophy, the principal sources are Überweg (1915-26), Windelband (1921), Zeller (1923); also the general histories of Windelband ([14]1928), Vorländer (1927), Sassen (1932) and Bréhier (1926), and in addition Vollenhoven (1950), Dooyeweerd (1949) and van Schilfgaarde (1944).

epistemology alongside his ontology. In Heraclitus, epistemology has developed into a principle of *logos* which immediately reveals the fatal flaw of all ancient thought about language and thought itself, its tendency to operate with a hybrid concept, a global theory in which language and thought are indissolubly mixed with one another.

Heraclitus ascribes to "discourse" a universalizing tendency which both takes account of the invisible harmony of things and accommodates the conditions of their individual existence, their φύσις (nature), the antithesis of this harmony. This motivated Heraclitus' own contradictory thinking and speaking. Looked at in this light, his rudimentary epistemology is still indissolubly linked to his ontology—and this is something which will change only gradually. The self-contradictory component in Heraclitus' λόγος (thought/speech) is the direct result of contradictions in his ontology. But in any case this remarkable philosophical system is made possible not least by the confused concept of "speech-thought" and "thought-speech", from which antiquity never escaped.

The origins of mathematical objectivity in Pythagoras and his pupils seem to have provided no special theories of signs or language; it remained for later ages to make a connection between mathematics and language *qua* sign. That the influence of Pythagoras' brilliant vision in these matters continued for centuries is generally recognized.

Of greater direct importance for our investigation is Parmenides, the (second) Eleate, who unlike the subjective Xenophanes, shares Pythagoras' objectivity. Just as Xenophanes was constrained to develop an epistemology in his campaign against δόξα (opinion), Parmenides' epistemology brings him—probably as the first among Greek thinkers—to a philosophy of language, albeit a primitive one. He distinguishes object and subject in transcendental and non-transcendental existence. The object guarantees the truth, the complete reality filling empty space, as the content of thought (τὸ γὰρ πλέον ἐστι νόημα). When thought is δόξα concerning the non-existent, and is expressed in such a way, it becomes lost in fleeting inconstant 'winged' words (ἔπεα); thought (νόημα) concerning the existent is expressed in the comprehensive word (λόγος); and this operates with significative words (ὀνόματα ἐπίσημα). It seems that this view of Parmenides still showed only a conditional reliance on language, and the resort of his pupil Zeno to the power of logic suggests the same thing.

It is likely that Euthyphro is applying the views of Empedocles to language when he introduces an etymology in which the basic elements of what exists provided the model for the mimetic composition of words.

Cratylus, who gives his name to Plato's celebrated dialogue, is, like Euthyphro, an objectivist; he is rather of the opinion of Heraclitus, but considers the word (λόγος) to be determined by the object: everything in existence produces a name which is appropriate to its nature. But he has no way of dealing with the subject, and he has to content himself with a gesture of approval or disapproval.

The time of Cratylus and Euthyphro may be considered to usher in a high point in Greek cultural history, as far as interest in language goes. Subjective individualists, practical men interested in politics, like the Sophists, so to speak *lived* their linguistic function even before they *contemplated* it.

This characteristic does not hold for all the Sophists to the same extent or in the same sense; the differences are too great between the oligarch Critias, Thrasymachus the traditionalist, Callicles, the Nietzsche of the Sophists, Gorgias the aristocrat, Protagoras and Prodicus the radical and the moderate democrat, Xeniades and Hippias the cosmopolitans, and Antiphon the anarchist—as Vollenhoven (1950) characterizes them. Etymology, as we have seen in the case of Euthyphro, synonymy, rhetoric and dialectic, the theory of sentence structure—all of these appear in more or less rudimentary form in the sophists' passion for oratory. But the close association of speech and thought is still presupposed as before. A typical feature of this development is that argument is seen not only as persuasion to perform this or that act, but also in all these cases, as persuasion to adopt this or that point of view, a feature which even at this early stage is fully in keeping with consistent and typical intellectual attitudes of Greek culture. Such a distinction between language and thought is occasionally made for practical purposes; but it is not followed by any theoretical development, let alone by an investigation of the divergent qualities of these different phenomena and of the relations between them. The predominant relation is that between objects on the one hand and "speech-thought" or "thought-speech" on the other.

The position of the Sophists is that argument is used merely as a practical means to mutual understanding or for influencing the views and actions of one's fellow-men. There is only one instance of an investigation of language, and even this one takes place under the influence of these practical considerations. This is the case of Gorgias, who is led to adopt a negative critique of language: there is nothing, or at best there is a something which cannot be perceived; and even if it could be perceived, it could not be uttered or communicated to others, since the sign is different from that which has to be signified. How can colours, for example, be communicated, since the ear is

receptive only of sounds! At this point the relationship of object to *logos* seems to have developed into the triadic system of object, knowledge, language. But this "theory", coming from an aristocratic champion of peace and harmony —one whose aim, in addressing the multitude before him which is ignorant of such things, is to use his practical rhetoric to persuade them to make good decisions—is to be seen as no more than a debating point. Gorgias makes use of this apparently sceptical attitude in opposition to pedantic objectivists whose pedantry stands in his way. For himself, the eminent orator, the value of language does not come into question.

Etymology was seen, and continued to be seen, as an interest in the relation between names and things. It is possible to form a judgment of things from words. The *synonymy* of Prodicus, Hippias' *phonetics* of letters and syllables, and the theory of spelling—the introduction of the Ionian alphabet in Athens in 403 B.C. presupposes a certain spread of notions of phonetic theory—the grammar of Protagoras, who differentiated between question, answer, wish and command; all these branches of linguistic thinking flourished among the Sophists, and did so, no doubt, in close interaction with rhetoric. But in all these rudimentary technical distinctions and enquiries into linguistic phenomena concentration on the principles of language remains implicit.

Plato and Aristotle

In his passion for definitions Socrates carried with him implicitly a view of language: the idea, conceived as a static entity, may be fixed in the linguistic ὅρος (standard). The definition itself is the guarantee and the proof of the possession of knowledge. And true knowledge in turn guarantees just and lawful action, in obedience to one's conscience, i.e. to that which is considered to be objectively known and perceived.

Plato may be said to have summed up the philosophy of language in his dialogue *Cratylus*, adding his own contribution to the discussion. His distinction between a defining and an instructive name (ὄνομα διακριτικόν, διδασκαλικόν) is unmistakeably sub-functional, and, above all, his characterization of the ὄνομα as an ὄργανον, a tool, arouses the reader's expectations of a functional phenomenology of language. But subsequently the ὄνομα is considered under the criteria of ὀρθότης (correctness) and ἀλήθεια (truth), and as a result any functional approach is precluded (see Pos 1922: 13). Modern theories of instrumentality readily accept Plato's concept of language as an instrument; this is especially the case with the behaviourists and Bühler. Here the reader is liable to forget that the concept of instrument in

Plato's linguistic theory is different from what seems to be supposed, and that the ancient world did not develop it further, but left it alone.[2] The notion of what we should wish to call the ennoetic use of language, the absorption of language in thought, so becoming in this limited sense a means of thought, Plato's διακριτικόν, does not come to the surface again with any force until the time of Hobbes and Leibniz. Against the background of the theory of mimesis or depiction, however, Plato's so-called sound-symbolism has never completely died out; it is invoked again and again in discussions of language.

Plato looks for truth in the ὀνόματα (names) rather than in the λόγος (sense) of the sentence. Nevertheless—and here he seems, as it were, to take up a position between Antisthenes and Aristotle—he tries to accept names as ῥήματα, as "sayings", or utterances. (The utterances of the Seven Sages were called ῥήματα; μηδέν ἄγαν ['nothing too much'] is for instance a ῥῆμα.) What the analysis of reading a ῥῆμα into a word, e.g. ἄνθρωπος = ἀναθρῶν ἃ ὄποπεν ('man' is 'one looking up at what he sees'), provides in the way of elements (στοιχεῖα) of primary names (ὀνόματα πρῶτα) is regarded as a copy (μίμημα) of the substance (οὐσία), confirming the validity of the term, an imitation of the transcendental idea understood by the mind.

In current writing on the history of linguistics there is generally no mention of the later Plato of the *Theaetetus* and the *Sophist*. In these works Plato's view of language is displaced: λέγειν (discourse) has become *internal* reasoning. The relationship between thing and word has made way for that between thinking and predication; it is now sublunary, cosmos-centred thought to which language is directed, in place of the transcendental idea. Those ideas which participate in the *a priori* components of the universe are expressed by motive forces and what is set in motion. The name is no longer anything more than a record of sound (σημεῖον τῆς φωνῆς); emphasis is now given to the ῥῆμα as a manifestation of the real objects (δήλωμα ἐπὶ ταῖς πράξεσιν). In combination they provide an expression (λόγος) and a (complete) thought (διάνοια). Here the position of the *Cratylus* is abandoned, and, as will be seen, the difference from Aristotle reduced. In the thought process which is internal speech, ideas combine to form the truth. Ὄνομα and ῥῆμα are here on the way to becoming co-ordinates. Before long, Alexandrian grammar was to adopt these words as grammatical terms for noun and verb.

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[2] "... and this model as an instrument may also be found in Plato's *Cratylus*. It was neglected in the nineteenth century, and must be revived and given its former status". (Bühler 1936: 1 [and *passim*]). It was, in fact, not just the nineteenth century, but nineteen whole centuries, that neglected it.

In Aristotle, such transcendental ideas have disappeared, and so, in conse-
quence, has any reference of linguistic phenomena to these ideas. In *De Inter-
pretatione* linguistic sounds are considered to be symbols of what the mind has
experienced (ἐν τῇ ψυχῇ παθήματων σύμβολα). These experiences are the
same for all, and it is always the same things of which these symbols are
representations or likenesses (ταυτὰ πᾶσι παθήματα τῆς ψυχῆς, καὶ ὧν ταῦτα
ὁμοιώματα πράγματα ἤδη ταυτά). What Plato had combined as λόγος or
διάνοια is once again differentiated into sounds and mental experiences, but
Aristotle's position is otherwise close to that of the Sophists. A sound is a
word only when it has become a sign. The mimetic component of language
is for Aristotle no more than a counter of rhetorical utterance, and he does
not reveal any trace of the transcendental μίμησις of the *Cratylus*, or of the
associated onomatopoeia. In fact, Plato himself abandoned it later.

We can thus immediately confirm a certain "demetaphysicalization" of
language, coinciding with a certain "objectification", the latter notably in the
emphasis on sounds, and comparison with animal noises, which are nothing
but sound. The distinction between (audible) speech and thought, however,
remains no more than an item noted as an *aide mémoire* (or rather as an *aide
oubli*); it has nothing to offer the theory of language. Language and thought
do not develop into twins (let alone Siamese twins!); in Aristotle's fundamental
parallelism the distinction goes no further than an internal and an external
aspect of the generalized concept of thinking and speaking as a single act,
which had already been indicated by repetition.

In the *Categories* and *De Interpretatione* Aristotle goes on to speak for prefer-
ence of thoughts (νοήματα) exclusively in terms of mental activity (ἐν δια-
νοίᾳ). While there is some dispute about the relationship between the various
works of Aristotle, it is neverthless almost certain that the *Categories* and *De
Interpretatione* are among his most mature writings. Besides, it can be seen that
Aristotle has no feeling for linguistic function in a more modern sense. To be
sure, he distinguishes language from thought as such, but he by no means en-
visages two distinct heteronomous human activities; on the contrary, although
the distinction between them indicates that they are subject to different
criteria, which should lead one to expect that it takes a deliberate act to form
an association between them, the association here is regarded as so close, and
is presented so uncritically, that there is no possibility of finding any trace of
a functional relationship.

Certainly we may note an advance on Plato, even on the later Plato. Aris-
totle states on one occasion that the ὀνόματα are established by convention
(κατὰ συνθήκην): the sound-symbolism of the *Cratylus* is thus clearly rejected,

and with his "significative sound by convention" (φῶνη σημαντικὴ κατὰ συν-θήκην), Aristotle severs all links with transcendental or *a priori* considerations. The term συνθήκη does not prevent him from expressly asserting the unity and identity of the word; but he does so with logical, classificatory intent. Aristotle operates from a dual technical base, in which existence is opposed to thought as matter is to form. In this scheme language is closely related to thought; and this has fatal consequences, on the one hand for language, which becomes logicalized, and on the other hand for logic and epistemology, which he constructs from the phenomena of language. If language does not serve the ends of thought, it is disallowed as being impure language; and no account is taken of the possibility that it might exist in its own right. Language is impure when a sentence either makes no predication or makes a false predication. Identification by means of the word seems, no doubt, to escape such a discrimination between truth and falsehood, but it is necessary for the word to maintain its character as a regular indicator in the sentence as a whole. In any case, it is only in this way that a word can be used as a subject or predicate. Finally, dialectic, in the sense of active altercation or dialogue as a means of establishing truth, is of less significance in Aristotle, and the sentence now serves as one of several such predications combined within a monologue to form a syllogistic method of establishing proof or determining truth. Thus, for Aristotle, as for the later Plato, truth or falsehood can be considered only as it applies to thinking. The criterion of 'true' or 'false' cannot be applied to an individual word, to an individual thought standing on its own. This is a view which was much taken to heart by later thinkers, and was enunciated again with great force in modern times, by Hobbes, Locke and others. This explains why Aristotle—in contrast to the Stoics—distanced himself from specific etymologies. He was not concerned about the matter of the individual word; what he regarded as important was the association of words into a predication, and of predications into a conclusion. He built his theory of logical categories on his analysis of linguistic predication, and in doing so provided western thought with more than a millenium of logic infiltrated by linguistic phenomena. It may be noted here that it was precisely the *Categories* and *De Interpretatione* by which Aristotle's concepts were transmitted to the Middle Ages.

Aristotle, then, takes the nature of language to lie in its thought-content. He comes closer to appreciating its essential functional character and typical individual quality when he approaches the form of language less from a linguistic than from an aesthetic point of view, especially in his *Rhetoric* and *Poetics*, where, *inter alia,* he discusses style. In a more literary vein, anticipating

as it were the work of the Alexandrians, he labels literary texts by genre. He also studies questions of Homeric exegesis; he is the first to realize that literary history needs documentation, and his *Didascalia* are an example of this.

In Antisthenes, the younger contemporary of Socrates, who introduced the spiritual (as opposed to the Diogenean) tendency of Greek thought, we find the beginnings of the familiar tripartition of physical, logical and practical, which was codified by the Stoics and became common property. This tripartition will be of importance for us later on, for it will be found to play a role in the encyclopaedic localization of language in Locke, among others; but Antisthenes is of greater importance for linguistic theory on account of the notable view of language which he propounded. Actuality and language, or rather things and their names, he says, are isomorphous. This suggests that here, for the first time, the conformity of the structure of language with the structure of life and of knowledge has become the subject of discussion. His handling of the concept of shape (μορφή) seems to imply as much, as does his view that there is no such thing as homonymy. He must also have made an abstraction here between the shape of sound and the unit of meaning. It seems likely that he was one of the few who in this early stage of Greek thought had a deep appreciation of the phonetic differences between languages—he was, after all, of mixed blood, and his mother's language was probably not Greek. He was unique in visualizing actuality as being built up of components which could be either simple or complex; the same structures applied also to nouns. A conclusion is produced by a system of combinations of namings (συμπλοκή ὀνομάτων), in which the guarantee of natural truth is the congruence between the combination of word-forms and structures of reality as perceived by the individual in his repertoire of concepts. Here we can already observe a reduction in the importance allotted to the influence of dialectic, which in Socrates' practice had always been directed towards bringing the *a priori* truth of ideas into the open by a process of elicitation; for Antisthenes the joining of words can occur within the individual, who thus views learning (παιδεύσις) as being achieved by way of mental monologue as well as by the words of the teacher, operating through the combination of names and their association into predications. His basic substances are simplexes or combinations of simplexes, far removed from the generic and universal entities of Plato, "horse", as it were, as opposed to "horseness". Basic meanings refer to fundamental individually existent entities. They are not definable, but at best can be approached, or suggested, through substitution by other words.

Among the other minor Socratics, Euclid of Megara attacks Antisthenes' method of making approximate comparisons by means of words as pseudo-definition, and accepts Socrates' method of disputation by question and answer. Isocrates pleads for rhetorical truth (ἀλήθεια) in the sense of subjective honesty, and Lysias strives for rhetorical clarity; but they make little contribution to linguistic theory.

Antisthenes the Cynic marks a transition towards the thinking of the Stoics. In the Hellenistic period which is now dawning it is the Stoics and Peripatetics who reveal those lines of thought which show the greatest concern for language.

Aristotle did not share Plato's esteem for mathematics; we find little or no trace in Aristotle of the exploitation of the mathematical concept of the image or sign which may be found in Plato's theory of ideas. While Plato's concept of mimesis influenced his symbolic interpretation of sound, language was for Aristotle the exponent of rational judgment, which names, sorts and establishes material provided by sense-perceptions. Language was for Aristotle what mathematics had been for Plato. For Plato it was mathematics, and for Aristotle it was language which provided the characteristic thought-pattern of his central epistemological system.

The Alexandrian School — Pergamum — Rhodes

It is entirely understandable that the collecting and arranging spirit of Aristotle should predominate in the florescence of linguistic study in the new cultural centre of Alexandria. But as a result the Alexandrian school of letters is far from developing a general theory of language; it is not concerned with enquiry into the nature of language. Nevertheless, what happened in Ptolemaic Alexandria was indirectly an important factor in the development of the concept of the independent functioning of language. The creation of libraries with more than half a million book-rolls, a university-like organization with "professors" and "colleges", a stream of publications, broadly speaking an organization and productivity which were unparalleled for two thousand years, all this came about in the cause of language! But how? Linguistics is here primarily the study of the written language, of literature, of textual study. A little later, but still in the service of the study of texts, came the study of grammar. The epic, drama, lyrical poetry and literary prose of earlier times became the subject of investigation—and of imitation. The immense output of the Alexandrian school comprised scholia, glosses collected into lexicons, textual criticism and emendation, aesthetic criticism and

metrics, new editions of old authors, exegetical commentaries, whole mono-
graphs, indeed, devoted to details, literary history and criticism, not to
mention studies of prosody and dialect. In the light of this tremendous
activity, the importance of language, albeit in the derived form of literature,
must have been generally recognized as a powerful force for drawing together
the intellectual life of the cultural society of the day, incomparably different
from what happened, for example, in the linguistic studies of the Brahmins,
which were always a more or less esoteric practice. Alexandria set a seal on
the whole of western culture.

In the last century before the beginning of the Christian era the tendency
towards archaizing in the study of literature yielded to an interest in more
recent material. This development certainly hangs together, too, with the
tendency which had begun to make itself felt in the middle of the previous
century towards the investigation of current language, i.e. the study of gram-
mar and rhetoric. Pergamum and Rhodes, new centres, show a different spirit
from Alexandria, something more like that of the Stoa. As early as the second
half of the third century B.C., Chrysippus had taken an interest in grammar.
We may, indeed, perhaps see the influence of Aristotle in the case system
which Chrysippus had developed, in which the oblique cases were regarded
as "technical" modifications of the nominative; he drew, after all, on the
definitive stage of Aristotle's work, namely on that of his view of the relation-
ship of form and material. The theory of word-classes, too—previously dealt
with by the Alexandrian Aristarchus—was developed further in Stoic lin-
guistics.

Two further notable linguistic questions seem to go back to the Stoic Chry-
sippus: the theory of anomaly, and that of allegorical interpretation. Stoic
etymology may also be mentioned in this context. The controversy between
analogy and anomaly, which has perhaps been too closely identified with
rivalry between the schools of Alexandria and Pergamum,[3] is concerned with
regularity within language. This may be seen in the case of etymology: Zeno
had already drawn a distinction between the physical, the logical and the
practical, or between ontology, epistemology and ethics. In the central field,
as it were, alongside knowledge, comes language. For the Stoic, true know-
ledge is inherent in the etymon, but this can be reached only by way of a
bewildering mass of linguistic corruption and disorder. A related presuppo-
ition is also inherent in Stoic allegorizing, though other motives—the Stoics'

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[3] Or that between the Aristotelians and the Stoics: the way the question was posed by
Chrysippus does not on the whole imply that he was an anomalist. See Dam 1930: 36ff.

aim of preserving ancient texts regarded as religious, and their conviction that poetry preached morals, for example—also played a role here. It is clear that the basis of Alexandrian literary scholarship in preservation, emendation and restoration, as practised by Aristophanes of Byzantium and Aristarchus, among others, needed to draw on analogy as a methodological principle; while, on the other hand, Krates of Mallos, the Stoic grammarian who investigated linguistic structure, was impressed by the anomalous qualities of language as handed down. This controversy petered out because the analogists adapted all anomalous exceptions to their analogical rules (*canones*), by simply increasing the number of their paradigms—from seven to seventy-one.

The *Ars Grammatica* of Dionysius Thrax (about 100 B.C.) is a product of the school of Aristarchus; but greater influence was exerted by Apollonius Discolus (second century A.D.), whose syntax has been preserved; he shows an appreciation of the grammatical cohesion of the sentence, so that Egger was prompted to remark in 1854 of his etymological analysis: "One more step, and we shall arrive at the distinction between root and suffix" (*Un pas de plus et nous toucherons à la distinction du radical et du suffixe*). However, the step was not taken, and indeed it was not taken until the time of Bopp.[4] The great compiler M. Terentius Varro (first century B.C.) transposed the whole of Greek linguistics into Latin, and in the area of etymology his *De Lingua Latina* dominated his successors.

Rhetoric

It is also of great importance to take account of rhetoric. Rhetoric had originally been closely associated with the study of language, and when the two disciplines later became distinct, the practice of the schools at the beginning of the Christian era was for pupils to read poetry with the grammarians, and prose works with the rhetors. But the closest approach to language as a living function was made when the pupil was taught "eloquence" by the rhetor, and practice was gained by making speeches and recitations. This was done with particular attention to purity of diction—the avoidance of "barbarisms"—and stylistic beauty; all manner of so-called tropes and figures of speech were introduced. While the effect of this specialized use of language was observed,

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[4] In the light of the development of grammar in the Middle Ages, it is not without significance that Apollonius still adheres in his *Syntax* to the theory of word-classes: noun, verb, etc. The terms 'subject' and 'predicate', which derive from Aristotle's philosophy, came only later to be used in grammar; Priscian, who was dependent on Apollonius for his syntax did not use these terms.

the effective sense of language in general was disregarded. This attention to rhetoric reached its zenith—or should we say nadir?—in the second century A.D. The Stoics viewed Homer as a rhetorician whose example was to be followed. At this stage in its development, rhetoric had clearly become far removed from anything which might be expected from the living word. Two factors were at work in this process of formalization and fossilization: the disappearance of civil liberty, which had put a damper on free discussion, and the steadily increasing conformity of the language of the educated to the language of literature, which was regarded as normative.

A brief sketch of the historical development of the subject may not be out of place here:[5] while rhetoric had by its very nature been practical when it began in the fifth and fourth centuries B.C., a systematic theoretical tradition grew up century by century in the course of its development. The controversies which frequently flared up between speakers of languages and theorists of language led them to reflect upon of the scope of rhetorical activity. It might be said that the fate of grammar was at stake; at one time it seemed that the influence of philosophical dialectic would triumph over grammar, at another grammar seemed to be at the mercy of rhetoric. To be more precise: within philosophy it is the Stoics who by tradition are rhetorical, while the nature of Aristotelianism—and *a fortiori* Platonism—has room for few if any rhetorical developments. This no doubt tallies with the energetic and dynamic character of the Stoics, in comparison with the basically analytical and contemplative nature of the Lyceum and the Academy. For the Stoics, knowledge and reflection are in the service of practical ethics. While a tendency towards the formalization of grammar may be found among the Peripatetics and Academics, the Stoics are concerned only with the utility of language; and for this reason they also approach language from the point of view of rhetoric. As we have seen, the Stoics did not hesitate to deny the immanent analogical quality of grammar, since they did not consider they were calling its powers of persuasion into question by doing so. In dialectic, the Stoics are less concerned with classifying than with investigating the demonstrative power of the components of a proof, for example in composite hypothetical proofs, and to

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[5]   The development of the notion of linguistic function among the humanists is based on the renewed importance of the transmission of classical rhetoric. It is interesting further to note Bühler's parallels between expression, effect and representation on the one hand, and lyric, rhetoric and epic or drama on the other, a parallel which was made "in order not to lose the thread" (1936: 32). Speculative, no doubt, but by no means nonsense.

establish that premisses could not be proved was of a piece with their epistemological principle of evidence.

But it is not the case that the relationship of rhetoric to grammar and dialectic was thrown into relief by the tendencies of philosophy or that rhetoric was as it were prompted by philosophy, especially Stoic philosophy. There is, rather, a certain inner affinity which occasionally led rhetoric and this form of philosophy to approach one another. While rhetoric did indeed experience times of weakness, it was able none the less to hold its ground throughout antiquity. The first Arts (τέχναι) emerged from the practice of sophistry; the tendency towards rote-learning which had begun in this way led in Isocrates to a totally non-practical academic subject; he wrote speeches for others. After fierce opposition from Plato, Aristotle received rhetoric into the theory of philosophy. The reduction in democratic freedom of speech forced rhetoric still further back towards the schools. Controversies arose about style: florid Asianism, and sober Atticism in reaction to it. The Stoics were on the whole on the best terms with rhetoric, Epicurus was fiercely opposed, and the Peripatetics were content to draw a boundary between the two tendencies and to allow to each his own. Hermagoras of Temnos (second century B.C.) produced a new theory, which amounted to the principle of *stasis* or *status*, i.e., the theory of defining the problem; this was of great influence on the forensic oratory of the Romans. Atticism established the canon of the ten Attic rhetoricians, and in doing so called for a revival of linguistic purity (Aristeides, second century A.D.). The so-called second Sophistic introduced the travelling orator, received in state and showered with praise for his usually empty displays of virtuoso speech; it is only stylistics which drew any benefit from this whole development.

The Stoics — Jewish and Christian exegesis

In Rome, the influence of the Greeks came to predominate shortly after the time of Cato. So here, too, we find rhetorical τέχναι, and Asianism *versus* Atticism. Cicero thrust formalism back with his call for a general philosophical refinement, thus bringing the whole personality of the orator into rhetoric. He did not set up a technical system of his own, and once this enlightened first stage is over, rhetoric shrank into theory and scholastic declamation. In exile, far from the free platform, it became more and more the protectress of literary studies, especially of literary prose, including the writing of history, in some respects reflecting parallel developments in the Eastern Empire. The archaizing and imitative current also met an Asianizing

and modernizing reaction. Quintilian took up a central position between these two extremes; his *Institutio*, the tenth book of which constitutes, as it were, a complete history of literature, adheres to Cicero and his insistence on personal commitment, but extends the compass of rhetoric to the whole range of letters, setting out in theory by this ambitious scheme what had already largely been achieved in practice. The further development in the West then proceeds more or less in parallel with that in the Greek-speaking part of the Empire: becoming ever more scholastic, imitating authorities, and dealing increasingly with literature.

The Middle Ages received direct from antiquity a division, first made by Aristotle, of rhetoric into three classes: forensic (δικανικόν), deliberative (συμβολεύτικον) and demonstrative (ἐπιδεικτικόν). The theory further distinguishes five parts of oratory: invention (εὕρεσις), arrangement (τάξις), elocution (λέξις), memory (μνήμη) and performance or pronunciation (ὑπό-κρισις). For the more philosophical theorists invention was the most important; it formed an interface with logic. For Aristotle rhetoric is a formal art, analogous to logic and applicable to all branches of knowledge. In the Stoic tradition there was a tendency to value it more highly, so far as we can infer from Cicero and above all Quintilian, because it was a technique of speaking eloquently (*scientia bene dicendi*). Aristotle and Quintilian provide the two most important examples of the Greek and Roman mentality in the area of eloquence. Aristotle's *Rhetoric* is, so to speak, a philosophy of rhetoric, classifying it as a power of the understanding: rhetoric is an activity of discovering all things conducive to persuasion in oratory (*vis inveniendi omnia in oratione persuasibilia*). However, Aristotle discounts the *effect* of oratory: in Quintilian's view he "holds back from the result" (*recessit ab eventu*); and his rhetoric in fact comprises only invention. Quintilian, drawing on Cicero, asserts that the orator has three aims, to inform, to persuade and to give aesthetic pleasure (*tria sunt, quae praestare debeat orator; ut doceat, moveat, delectat*). This is not an abstraction made by working outwards from the objectively given discipline, but from the subjective individual and his functions (*praestare*). Quintilian thinks methodologically and encyclopaedically; however, the range of his scholarly activities, as has already been noted, covered practially the whole field of literature. This leads finally to a form of literary scholarship, pedantic no doubt, but, in contradistinction to the Peripatetics' approach to literature, always sensitive to the energetic component of discourse (*logos*).

The one-sided interest in the written language, though associated with an enduring awareness of the power of language, seems also to inform the principle of allegorical interpretation practised by the Jews in the tradition of the

Stoics. This method of scriptural exegesis, applied to the revelations of the Word in the Old Testament, flourished greatly in the large Jewish colony of Alexandria soon after the beginning of the Christian era. The Word of God has a double meaning; but this special view of the language of revelation has no significance for everyday human use of language. Interpretation through allegory even entails God's using human language in order not to be understood, revealing himself while he conceals himself. Philo, the Jewish, and Origen, the Christian allegorist contributed nothing to the analysis of the nature of language. Their notion of a sense behind the sense—Origen went so far as to distinguish three senses, literal, allegorical and spiritual—may suggest that they had hit upon the metaphorical properties of language, but the exclusively theological orientation of their exegesis means that their concept of the word (*logos*) is only used to support their speculations on the Word of God.

We do, however, find something of a wider perspective in Augustine—one not restricted to biblical exegesis—though the interpretation of Scripture nevertheless forms the basis of his views. Augustine works with the concept of the *sign* (Kuypers 1934). The sound of words is exclusively a sign, and things are also signs—for the spiritual content underlying physical objects. In this last case Augustine's Platonism, the hypostasis of the idea, is unmistakable. Augustine deals with the mimetic element in the sign, which is present in the plastic arts, but not in the words of language; language is in fact established by imposition (θέσει). Furthermore, unlike the Alexandrian allegorists, for whom "spiritual" exegesis was the only valid exegesis, Augustine holds to both literal and figurative Bible interpretation. A certain two-term system of sign relationships may also be discerned in Augustine's thought; a system the like of which we shall soon encounter again in the works of Occam.

While we can therefore see an influence from Plato, via neo-Platonism, on Augustine at the beginning of the Middle Ages, it is nevertheless the ideas of Aristotle and the Stoics which generally preponderate in matters of language and knowledge. We have seen this already in the area of language, i.e. in literary studies and grammar. Aristotle's *Categories* and *De Interpretatione*, together with the *Introduction* of Porphyry, enter the Middle Ages through the medium of Boethius' translation.

About 350 A.D. in Rome, Donatus codified the current grammatical views of his day in his *Ars Grammatica* ("Art of Grammar"), an unpretentious school textbook. The *XVIII Libri Commentariorum Grammaticorum* ("Eighteen Books of Grammatical Commentaries") of Priscian, who was writing at Constantinople in the time of Justinian (about 500 A.D.), is more extensive and influential,

a culmination and reservoir of ancient grammar, handed down to us in approximately a thousand manuscripts.

Grammar and textual studies in close association, though only at the expense of the latter, constitute the legacy of antiquity to later times. Textual studies derive mainly from Aristotle and the Alexandrians; the congruence of linguistic structure as form, and thought as content, is accepted almost uncritically. On the other hand, grammatical investigation, including etymology, shows characteristics of Stoic thought. The Stoics, from their dogmatic standpoint, did to be sure perceive a sharp discrepancy between language and actuality, but they asserted the logicality, the reasonableness of language, which departed only apparently from logicality; they showed this in their exegesis through allegory, in lexicon through etymology, and in structure through grammar. That they started on their grammatical investigations by rejecting as uncritical and naive the concept of analogy which the Peripatetics had accepted, only goes to show that the Stoics realized how serious the problem was, and did not consider it to be disposed of by a series of superficial sets (*canones*) of words associated to one another by external analogy.

Besides these two traditions, which towards the end of classical antiquity had become entangled with one another, and Augustine's more general theoretical linguistic notion of the sign, there is also a second ancient tradition of linguistic analysis, which later came to the fore in the west, namely, Epicurean semiotics. This was, however, very weak to begin with, and took a long time to become established. Several reasons may be adduced for this: first, that it probably expounded something more like an epistemological position opposed specifically to Stoic determinism and dogmatism rather than a theory of language; secondly that Epicureanism never succeeded in establishing itself in Rome and the West as firmly as the Stoics and Aristotle had done, and that as a result semiotic ideas hardly ever again received a hearing after the Greek tradition and Græco-Byzantine scholarship had, through various channels, found fresh entry to the west from the twelfth century on; finally the evil reputation of atheism accorded to Epicurus and his like. Epicurean thought about language is in general confined to the theme of origin. The principal document is Lucretius' *De Natura Rerum* ("On the Nature of Things").[6] For present purposes the question of origin is of secondary

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 [6] The term σημείωσις (marking), which Locke reintroduced, appears to occur in the title of a work of the Epicurean Philodemus, known from a severely damaged copy found at Herculaneum in the library of the Epicurean Piso. Philodemus devotes extensive passages of his work to a contention that the study of separate branches of learning is of no use to the philosopher,

importance; it is mentioned here, however, because the eighteenth century, in particular, was to return repeatedly to this topic.

It was through the three channels of the arts of language (*artes sermocinales,* the general name of the three arts of the Trivium, viz., dialectic, grammar and rhetoric) that ancient thought about language was transmitted to the Middle Ages. Dialectic corresponds to Aristotelian rhetoric, grammar based on textual exegesis takes over the task of protecting literature from rhetoric. The Christianization of the west, however, initially required of grammar only that it should produce a command of the language of the church as quickly as possible, and the assumption of this role meant that texts of literary value but heathen origin fell into neglect in monastic libraries. Any interest in literary texts was reserved for those by patristic authors. Traditional rhetoric was exploited only by the clergy for the composition of sermons. Etymology repeated Varro.

Antiquity and linguistic function

Since the theories of Antiquity outlined above seem to offer so little appropriate to linguistic functions, the reader may feel disappointed, in spite of the warning in the Introduction, and ask whether a survey of the kind undertaken here has been worth while, the more so since some of the analyses, for example that of Alexandrian philology, seem to stray a long way from the central theme of this study.

The reason is that any theory which, no matter how abstract and elaborate it is, nevertheless sets out in principle from direct experience, amounts to a concept of functions. Functions, or effects, specifically of language, can be observed only in the light of the complete reality of language. Thus, in classical antiquity, the role which language played in the whole of ancient culture underlies all the polemics of the philosophers about its nature. The problem of language——and with it, the question of functions, no matter how deeply it may lie hidden——would never have been of such importance as it was in Antiquity,

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demonstrated with arguments drawn from academic scepticism. Locke cannot have known of this source, but must have derived his knowledge directly or indirectly from Diogenes Laertius and Sextus Empiricus. Epicurean views of language seem to have followed the Greek tradition, and to have re-established contact with the west by way of the Byzantine empire. Lucretius' view is that "it was nature that drove men to utter the various sounds of *spoken language,* and practical convenience that gave a form to the names of objects" (*De Rerum Natura* V, 1028-9); "And so, if their various sensations lead animals to produce different sounds, even though they are dumb, how much more should not mortal man likewise have been able to denote different objects by all manner of different sounds" (V, 1087-90). The whole preceding passage (1030-86) likens human language to animal cries expressing joy, fear, the mating urge, etc.

if, for example, the free use of language, the free expression of opinion, had not been such an esteemed cultural possession, if the arts of language had not soared so high, and if the study of literature, begun in Alexandria and continued elsewhere, had not been practised with such astonishing astuteness and powerful apparatus. If the underlying cultural facts are neglected, an investigation of concepts of linguistic function is as seriously flawed as would be an attempt, for example, to investigate and comprehend the state of medical opinion in a given cultural period without a knowledge of the hygienic conditions in which it is set. And the investigation undertaken here can escape foundering on the rocks of sterile abstraction only by constantly supporting historical views of linguistic function by reference to the total practice of language, both spoken and written, and views expressed about it, both in the periods under discussion and in general. It is for this reason that the way classical antiquity experienced and discussed language has been sketched in here, however briefly, from the beginning in (pseudo-) revelatory myths to the arid textbooks from which barbarians had to learn the one model language of the church. This is why it is useful to trace the conflicts between thinkers about language and users of language, the latter often becoming in their turn theorists of language. After enquiry by the philosopher (σοφός) into what language is, it is the Sophist——"half professor, half journalist", as Gomperz puts it——who again provides fresh insights into what language actually does. Socrates, who regards everything as being actuated by knowledge, and expects knowledge to be acquired through dialogue, assigns to language the servile role of bearer of knowledge. Plato's criterion of correctness and Aristotle's theory of judgment obscure the theory of function still more. The Alexandrians lock themselves behind a double door; they see language as an unchanging store of thought, and in the form of written language at that. The Stoic view of language as the proclaimer of truth is in turn a corrective to this. Here the analogical regularity of literary interpretation rediscovers something of a live set of issues and a criterion by which functions may be assessed. Meanwhile, the Sophists found the channel of rhetoric, Plato's bête noire. After Protagoras' view of language as a weapon, seeming as it does to supply the weakness of language with muscle for use in the political power-struggle, rhetoric makes the more modest offer of power of persuasion, only to be diluted in later ages into a course in elegant oratory, or rather spinning fine words. Yet in classical antiquity it was rhetoric that was the branch of linguistics which stood closest to a functional view of language. Its tradition was soon to bear fruit in the revival of the notion of linguistic function under the auspices of humanism, and it was worth while for the reason given above to devote considerable space to describing it. To state the position briefly, and in admittedly imprecise terms, textual criticism and gram-

mar asked the question, "What is language like?"; philosophy, "What is language?", and rhetoric, "What does language do?" The Stoic theory of allegory, which arose from the desire to preserve the truth of Homer's writings, and was taken over as a method by Jewish and Christian exegetes of Holy Scripture, sees this language as an intellectual game of hide and seek; but these expounders of the Bible fail to observe that language in general has an intrinsically metaphorical character. Etymology seems to some extent to deal with the genesis of words, and Lucretius gives a speculative philosophical account of the origin of language; in both these areas a faint glimmering of a diachronic approach may be discerned, and in addition Lucretius associates language with the life of the mind and the emotions by continual transitions between these two areas.

At the beginning of ancient linguistic investigation stood the obscure thinker Heraclitus with his concept of universal logos; at the end, Augustine, the preacher of the Gospel, with a similarly universal concept of the sign. Both these concepts provide a key which gives access to an understanding of the meaning of things. For the heathen subjectivist this key is the theory of the unity of opposites; for the Christian realist the key is belief in the revelation of the thoughts of God through and in man, his creature. For both schools of thought the cosmos is a discourse, but the one sees the irrational as being the product of logos, the conformity of opposites (coincidentia oppositorum), while the other leaves the irrational, or rather what it sees as the supra-rational, in the hands of God, as sign. These two views of language come closer together within the repeatedly recurring concept of the relationship between language and thought, where classical antiquity is always inclined to treat thought and language as a unity; and of the polar extremes Heraclitus inclined to the side of thought, Augustine to the side of speech. This co-existence in one prescientific concept caused tensions throughout the classical age, but there was seldom any awareness of the antinomian character of these tensions, the more so because the most elaborate systems of thought either ignored this antinomy or appeared to resolve it. However, the contradictory presence cheek by jowl of the implicit and cognitive principle on the one hand, and the typically semasiological main principle of language on the other, are felt, by philosopher and linguist alike, to be in opposition to the principle of control and order which is proclaimed by the rhetoricians as the power and the supreme quality of language.

Between these contending factions Epicureanism moves like an enfant terrible whom everyone avoids, with a few comparatively advanced distinctions of function. They are, however, given little prominence, and are then as it were shouted down, or at least receive hardly any attention. If Epicureanism seems for this reason to be of little importance in the description of the effective currents and factors in the history of the development of the concept of function in Antiquity,

and thus in this context to deserve little more than a brief mention as a historical curiosity, it does nevertheless reveal, albeit in rudimentary form, surprising insights into the concept of function based on criticism of its great and predominant rival, and these deserve to be discussed here in a few words.

The Epicureans——Metrodorus of Lampsacus, Colotes, Phaedrus, Philodemus, Lucretius——are all sensualists, in their attitude to language as elsewhere. Language has cognitive value for them only in so far as it expresses knowledge obtained by the senses. This is its primary, and its only concern. The Stoic doctrine of the reproduction in language of truth in respect of the object under discussion, and also the use of language for the dialectical establishment of truth in Socrates, are thus rejected by the consistent subjectivity of the Epicureans. Truth for them is no more than the "truth" of the evidence of the senses; even mathematics is valid only in so far as it is legitimized by sense-perceptions. The relationship of language to things is entirely arbitrary and random. The emotional content of language, however, is natural, and present even before cognition through sense-perception. Poetry is justified only as emotional expression with aesthetic intent. Rhetoric lacks this justification, since it turns to the emotional for cognitive persuasion, and is for that reason reprehensible (see de Lacy 1939: 85f.).[7]

It can be seen that Epicureanism is battling on both fronts, against philosophy and against rhetoric. Its conceptions in general and a fortiori its view of language as set out by Lucretius in his Latinizing and popularizing didactic poem are too narrow a bridgehead to make possible a wholesale transmission to the Middle Ages. If Epicureanism was not a significant factor in history, it is certainly a historiological curiosity from the point of view of linguistic functions.

In the Middle Ages it is primarily in the disunity between grammar and logic (also termed dialectic) that the still unresolved tensions become noticeable. Only on the very threshold of modern times does Humanism go on to the attack against those who value language for what it thinks and signifies, and set up in opposition an evaluation——that of the ancient rhetoricians!——an account of what it does, of what it achieves.

Confidence in the logicality of language is characteristic of the early Middle Ages, but towards the end critical spirits take up arms. The main lines are few in number——at least where language is concerned. We shall follow these, and the prehumanistic intermezzo of Orleans will be the next object of our attention.

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[7]   De Lacy's short but informative article gives a careful account of the (not very extensive) literature on the subject since Usener revived the study of Epicureanism in 1887. De Lacy, however, has nothing to say about the influence of these concepts on later views of language.

THE MIDDLE AGES

Part I: The Realistic view of language: The Humanities at Orleans,
Thomas Aquinas, Speculative Grammar, Raymond Lull

DONATUS' *Ars Grammatica* and Priscian's *Institutiones de Arte Grammatica,* textbooks of the written Latin language composed in the fourth and fifth centuries A.D., emerged out of the cultural chaos of the Migrations. Both these books, more especially that by Donatus, served for hundreds of years in the teaching of Latin. Latin is the language of the Church and missionaries; and it is only when more or less closed linguistic and ethnic communities were established that Bible translations were produced, e.g. those in Gothic and Bulgarian.[1] These undertakings are not concerned with the study of language as such, and even Hebrew and Greek were still imperfectly known. It was the so-called Carolingian Renaissance that brought some revival of scholarship, based on the works of classical authors preserved in monastic libraries. Grammar, together with dialectic and rhetoric, constituted the propaedeutic Trivium as it was taught in the centres of learning which gradually came into being.

At this time, grammar sets out to be both the exposition of the poets (*enarratio poetarum*), and the art of speaking correctly (*scientia recte loquendi*). This is the situation until about 1100, three centuries in which there was no observable progress; at most scholars were engaged in writing commentaries on the authorities who were accorded undisputed and unqualified respect. Furthermore, grammatical knowledge was drawn from the *Etymologiae*, written about 600 A.D. by Isidore of Seville (c. 570–c. 635), in which the author, beginning with language and frequently reverting to it, used extensive source material to compose a descriptive compilation of the whole compass of the human

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[1] The (strictly speaking pre-mediaeval) Gothic translation dates from the fourth century, and the Bulgarian from the ninth. The earliest Celtic literary monuments, in Old Irish, date from the seventh to the ninth century, as do those of Old English, Old Saxon and Old High German.

knowledge of his day. This work was studied intensively by the more advanced students, but the result was that they no longer had a direct approach to classical authors (see Sandys 1906: 457). Of equally great importance for teaching in the early Middle Ages is Martianus Capella's *Nuptiae Mercurii et Philologiae* ("The Marriage of Mercury and Philology"; early fifth century). The seven bridesmaids are the Seven Liberal Arts (see Sandys 1906: 241ff.). This book brought the cyclical curriculum of Trivium and Quadrivium from classical antiquity to the Middle Ages, and remained in use as a textbook until the thirteenth century.

The Humanities at Orleans and Chartres

From about 1100 a new wind begins to blow. The Crusades brought the West into close contact with the refined culture of Islam. This contact led to an enhanced esteem for the arts and literature and to a renewed study of Aristotelian philosophy. A fresh vigour was apparent in all spheres of activity, not least among grammarians. In Italy, especially at Bologna, where the study of law flourished, grammar was incorporated into jurisprudence. It was studied and taught as an *ars dictandi* (art of composition), with the aim of codifying precisely the legal terms used in argumentation. As a result, it was inevitably reduced to the level of an auxiliary subject in the study of law. In France there emerged what may be called a pre-humanist revival of classical literary studies. In Orleans and Chartres (see Clerval 1895), and initially also in Paris, classical authors were once again read and studied for their aesthetic and edifying value. But important as this development was in the wider cultural context, this study of literature does not seem to have entailed any progress in linguistic study as enshrined in grammar: indeed, in this area of humane studies a somewhat disparaging attitude towards Donatus and Priscian may be observed.[2] Grammar is now no more than an aid to the interpretation of classical works in both verse and prose, and grammatical compilations and digests were eagerly used. The special study of "Barbarismus", the third book of Donatus' treatise, is characteristic of this trend, and of the value it ascribed to grammar. About 1200 there even appeared versifications of grammar in hexameters, the *Doctrinale* of Alexander de Villa Dei and the *Graecismus* of Eberhard of Béthune; and while the introduction of these simplified mnemonic grammars into teaching was not an immediate success—they were not incorporated into the syllabus until 1328 at Toulouse,

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[2] "They knew no bounds but those dictated by necessity" (Wallerand 1913: 39).

and until 1366 in Paris, displacing Donatus and Priscian—a change in emphasis may be seen at the turn of the twelfth/thirteenth centuries. The Faculty of Arts at Paris had already departed from the bonds of the Trivium, Chartres was in decline, and only Orleans maintained the tradition and continued to exert influence, mainly in Southern France (Wallerand 1913: 40). We possess a remarkable dramatization of the controversy between 'philology' (the *auctores*) and the new current (the *artes*) in Henri d'Andeli's poem *La Bataille des sept Arts des Troubadours* (1256) (see Paetow 1914), an allegory in which the classical Humanistic Letters of Orleans take up arms against the Logic of Paris. The assailant loses, and the poet concludes by expressing the hope that there will be another chance, a hope that was, indeed, fulfilled in the humanism of a century and a half later.[3]

We can date the climax of this literary and aesthetic interlude in humane studies at Chartres and Orleans to between 1150 and 1250. It is an expression of a revival in the status accorded to language and its beauty in general. While it did not contribute, at least initially, to the theory of the nature and essence of language, the intermittent appearance of movements such as this one of humane studies at Orleans is evidence of what may be called an "underground" continuation of a living tradition of affection for literature and the classics. The awakening of the concept of functions in the humanism of the modern era draws on, and is supported by, the self-same tradition.

The champion of this movement was John of Salisbury (1120-1180). He was born in England, and studied in France, later returning to spend many years in his native land (Sandys 1906: 537). He was influential both in England and in France, where he died as Bishop of Chartres. He was the outstanding humanist of the Middle Ages, and an incomparable stylist, on the model of classical authors.[4] The tenth and eleventh centuries had engaged in controversy about the importance and extent of dialectic. Anselm of Besate, and above all Berengar of Tours, had assigned to logical reasoning a decisive role, even in matters of faith. This opinion attracted vigorous opposition from the church, and Berengar's views on the Eucharist were condemned as early as 1050. It was in opposition to such an overvaluation of a logic which had

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[3] "Orléans had neglected the study of philosophy and had insisted solely on the attainment of purity of style through the direct study of classical authors, especially Virgil and Lucan. The AUTHORS were supreme at Orleans, the ARTS in Paris" (Sandys 1906: 676f.).

[4] Besides the works of Donatus, Priscian, Cicero and Quintilian, which he knew as a matter of course, he also knew those of Terence, Virgil, Horace, Ovid, Lucan, Statius, Persius, Martial, Juvenal, Claudian, Justinus and Valerius Maximus; Seneca, Petronius, the two Plinys, Gellius, Macrobius, Apuleius. (See Sandys 1906: 541).

been reduced to a formalistic system of reasoning, but which still had many adherents in his day, that John of Salisbury set up his Platonic conception of dialectic[5]. Dialectic, considered as a technique of reasoning, was a servant of the sciences, the source of their content; it does not dominate them. But it can nevertheless not be ignored. In his *Metalogicus,* our principal source for the early history of the controversy over universals, John of Salisbury is also a practitioner of the history of philosophy.[6]

This revival of humane studies at Orleans and Chartres is embedded in a broader current of more philosophical nature, the so-called School of Chartres, to which belong Gilbert de la Porrée, Bernard Theodoric of Chartres, William of Conches and Bernard of Tours, among others. Adelard of Bath (c. 1090 – after 1160) and Otto of Freising (c. 1114-1158) may also be included in their number. Mathematics, literary studies and Platonic philosophy go hand in hand for most representatives of this school (see Sassen 1932b: 125ff.). That it was finally trodden under by the renewal of Aristotelianism is of a piece with the reputation of paganism in which the study of classical authors stood (Kroll 1909: 66ff.). Some of these thinkers also held Epicurean ideas, e.g. the theory of the atom; this, too, may have contributed to their reputation.

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The new movement in linguistics which caused the Faculties of Arts in the university community in general to miss the revival of letters, and indeed to oppose it, and of which John of Salisbury complained, "any form of letters is burdensome; only logic satisfies them" (*Quaevis litera sordescit, logica sola placet,* see Wallerand 1913: 41), began, hardly noticed at first, with a Commentary on Priscian, written about 1150 by Peter Helias. This in no way means that there had been no commentaries on the two traditional grammarians before then. The ninth-century commentary on Donatus by Remigius of Auxerre,

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[5]   When John of Salisbury went to Paris, "he found the Schoolmen busy with their wordy warfare, ever producing some new opinion on *genera* and *species,* unknown to Plato or Boëthius, which they had been fortunate enough to extract from the mine of Aristotle. The scholastic treatment of Logic is also abundantly illustrated in his METALOGICUS, where he vindicates the claims of 'Grammar', or a scholarly knowledge of ancient literature, while, in defending an intelligent study of Logic, he insists that it is useless in itself, being only important when associated with the other arts" (Sandys 1906: 538). "In that School [i.e. Chartres]... the pupils wrote daily exercises in prose and verse, founded on the best models only, and corrected one another's compositions, besides learning passages by heart and holding discussions on a set subject" (p. 539).

[6]   Humanism was later, in Bruni for instance, to revive the study of history.

inter alia, had enjoyed a wide currency; but Peter Helias' commentary is novel in looking upon grammar from the point of view of Aristotle's theoretical position. The philosophical interest Helias shows in language thus derives from the Aristotelianism which was developing from the beginning of the twelfth century. Within Aristotelianism, however, there developed an old opposition, that between realism and anti-realism. This results in two theories of language which, though they both start from logic, yet lead to opposite conclusions. The first, the one introduced by Peter Helias, leads to a positive theory of the vindication of language, while the other, as a result of epistemological scepticism, credits language with little value as a vehicle of knowledge. As the realistic view of language was developed earlier, I will examine it first, even though the later nominalistic theory had its precursors in Roscellinus (1050-1125) and Abelard (1079-1142), who had been influential for many decades before Peter Helias put pen to parchment.

The eleventh-century dispute over the validity of logic had called forth a reaction from the language-orientated school of Orleans against the arid formal procedural logic of the *philosophi*, but the grammatical component of their linguistic studies remained subservient to their study of literature, while at the same time in Italy, grammar had practically become the handmaiden of law (but see above, pp. 23-24). "I desire to reinforce grammar with the help of dialectic"[7] could have served as a slogan for the intentions of Peter Helias' grammar. Grammar had been subservient to jurisprudence at Bologna, and though in humane studies at Orleans it was honoured in words, it was neglected in practice; but support of this kind from logic was of course of questionable value for the functional autonomy of language.

It took more than a century for this view of language, introduced practically unobserved by Peter Helias, to be recognized. Its principles came into their own when they took their final form at the University of Paris at the beginning of the thirteenth century, while the study of the classics had to give ground. Even here, classical letters still had a champion in John of Garland until the middle of the century, but as the century ran its course the development of logical grammar gradually gained ground; and it is embedded in the realistic thinking which triumphed in the great schoolmen Albertus Magnus (1206/7-1280), Thomas Aquinas (1225/6-1274), and Duns Scotus (1266-1308). A few words are needed here to give a broader context.

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[7] *Cupio per auxilium dialecticae grammaticam adiuvare*. The reply of a student to a warning by Buoncampagno of Bologna against the neglect of grammar, quoted by Sandys 1906: 666 from Thurot 1866: XXII (ii), 90.

Although Aristotle's *Categories* and *De Interpretatione* had been available throughout the Middle Ages, thought was initially dominated by a christianized neo-platonic realism, within which a strand inspired by the vitalistic and symbolic thinking of Augustine stood in contrast with the Areopagitic principle of the absorption of nature in the Godhead.[8] But despite this and other inner tensions, a broadly Neoplatonic realism was the leading view until about 1100. In the last century of this period the dispute sketched above concerning the role and extent of dialectic had taken place (Berengar of Tours), and there had already been a fierce preliminary skirmish in the controversy over universals (Roscellinus)—this will be discussed further in the context of the nominalist theory of language—and the last great medieval Augustinian (Anselm of Canterbury, 1033-1109) had come forward. In general the leading view is that knowledge and faith are in harmony with one another; and this view continued in the next two centuries. Meanwhile the forces of opposition, never entirely silenced, were forced to adopt a sharper critical approach. In these movements linguistic theory is involved.

Neoplatonism was still active in the literary classicism of the twelfth-century schools of Chartres and Orleans described above; but, although some further original Platonic works became known in the West—Henricus Aristippus translated the *Meno* and the *Phaedo* in about 1160—the great gains brought about for western scholarship from contact with Judaeo-Arabic philosophical and scientific literature gave Aristotle the advantage. When Peter Helias produced his commentary on Priscian he barely drew on the so-called *Logica vetus* (ancient logic), i.e. the *Categories* and *De Interpretatione* in Boethius' translation, together with Porphyry's *Isagoge*. But in the second half of the twelfth century the two *Analytics*, the *Topics* and the *Sophistic Elenchs* became known (being, *inter alia*, translated by Jacobus Clericus of Venice in 1128), and the *Organon* known as the *Logica nova* ("new logic") was complete. Remarkably enough, it was the Orleanists Adelard of Bath, Otto of Freising and John of Salisbury who were among the first to become acquainted with this. But it is philosophy which masters and assimilates the new discoveries, and in so doing develops into the most elaborate corpus of thought in realist high scholasticism.

This came about, however, mainly in the thirteenth century. Even in the

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[8] The relationship between church and state is seen very differently by these two schools of thought: for the Augustinian the church advises the state. For the Areopagite the church is the soul, and the state is the body; the church dominates the state. The importance of these viewpoints is apparent from the part they played in the Great Schism of 1054 and the conflict between the Emperor Henry IV and Pope Gregory VII (1077).

time of Neoplatonic realism, for example, in such writers as John Scotus
Eriugena and Anselm, thought was well acquainted with, indeed completely
permeated by, such concepts as genus, species, difference, property and acci-
dent, the "five voices" of Porphyry's *Introduction*.

Thomas Aquinas

It was in Thomism that realism, in its intellectualized form, gained a great
influence—which has endured—as a view of the world and of life. Since the
most important linguistic theory to come out of the Middle Ages is bound up
with this form of realism, the investigation of mediaeval linguistic theory can
be undertaken only after a preliminary account of Thomism. Behind the "five
voices" and a whole further series of concepts there lie deep-rooted principles
which contribute to delimiting *a priori* the realistic view of language and gram-
mar.

Realism follows both Plato and Aristotle in asserting that underlying all
creation there is, so to speak, a factor which determines its structure, and that
this is communicated to us through objects as a general world plan. The
highest truths present themselves to us through revelation; all that rational
investigation can achieve, in Anselm's view, is to confirm them, and in the
process give what is generic and universal greater claims to reality and truth.
Being is now considered in degrees of reality, in which the Creator, as the
most general being, is also the most real being; this is the reasoning which
forms the basis of Anselm's so-called ontological proof of the existence of
God—that God is *ens realissimum*. Being (*esse*) thus becomes a quality, an acci-
dent which is comparable with other accidents. The more highly differen-
tiated a being, an essence (*essentia*), the less its incidence (*existentia*). The all-
embracing genus is substantial, and individuals are characterized by specific
accidents of this substance; for Socrates, existence as a human being is real.

Thomas Aquinas (1224-1274) was a realist of more moderate views.[9] The
underlying principle of Arabic and Jewish philosophy had been to rise from
the faith of the simple believer to an esoteric rational belief. In Thomas the

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[9] Thomas Aquinas is of incomparable stature as a representative of the period between Peter
Helias (c. 1150) and the *Modistae* (from about 1300 on). His great influence on his own age and
that which followed is generally known, but his views on language are less well known. These
have been examined by Manthey (1937), and material may also be found in Rotta (1909). It
should, however, be noted that Thomas is not part of a development from Peter Helias to the
Modistae; rather, as a non-linguist, he stands to one side.

opposite trend predominates, and this leads him to modify Anselm's ideas; Thomas considers philosophy to be a preamble to faith, and the highest truths to have the character of unprovable items of faith. Revealed knowledge enhances natural philosophy as a complement provided by divine grace. The ultra-realism of Anselm, which makes extreme pronouncements in respect of language, in which, for example, speech and thought appear to be equated (see Manthey 1937: 178), is thus mitigated by Thomas.[10] Instead of basing understanding on unquestioning faith we now have an understanding which, as it were, forms a preliminary stage in establishing the truth of faith. This point of view leads by way of an extensive adoption of Aristotle's theoretical system and the systematic development of a natural philosophy to a realism which makes Anselm's seem naive. Yet this intellectualized realism of Thomas's gives his apologia for an underlying realistic view an extremely firm basis.

The eternal law, he maintains, originated in the reason of God. It has a corollary in the created world in the natural law inherent in nature. All things derive from, and partake in, the absolute form of divine reason as their efficient and final cause. According to this teleological scheme there is a hierarchical structure within the created world according to which the lower sphere constantly provides the material which appears as form in the higher sphere. The material is potential: it adopts a passive attitude to the form which determines existence. Accidental delimitations occur as random forms in a substantive form of existence. Man is a unity of soul and body, in which the soul is the form of the body. In spite of this close association the soul is immaterial, it is an underlying form. It is on this that the immortality of the soul is based, with the proviso that this applies only to the rational or understanding soul; lower levels, such as the vegetative or perceptive soul, are indissolubly linked to the body.

In order to receive knowledge, the understanding stands passively open as a *tabula rasa* (blank page), which receives images. The active intellect discovers essentials by abstraction from images received through the fallible sense-organs. The comprehensible becomes the comprehended when, through the agency of the active intellect, the item imprinted on the senses becomes the item expressed.

God implanted his eternal law in the human soul, not only in respect of contemplative knowledge, but also in respect of practical knowledge, i.e.

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[10] It is probably unnecessary to go into detail about *ante rem, in re* and *post rem* (antecedent, concomitant and succeeding factors), since these may be taken as known.

action corresponding to the moral law. This natural light is sufficient to
assure us of the possibility of true knowledge; the eternal principles of divine
reason assure us of this.[11] The truths of faith are beyond reason, but not
against reason. Knowledge and belief, reason and revelation are in principle
not in opposition to one another.

The emphasis which Thomas gives to the reliability of the understanding
is liable to lead to insufficient account being taken of the fundamental
Christian truth of the total depravity of man, taken here to apply also to the
human intellect.[12]

The overvaluation of the understanding as "the *highest* and most noble
power in man" (Sassen) also leads to the interpretation of other kinds of
human activity as emanations of the intellect, and in this way to intellectua-
lizing them, thus depriving other functions of life of their autonomy.[13]

This is all the more problematic when the regularity of thought itself is
liable, as a result of the *tabula rasa* theory, to be misinterpreted as a heuristic
procedure. But although this danger was realized among Thomas's followers,
Thomas himself cannot be held responsible for the exaggerations of his sen-
sualistic-empirical successors, since the active intellect which he emphatically
propounded and developed on a broad canvas extended beyond the *tabula rasa*.[14]

Thomas's pious humility and critical sensibility suggest many correctives
to him, but these are subordinated to his system of thought as such, and this,
viewed as a whole, justifies in its intellectual character the reservations against
the view of language incorporated in his system which will be examined in
the account which follows.

What, then, is the position of linguistic function in Thomas, and how does
he regard it?

In view of the shortness of Thomas's life, the corpus of works he left was

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[11] "Objectively speaking, the guarantee of certainty rests on the necessary existential condition
of the observed objects themselves, which is based in the last instance on the immutable truth
of the eternal reasons in God's ideas" (Sassen 1932b: 213).

[12] "In the simple comprehension of the object before it, i.e. the nature of perceptible things,
the intellect cannot go astray. The inner cohesion of objects known in abstraction is immediately
evident from basic principles, and thus indisputably certain" (Sassen 1932b: 213). "Thomas is
not concerned with the analysis of knowledge; for truth is never a problem for him, as it was for
Augustine, but is established in advance" (see Vorländer 1927: I, 278).

[13] See Dooyeweerd 1935: 143-147, where *inter alia* Thomas is criticized on this point.

[14] "The understanding is in itself no more than a potentiality, entirely unformed [!], like a
blank page" (Sassen 1932b: 213). I would defend Thomas against Sassen's attack with an appeal
to Maritain 1932, where a one-sided interpretation of Thomas as an empiricist is opposed
throughout.

a most extensive one. He begins and ends as a theologian-philosopher. His
views of language, though abundant, can be assembled only by filtering them
from works which are anything but linguistic in intention.[15]

Thomas stands at the centre of a development which, in linguistic matters,
extends from Peter Helias to the authors of so-called speculative grammar.
A certain amount of interest in linguistics had been shown from the early
Middle Ages on in the many commentaries on *De Interpretatione*, but these
comments were not themselves discussed, since writers limited themselves to
an uncritical paraphrase of the text under discussion. In contrast, writers of
treatises on the properties of terms, above all Thomas's contemporary Peter
of Spain, were independent, and important for this reason. The terminology
and the conceptual framework of these authors were known to Thomas, and
he made use of them. But this literature, a logic which makes a critical ex-
amination of terms of judgment as expressed in language, does not form part
of the ideas under discussion here. It is nominalistic criticism of language
which stresses such investigations, and they will be examined in the appro-
priate place.

According to the general view Thomas proclaims that language gives us
knowledge of things. Since all knowledge derives from sensory powers, lan-
guage itself must be a sensory power. The language of sounds is initially a
provision which enables perceptible signs to be made (Manthey 1937: 55). It
is the audible or visible sign of an inner concept; in exceptional cases nothing
more than internal discourse is achieved (p. 56). Thomas also considered that
emotional factors, the feelings of the mind, may be expressed in language, for
example in prayer, question, encomium, etc. (p. 57). He speaks also (*Summa
Theologiae* II, 2, q. lxxvi) of a threefold role of language, declarative (*indicativus*),
effective (*imperativus*), and affective (*optativus*). Elsewhere he combines the first
and third of these (p. 59). It is language which makes man a social animal
and brings human society into being by communication; on the other hand
language itself derives from communication. By being communicable, lan-
guage has the function of supplying information, and thus satisfying a desire
for knowledge.[16] For the teacher, the complex of thought and language pro-

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[15]   This task has been carried out by Manthey (1937). Manthey's collection of materials is ex-
tremely valuable, but, since he does not adopt a clear stance of his own in linguistic theory—he
is, after all, examining Thomas's views on language "in their application to theological
problems"—he does not, of course, provide any critical evaluation. In the analysis which follows
reference will be made to the relevant pages of Manthey, but his often unnecessarily numerous
page-references to the corpus of Thomas are generally omitted.

[16]   "To satisfy this desire is another effect of language. New knowledge is imparted by the

ceeds from the object, goes on to the concept, and from there to the word. For the learner the procedure is reversed. If the learner already knows the object, he receives no fresh knowledge. If he does not know the object, he also learns nothing, since he cannot understand the spoken words. In talking himself out of this minor paradox by saying that the signs used can never give knowledge of completely unknown objects, but only of ones vaguely known, so that the increase of knowledge in this case consists in making vague knowledge distinct, Thomas came to a conclusion which was in essence that reached four hundred years later by Leibniz. Leibniz's development of the criterion of distinctness is completely determined by his discussion of Cartesian views on this point. But when we reflect that Leibniz incorporates the Aristotelian and scholastic tradition of language *in toto* into his system, this position of Thomas's is certainly remarkable. It shows the ends to which a determined association of language and the transmission of knowledge can lead logical and systematic thinkers. Moreover Thomas's theory of language remains consistently within intellectual limits: language derives from the intellect and appeals to it. It is therefore by nature available only to man. It is the instrument of wisdom.

How does Thomas match his basic scheme of material and form to language? He does so in several ways: on the basis of the relationship between sound and speech-sound, between speech-sound and meaning, between noun *plus* verb and utterance, also between subject and predicate.

It is meaning which transforms sound into speech-sound. What is the meaning of 'meaning'? Once and once only does Thomas say 'the object'. Signification for him lies for the most part in *thought* about the object, the definition itself, the essence or the nature of the object comprehended in the term. The expression *designare* (define)—normally used with greater consistency by scholars like Peter of Spain—should have been reserved for the first of these views. Thomas does, indeed, use this term, but in free variation with *significare* (p. 68). We also find Thomas adopting, albeit intermittently, the attitude which sees the concept as the sign of the object. When expressed independently and carried to extremes, this view (which incidentally goes back to Aristotle) leads to serious consequences for terministic nominalism in the area of the criticism of knowledge, and indirectly in the criticism of language.

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teacher to the learner by means of language. The knowledge of the teacher is transferred to the mind of the learner by means of language, for the learner can receive knowledge of the objects perceived by the teacher only by means of words, the signs of these objects." (Manthey 1937: 60).

Meanwhile, Thomas does not apply the contrast between form and material to linguistic phenomena at all rigidly; nor is his concept of the sign firmly established. This, indeed, was perhaps hardly to be expected, given the nature of Thomas's works. Speculative grammar, as a specialized linguistic discipline, was to take these matters much further.

Thomas's view of the process of development from thought to word is important. Here he was able to build on an even older patristic tradition, viz. that of interior speech. This idea is described by Rotta in a formulation by Bonaventura which, in turn, goes back to Augustine: "Thought is nothing other than internal speech" (*Cogitatio nihil aliud est quam interior locutio*), and similarly in Thomas: "The word is nothing other than thought given form", where Thomas equally goes back to Augustine.[17] Rotta is right in finding that the second statement is fully in accord with the first, yet there is a characteristic subtle difference. The first statement is an explanation of where thought is leading; the second of where language comes from. Although the direction of derivation is the same, i.e from thought to speech (or word), the starting-point of the question has been shifted. As far as Thomas is concerned, it agrees with his view of the mind as receptor: thought receives its content from objects, and language receives its content from thought. Manthey devotes a paragraph (1937: 70-73) to Thomas's concept of the word of the mind and word of the mouth, the doctrine of the internal and the external word, or the spiritual and invisible word as opposed to the word of sense or of sound. The word of the mind is the cause of the word of the mouth; the word of the mind is the actual word, the actual sign of the object. What, then, is the precise sequence of the progression from thought to language? Thomas distinguishes the following 'stations': first, the power of the mind; secondly, the form, the intelligible aspect of the object, which relates to the intellect just as the aspect of colour does to the pupil of the eye (Manthey 1937: 71); thirdly, the operation of the intellect; fourthly, as a consequence of the third stage, the word of the mind, or internal word; fifthly and lastly, the external word. However, this fivefold distinction has a variant in place of the fourth and fifth stages, which distinguishes three 'words' in place of these two, i.e. a word of the mind (or of the heart), a word of the

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[17] *Verbum nihil aliud est quam cogitatio formata* (*de Veritate*, q. IV, art. 1). See Rotta 1909: 104ff. for a discussion of the currency of this thought among the Fathers. (Manthey knew Rotta's work, but appears to have made no use of it.) The reference to Augustine is from Book XV of *De Trinitate*.

imagination, and an outward word (or word of the mouth). If the word is not produced as sound, but the word only 'approaches the lips', the notional word, the word in the imagination,[18] is the final stage. This, in free adaptation, is the content of Manthey's paragraph.

What is the purpose of this analysis? In the first place, it will relieve us of more detailed discussion in connection with fourteenth-century speculative grammar, since this follows the same principles. But there is also a second, more important reason for examining this theory of stages, namely that in the course of our investigations we shall come upon views of language which also regard the word, or in some cases language, as "internal", but which reveal marked differences from the position adopted by Thomas and his school. In the case of Thomas, Manthey observes very justly: "the word of the intellect is not *the means by which the intellect perceives,* for that is the intelligible aspect, but *the medium in which* it perceives" (1937: 71 [emphasis supplied]).[A] The operation of the intellect thus results in the word of the mind, but is preceded by the *species intelligibilis,* the perceptible aspect of the object presented to the senses.

However, this view of language, i.e. one which explicitly asserts that language is, so to speak, a word of the mind or intellect *by which* the intellect perceives, is one which emerges some centuries later in rationalism. It is a theory which sets out to incorporate language into the operation of the intellect as an instrument, just as mathematics operates by means of signs adopted as instruments of thought. Development in this direction originated in nominalistic linguistic theory, which sets out by eliminating the perceptible aspect, *inter alia,* as superfluous; and alongside the scepticism of the nominalists we find a curious attempt to make language serve as a basis or instrument, an attempt, made from an ultra-realistic position (Ramón Lull), which, so to speak, assigns the role of the perceptible aspect to language. This view will also encourage the development towards *ennoesis,* i.e. situating language within the mind, within the reasoning faculty. At one end of the first of these tendencies in linguistic theory stands the rigorous systematic view of Hobbes; at the end of both stands Leibniz's even more consistently developed theory. They were systematically rigorous in locating language and sign in the mind, and, what is more, made this a central feature of their philosophies.

Similarly, it is by means of his concept of the word of the mind and the word of the mouth that Thomas finally intellectualizes language as a product

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[18] It goes without saying that the "word in the imagination" is repeatedly discussed in linguistic theory, but, as Reichling points out (1935, chapters 4 & 5), the "word in the imagination" has no place in common linguistic practice.

and exteriorization of the intellect. But was there any area of human mental activity which did not fall within the ambit of the supreme driving-force of his philosophy? It is the intellect which provides both truth for the contemplative life and benefit for the practical life of man. *But for all this Thomas never locates language in the mind,* although terms like 'word of the mind, of the intellect, of the heart', etc. may suggest as much. For him, language is a post-intellectual process; although it, so to speak, leaves the paternal home of the intellect, it never escapes paternal authority. Language continues to be assessed by intellectual measurement, and as a result to be subject to normalization by the intellect. The relationship between the word and the object meant is one in which the word of the mind is considered to be a representation of the object in the mind (Manthey 1937: 71). The word of the imagination which occasionally intervenes was also called the manifestation of the exterior word. The word of the mind or *intellectus* is thus the meaning. The intellect determines the perceptible aspect of the object. All "transitions" between objects and language leave language ultimately within the domain of the intellect; not one of them justifies the transition from intellect to language as one to a fundamentally different mode of existence or different regularity.

Yet Thomas is not blind to the discrepancies which emerge between the three members of the series Object, Concept, Word; he deals with homonymies and synonymies, he realizes that there are concepts for which no words exist, he does not overlook differences between languages, etc. But he did not learn his lesson from Aristotle aright; it is not the individual words, but words joined together in predications which are the vehicles of truth;[19] within the predication the individual words represent the concept of the nature of the objects. Thomas can thus also remain consistent and yet make a distinction between the etymology of a word, the property of the word and the interpretation of the name on the one hand, and its signification on the other. Since "that from which the name is given" was originally no more than a single feature or quality of the object, he proclaims, it is rarely possible to determine the essential nature of an object from the etymology of the individual word. *Lapis* ('stone') is etymologically equivalent to *(quod) laedit pedem* ('[that which] injures the foot'), but the word *lapis* nevertheless means the complete concept of the nature of the stone (Manthey 1937: 77-78).

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[19]   In this respect, Aristotle distanced himself from Plato, who had looked for truth in individual words, though he did admittedly try to convert them into a *rhema,* or predicative clause.

It is thus also possible for Thomas to work with the concept of *supposition*, although this notion, in so far as it had any relevance for linguistic theory, referred in the first place to the naming of individual objects. Realism always acknowledges individual objects, even if it regards them as existing in essence and in fact as a sub-class of universals; but nominalism is inclined to reject the universal altogether, or at any rate to limit it. Thus we find the concept of supposition occurring also in Thomas, where he examines what is intended by language. He does, indeed, distinguish signification and supposition, but not rigorously. In the case of proper names, *suppositio personalis*, signification and supposition fall together. Within supposition Thomas distinguishes, *inter alia*, a natural supposition alongside a contextual supposition (*suppositio accidentalis*), and a specific supposition (*suppositio determinata*) alongside a confused supposition (*suppositio confusa*). There is no need to go into their peculiarities; but Thomas's theory of suppositions is something of an oddity. In itself the distinction between supposition and signification proved useful for linguistic theory, though it was only much later that this was to appear in a modern thinker, i.e. in Husserl's observation concerning the naming of objects by way of their meaning. The theory of supposition was, however, a welcome device in nominalistic linguistic analysis, serving to identify discrepancies between thought intended and the thought achieved. It began as an analysis of knowledge; and since language functioned as a vehicle of knowledge, this analysis implied the analysis of language through the analysis of knowledge. Thomas has a completely different attitude towards knowledge, and in consequence towards language. With "simple faith in human knowledge" (*eerlijk vertrouwen op de menselijke kennis*), as Sassen puts it, Thomas receives truth, which for him is understood subjectively by the operation of the intellect on the material objectively presented to it (the *intelligibile*). He is, indeed, critical of the opinions of others, but not of the possibility of knowledge and the ascertainment of truth in general: "the understanding cannot err about the nature of perceptible objects" (*in het wezen van de ervaarbare dingen kan het verstand niet dwalen*—Sassen again).

While the signification of the word defines the general concept, supposition covers its use to indicate any individual entity which is included in the concept: "man" means the genus *Man*, but "man" can also give the supposition of Tom, Dick, or Harry when we use the term "man".

Realism accepts not only universals but also individuals. For the nominalist there is no reality corresponding to the universal; it is no more than a name. (These questions will be dealt with in the discussion of nominalism.) For Thomas, natural reality is intelligible fundamentally through its structure

of substance and accident, of genus and species, of universal and individual. Language expresses the concept received as a representation of the thing understood (*similitudo rei intellectae*), and transmits it to others, retaining an intellectual quality both as expression and as transmission; and at the same time, the view of language as an action of thought, or rather as a likeness of thought, provides Thomas with his confidence in language.

Thomas was not a grammarian; intellectualization of language was not his main object, but a by-product. Things are different when grammarians begin to use these thoughts deliberately and to build their systems on them. The line which starts with the innocent Peter Helias leads past Thomas, leaving him on one side, to the rigorously systematic theory of Speculative Grammar.

Manthey's knowledge of the works of Thomas Aquinas is comprehensive, and the account given here depends on the textual material he provides; but he has a tendency to see only the receptive side of the linguistic process in Thomas. A corrective may be found in a study by Warnach which appeared a year after Manthey's, expressing reservations which are shared by the present writer:

> In excluding linguistic psychology, which after all is specifically concerned with the speech act, from the realm of linguistic philosophy properly so called, and investigating Aquinas' views on the matter only as an afterthought, Manthey does not represent the views of St Thomas. While discussions of grammar and logic take up considerable space in Aquinas' writings, reflections about psychological and dynamic aspects of language also form a considerable part of Thomistic linguistic philosophy, which deals not only with static configurations but also, as a matter of principle, with the acts and functions of speaking and understanding. In this respect we may observe a certain affinity between Thomas and Wilhelm von Humboldt, who regards language "less as an inert product than as a [process of] producing". Humboldt's dictum that language is "not a [finished] work (*ergon*), but an activity (*energeia*)" is well-known. It must of course be emphasized that Thomas also remains far from one-sided subjective psychologizing such as dynamism. (Warnach 1938: 396, *n.* 1)[B]

This interpretation of Thomas is, however, also in its turn susceptible to counter-reservations, in the light of my own view of the matter. First, the "certain affinity" with Humboldt seems to me to be questionable. Intrinsically so, even; for Warnach, who unlike Manthey is completely at home in linguistic literature, himself notes (p. 412, *n.* 2) of Humboldt that "a certain idealistic tendency may occasionally be found in him" (*[daß] sich bei ihm ein idealististischer Einschlag bisweilen bemerkbar macht*);—an idealism which, the same note points out, leads its practitioners to the fault of "breathing life into meaning too readily from the subjective concept" (*die Bedeutung mit dem subjektiven Begriff allzu*

eng verquicken). At another point Warnach criticizes Manthey in the following terms (p. 412, *n.* 1):

> Manthey seems however not to have understood the real view of Thomas when he claims that language in Thomas's view is the "sign of our state of mind". This misunderstanding is all the more remarkable, since Manthey otherwise adopts a negative attitude towards treating language as a branch of psychology. ... Thomas views meaning, rather, as the objective content, whether expressed or "implied", not the concept as the subjective product of the intellect.[C]

This comment demonstrates Warnach's own standpoint very clearly.

In connection with Thomas's remark that "truth is declared to the extent that signs conform to what is signified" *(veritas dicitur secundum quod signa concordant signatis),* Warnach remarks (p. 412, *n.* 2): "With these definitions Thomas offers a solution of the problem of meaning which preserves a just mean between nominalism and extreme realism."[D][20]

I accept the remark about Thomas's central position, but I would emphasize that the realism mentioned here is *extreme.* However, I do not agree with the word "solution". It is, on the contrary, precisely Manthey's strong point that he does not present Thomas as a thinker who gives a solution based on linguistic theory. Thomas had a surprisingly balanced view of the many aspects of linguistic behaviour, but he did not set out to provide a "solution", nor did he give one. Warnach himself realises this at the end of his eminently thorough study,[21] when he says (p. 418): "Thus the functions which comprise the action of speaking are various. Their interaction in the concrete speech event can perhaps be represented by the following diagram".[E]

The "circuit" which follows proceeds through the following stations: we join the circle at W *(Wirklichkeit,* "reality", or *gemeinte Gegenständlichkeit,* "supposed actuality"): W → thought of the object → introduction of the sign → proposition → interpretation of the sign → comprehension of the object → W, etc. Thus there lies, between W and the proposition (the audibly produced sentence), a relationship of representation *(Darstellung-beziehung).* According to Warnach (p. 419), then, language has

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[20] Thomas' words are in the text; Warnach's comment in a note on the same page.

[21] His reviewer in the *Bulletin Thomiste* 6 (1946-47): 197-199 says: "The unadorned and objective character of his analyses makes any comment other than praise impossible". Warnach's study deserves this evaluation in full measure, but even so, the same commentator added: "Words express concepts, and it is only *via* concepts that words express things ... , i.e. they indicate directly the term for the representation which the mind makes of external objects. Hence words have a life of their own, and their signification is in part arbitrary, even though they are based in nature, *a point which Warnach does not sufficiently take into account*" [emphasis supplied].

a characteristic threefold relativity: (i) a subjective relation to the speaker, making his inner thoughts known by uttering them, (ii) an objective relation to the object referred to, and (iii) a social relation to the hearer, who is to receive information about this object.[F]

This is a disappointing result from a study which sets out to establish functions: this is no fault of Warnach's, but it is simply the result of the fact that Thomas himself in the last analysis restricts linguistic behaviour to the intellectual sphere. Then there is only a single function left, understanding (*intellegere*). Thomas, as an acute observer, undoubtedly saw the psychological factors of language, but if we maintain that Thomas gave a "solution" which may be regarded as a linguistic theory, we cannot avoid attributing to him a system of linguistic theory—rudimentary perforce, but none the less a system —which Thomas in fact does not provide. And then this becomes an intellectualized linguistic system, since the whole of Thomas's philosophy and theology bore this character. And in this system the plurality of linguistic functions melts away.

Warnach expressed an intention of producing a complementary study on "Thinking as inner speech in Thomas Aquinas". To the best of my knowledge this has not appeared. It would certainly have presented him with great difficulties. Before writing on Thomas, Warnach had published several articles on pre-Thomistic views of language. In comparison with these, Thomas's thoughts on language may undoubtedly be regarded as more clearly outlined, but in comparison with what was to come, it would necessarily have emerged that Thomas's point of view gave, or claimed to give, no "solution". If Warnach had made this study, he would probably have had greater reservations about Thomas's intellectualism, since Thomas ultimately recognized no function apart from the intellect.

Speculative grammar

Research into the linguistic writings of the Schoolmen was initiated by Thurot's publication of medieval texts in *Notices et extraits de manuscrits de la Bibliothèque Nationale* (1868). The further investigation of this branch of linguistic knowledge was undertaken primarily by Grabmann (1936, 1943), who has had several followers. Abandonment of a disparaging attitude towards the so-called "dark [Middle] Ages" has enhanced our vision of the depth of medieval scholarship and of the importance this had for the development of Western thought in general. Present-day thought, especially in the area of Logic, has also been able to draw increasing benefit from the investigation of

medieval thinkers.

Those writings about language which were composed from a realistic standpoint are collectively known as "Speculative Grammar". The name is apposite, at least as far as the second word goes—they are grammars. From the later decades of the thirteenth century to halfway through the fourteenth an ever-increasing stream of works of this kind appeared, in such numbers, indeed, that one may speak of them as a special literary genre. The authors of these Treatises or Outlines of the Modes of Signifying (*Tractatus* or *Summae de Modis significandi*) are known as *"Modistae"*. (The term 'Speculative grammar' came later.) The birthplace of the movement was Paris, for it was there in the second half of the thirteenth century that humane studies lost their predominance, as described above (pp. 32-33). Two of these works had appeared in modern editions by 1952,[22] the *Grammatica Speculativa* (Speculative Grammar) of Thomas of Erfurt (fl. c. 1300), and that of Siger of Courtrai. The first-named work, formerly ascribed to Duns Scotus, but assigned by Grabmann on convincing grounds to Thomas of Erfurt, has been investigated by Heidegger (1916). Wallerand prefaced his edition of Siger of Courtrai (1913) with an exhaustive and valuable discussion of medieval realist grammar. The most widely distributed[23] work was probably that of Thomas of Erfurt. While the tendency of these two generally accessible works is broadly comparable, they are by no means similar on points of detail, critical method, style, etc. Siger's work, in my view, is in many respects superior to that of Thomas. Thomas's work, however, is less complicated—it could almost be said more didactic—and his presentation is, for this very reason, the more serviceable of the two grammars under consideration as a sample of received opinion. The simple trust in language against which Occam was later to react is shown most clearly in the simpler exposition of Thomas of Erfurt.

Speculative grammar should meanwhile not be regarded as a totally abstract reflection, remote from the practical aims of linguistics. Just as the secondary genre of random questions (*quaestiones quodlibetanes*) evolved beside the theological "sentences" (or opinions) and outlines (*sententiae* and *summae*), the

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[22] *Translator's note:* Since 1952, the works of Martin of Dacia (1961) have also been published. The edition of Thomas of Erfurt available to Verburg was that by Garcia (1902), which still ascribed the work to Duns Scotus. References in this translation have been made to the more recent edition by Bursill-Hall (1972). This gives the text and an English translation on facing pages; it is necessary, in most cases, to note only the (recto) page on which the English translation appears. Bursill-Hall's Introduction gives a detailed analysis of Thomas's work.

[23] Roos (1946) claims a wide distribution for Martin of Dacia's *De Modis Significandi*.

so-called sophisms (*sophismata*) evolved alongside these systematic logical grammars; these contained practical exercises in the application of logical theories of language. These grammars were really used in linguistic scholarship!

What is the most striking factor in the content of these Speculative Grammars? They normally consist of a general introductory section, tracing back from one mode to another and discussing the relationship of language, thought, and reality; and a major part, which defines word-classes, adduces and describes sub-classes, performing this latter part of the programme entirely on a semantic basis.[24] Detailed attention will therefore be given here to a few specimen chapters of Thomas of Erfurt's Grammar.

The so-called logic of language distinguishes three types of mode, the mode of being, the mode of understanding, the mode of signifying (*modus essendi, intelligendi, significandi*). Thomas of Erfurt then makes the following distinctions: the active mode of signifying consists in the property (*proprietas*) of the word (*vox*)—an individuality conferred on the word by the understanding—which enables it to indicate an individual property of the object. The passive mode of signifying is then the individuality inherent in the object indicated. Only the active mode of signifying is part of grammar; the passive mode of signifying is not. The understanding gives the sound its signification, and as a result the sound becomes a sign (*dictio*). And understanding also allots sentence-componency (*ratio consignificandi*) to the sound, by virtue of which it becomes a sentence-component (*consignum*), a part of speech. The passive mode of sentence-componency (*modus consignificandi passivus*) also lies outside grammar, being a property of the object (*proprietas rei*), "relevant only in so far as their formal aspect is concerned, since in this way they do not differ greatly from the active" (Bursill-Hall 1972: 137).[G] Meanings are not inventions (*figmenta*), according to speculative grammar:

> *Every active mode of signifying derives from some property of the thing.* It should be noted immediately that since faculties of this kind or active modes of signifying are not fictions, it follows necessarily that every active mode of signifying must originate basically from some property of the thing. It is clear therefore, that since the intellect classifies the expression for the purpose of signifying under some active mode of signifying, it is referring to the property itself of the thing from which it originally derives the active mode of signifying; it is also clear that the understanding, since it may be a passive capacity undefined by itself, does not apply to the prescribed act unless it is determined from another source. Hence since it classifies the expression for the purpose of signifying by means of a prescribed

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active mode of signifying, it is necessarily occasioned by a prescribed property
of the thing. Therefore some property or mode of being of the thing corre-
sponds to some active mode of signifying or other. (Bursill-Hall 1972: 137–9)[H]

Typical of the kind of objection which is raised to this congruence of word,
meaning and property is the reply to the question: "How can deity (*deitas*) be
of the feminine gender?" The answer is that "it does not follow that the active
mode of signifying of a word is always drawn from the property of the thing
of which it is a mode of signifying" (Bursill-Hall 1972: 139).[1] What is more,
this special instance refers to God, whom we do not comprehend as a
separate substance, but only from his manifestations to the senses, for the
reason that here we are giving names to properties of sensible objects (
proprietatibus sensibilium, ibid.).

A comparable objection in respect of absent (or negative) and imaginary
objects (so-called *privationes* and *figmenta*), for example 'chimera', on the ground
that we can find no underlying entities in such cases, is dismissed as follows:

> It can be stated that although negations may not be positive entities outside the
> mind, they are however positive entities in the mind ... and are entities accord-
> ing to the mind ... And because their conceptualisation constitutes their exis-
> tence, therefore their modes of understanding will be their modes of being.
> (p. 141)[J][25]

It is hardly necessary to demonstrate that this contravenes the fundamen-
tal structure of speculative grammar; what is noticeable is that speculative
grammar never lets language down, but that it tries by every available means
to explore the data language provides; and it will be seen in the last case that
the object is in principle derived from the word.

In Chapter 3 we learn that the intervening mode of understanding is also
twofold, i.e. active and passive. It is active as the manner of conceiving by
means of which the intellect signifies the properties of the object; it is passive
as the property of the object as it is conceived by the intellect. The active
modes of signification are directly derived from these passive modes of the
intellect. They return by way of this process of understanding to the mode of
being as mediated by the passive modes of understanding.

The passive modes of signification and of understanding are congruent
with the mode of being, and Chapter 4 tells us that this applies both to the
object as it is understood and to the real object (*materialiter et realiter*). They are,

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[25] This matter will be dealt with again in the discussion of Hobbes.

however, formally differentiated: "And since there may be one faculty of
being, another of understanding, and another of signifying, they differ in
terms of their formal faculties, though in practical terms they agree" (p.143).[K]

Chapter 5 asks where the modes of signification are to be found in the
object, and replies that the passive mode of signifying is materially present in
the object, while the active mode of signifying is materially present in the
significative word, as it is in the object (summarized from p. 147).

Chapter 6 of the general introduction finally defines the terms *signum, dictio,
pars orationis* and *terminus:*

> [A] *sign* is specified formally by means of the faculty of designating or repre-
> senting something in absolute terms; but a *word* is specified formally by means
> of the faculty of designating superimposed on the expression, since a word is a
> significative expression. A ... word is a *part of speech* inasmuch as it possesses an
> active mode of signifying. (p. 149)[L]

The *termini* are the subject and the predicate.

And what is the sound (*vox*)? A sound is a matter for grammar only in its
role as a sign, but as such, "the expression is the most suitable sign among
other signs" (*vox est habilissimum inter alia signa*, p. 149)—the most suitable, and
hence the most convenient to handle. The sign is an accident of the sound.

To sum up, we can note:

> The mode of being (*modus essendi*) (A);
> The passive (B) and the active (b) mode of understanding, = intellect;
> The passive (C) and the active (c) mode of signification, = sound.

Speculative grammar relates these as follows:

> A = B = C materially and factually (*realiter*);
> A ≠ (B = b) ≠ (C = c) formally;
> A ≠ b ≠ c whether materially or formally (i.e. they are disparate).

An inability to explain—or perhaps rather an attempt to explain—the
various manifestations of existence, thought and language in terms of matter
and form, may be clearly seen here. The explanation of these differences is
confined in the main to ascertaining that they constitute differences in form.
This discovery is in itself an advance, but it is invalidated by the remarkable
omission from Thomas's Chapter 2, noted above, where in answer to the
question "From what does the mode of signifying basically originate?" (*A quo
modus significandi radicaliter oriatur*), the reply is given, "from the passive mode of

understanding as determined by the mode of being",[26] i.e. c derives in prin-
ciple from B. And B is nothing other than the intelligible aspect of the
object.[27] The almost naive realism of this view is apparent.

These and the other speculative grammars also played a significant role
in the controversy over universals. The triadic scheme of object, concept,
word is adopted in the basic conviction that there was in principle an under-
lying congruence. This conviction was not shaken by the knowledge that there
was a multiplicity of languages, for it can be seen from his analysis of the
parts of speech that Thomas of Erfurt is aiming to provide a universal gram-
mar, and not a grammar for one language among others, as here for Latin.

Speculative grammar made valuable contributions to theological termin-
ology, and its logical view of language gained general acceptance among the
realists. The nominalists in general stood resolutely opposed to the *Modistae*
and their uncritical confidence in language, as the humanists, of course, were
also to do, though for totally different reasons. The nominalists developed
their own theory of language and signs. Here we will name only two who
made direct attacks on the linguistic logic of the *Modistae:* Pierre d'Ailly, a
convinced and radical Occamist who wrote a work entitled *Destructiones
Modorum Significandi* ("Destructive Criticisms of the Modes of Meaning"), and
John Gerson, whose *Quinquaginta Propositiones de Modis Significandi* ("Fifty Pro-
positions concerning the Modes of Meaning") is milder in tone, though his
emphasis on the importance of these theories in theology carries with it
reservations in respect of philosophy and epistemology. D'Ailly and Gerson
are later Parisian Occamists, and Gerson begins to display concern about the
fatal consequences of radical nominalism and the *via moderna*, the new
direction in faith and morals. His fifty theses may well be regarded for that
reason as a justification. In any case, his intervention shows just how
important logical grammar was in the controversy over universals.

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[26] *Translator's note:* Cf. above, p. 50. The last phrase appears to be an inference from several
statements in the text: "[S]ome property or mode of being of the thing corresponds to some
active mode of signifying or another"; "a significative expression such as *deitas* has feminine
gender which is a passive mode of signifying"; ("[A]lthough *in Deo* [in God], in reality [there]
is not a passive property, yet we imagine Him, as it were, being acted upon by our prayers"
(Bursill-Hall 1972: 139).

[27] "If ... the forms of meaning find the ultimate basis of their determination in the mode of
being, then it is only actually the passive mode of understanding that makes the determination
of form, since it is the objectively given mode of being" (Heidegger 1916: 138). It should be
noted that little use has been made in the present study of Heidegger's work, which, valuable
though it is, seems to the linguist to be something of a speculation about speculation.

Grabmann dubs speculative grammar "logic of language" (*Sprachlogik*). It would, I think, be more appropriate to speak of 'logic-based grammar', for then we could contrast the differing character of nominalistic views of language as 'language-based logic'. The logicalization of grammar by Thomas of Erfurt and his like is as such objectionable, and the incorrectness of the intellectualized realism of its basic vision has been demonstrated. But it is not fair to dismiss by such considerations the effort these grammarians applied to language. The theory of connotation (*consignificatio*), as they developed it, makes a contribution to linguistic theory, even though it is not exploited to make a theory of functions. Speculative grammar considers consignification to be a supplementary feature which the active mode of signification, as significative sound (*vox significativa*), adds to the word (*dictio*). An example (from Manthey 1937: 79) will make this clearer: *donum* and *datum* both express the one English term 'gift', but *datum* has the consignification of "pastness". Similarly all accidents of parts of speech are consignified. The system of inflection is examined in its entirety from this point of view, but as a result syntax is obscured as a set of accidents in a content-based system of word classes.[28] The ability of language to form constructions is regarded as a supplementary feature and as an accident, specifically a "metaphysical accident"; and by adopting this view as an axiom, speculative grammar denied itself access to a systematic view of the functions based on the nature of language itself. For speculative grammarians, language wss a conglomeration of representations of objects to which all manner of specific properties are attached; but in examining these static attachments they forgot that these are only the result of the practical use of language, in which the ability to form constructions is an absolutely intrinsic feature. For a time it seems that the sentence, or syntax, is brought back into prominence by the nominalists, but this is no more than an illusion. Nominalism poses the question of truth and approaches it through predication, since—in a truly Aristotelian spirit—it is from this that truth or, as it may be, error emerges. Thus for the nominalists, at any rate for the Occamists, a sentence is a predication; and the words, as elements of this predication, are premisses (*termini*). It is characteristic of the different spirit which is at work in speculative grammar that while the expression *terminus* is, indeed, known (see Bursill-Hall 1972: 146), it is rarely applied. The expression is from the very beginning appropriate to logic, albeit

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[28] No new theory of word classes will, however, be able to ignore speculative grammar; indeed it will have to deal with it in the course of rejecting what preceded it. The traditional theory of word classes is still practically the same as that of speculative grammar.

to a logic based on language.

Although it is not necessary for us to pursue the theory of word-classes en-shrined in speculative grammar any further, one exception may be made in the case of the verb; for it is clear in this instance that speculative grammar, in spite of subjecting language to logic, does in fact set out from the basis of language. It does indeed give a logical interpretation of linguistic phenomena, but the phenomena it investigates at any rate are linguistic events. This is in distinction to the terminists (see Reichling 1947: 3 and 17 *n*. 2).

Thomas of Erfurt deals with the verb, after a discussion of nouns and pronouns, from Chapter 25 on. He says: "The essential mode of signifying of the verb is most generally the mode of signifying the thing by means of the mode of being and separation from the substance".[M] What is meant by "being", "separation from substance"?

> [T]he mode of being has the function of matter with regard to the verb because it makes the verb agree with the participle, ... but the mode of se-paration has the function of form because it makes the verb stand apart and differ from all parts of speech. (Bursill-Hall 1972: 209-211)[N]

Thomas is working here with the contrast between *ens* and *esse* (entity and being), or in other words, between *essentia* and *existentia* (substance and quality). The former tallies with the object's properties of consistency and permanency, the latter with properties of change and development. Here the verb signifies materially by the mode of being, and formally by the mode of excluding substance; the participle shares the mode of being with the verb, but formally it is not exclusive of substance, or is conjoined with substance. That is all. The explanation is presumably that instead of breaking the verb down into copula and predicate, in which the latter becomes a participle, speculative grammar leaves the verb to stand for what it is. In other words, while the verb is interpreted logically, it is not made into a formal component of logic, as was to happen under the terminists, e.g when they break down the sentence into the formula "the subject is that which is predicated (*Predicatum*)" (S = P). This could have been learnt, in any case, from Aristotle's *Organon*. The intervention of logic is restricted to the fact that after the basic linguistic categories of noun and verb had been stretched on the rack of the metaphys-ical distinction between entity and being (*ens* and *esse*), it fell to the system of substance and form to eliminate the difficulties.

For the understanding of the basic tenets of speculative grammar we may conclude by considering Thomas's two final chapters (53 and 54), entitled respectively "On the congruity of speech" and "On the perfection of speech".

The preceding chapter had ended by defining construction according to reason. Congruity demands a proper conjoining of the components of a construction, and this becomes possible as a result of the agreement of the signifiers and also as a result of the conformity of the modes of signification. This "symmetry ... as such is not of itself considered by the grammarian but rather by the logician" (*convenientia ... a grammatico per se non consideratur, sed magis a logico*, Bursill-Hall 1972: 309). Congruity, in so far as it depends on the conformity of the modes of signification, is the proper concern of the grammarian. We shall find a similar final allocation among the nominalists, but naturally in the reverse direction, i.e. towards the grammarians. The perfection of language lies in attaining its objective, which is twofold: immediate and ultimate. The immediate aim is the expression of the concept in the mind, and the ultimate aim is to produce a perfect comprehension in the mind of the hearer. Perfection depends on, or presupposes congruity, and congruity depends on construction. And this, then, is the conclusion of the speculative grammar of Thomas of Erfurt.

The grammar of Siger of Courtrai is based in principle on similar fundamental ideas. He cites his sources rather more explicitly; they are Donatus, Priscian and Peter Helias (referred to simply as the "commentator"), among others. For reasons given above, I do not propose to examine this text in detail here; but instead to turn to so-called nominalism, a medieval trend, indirect though it may have been, towards a theory of language; but first the figure of Ramón Lull will be examined, to show the extremes to which the simple trust in language and discourse of the realists can lead.

Ramón Lull

The Majorcan Ramón Lull (1235-1315), a most remarkable individual, is a key figure in the present enquiry. He is not discussed in current histories of linguistics, and the history of philosophy generally deals him very cursorily,[29] either because he is regarded as a theologian rather than a philosopher, or because his fantastical, fanatical character is not considered to be appropriate

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[29]   Stutterheim discusses him in *Het Begrip Metaphoor* (1941: 118ff.). Erdmann (1896: 206ff.) is an honourable exception to the general neglect of Lull. Lull's system, seen from a basically philosophical point of view, is not complicated; moreover he repeats it and varies it endlessly. For these reasons I have been able to rely confidently on Erdmann for my data (as, for that matter, have most historians of philosophy since Erdmann). Erdmann, indeed, described the whole systematic structure of Lull's *Ars* with exemplary patience and accuracy. The critical interpretation of the views of linguistic function contained in the *Ars* is, of course, my own.

to philosophy, or perhaps for both reasons. The noticeably low value set upon him by modern scholars certainly does no justice to his enormous activity (which extended to his writing), let alone to the great influence he had on his own age and succeeding generations. In his homeland, however, there was —even if Spanish patriotism was perhaps a contributory factor in this case—a whole stream of publications about him in the decade from 1934 to 1945.[30]

Lull wrote hundreds of texts, all devoted, directly or indirectly, to a campaign against the false religion of the Saracens, and against the Averroism which had infected the heart of Christianity itself. He travelled from land to land making impassioned pleas to temporal and spiritual leaders, and also to the people at large, to take part in his campaign, and he ended his life as a soldier of Christ in martyrdom to the Muslims.

Lull is a younger contemporary of the great realists of high scholasticism, Albertus Magnus and Thomas Aquinas. Although Thomas's perceptions of revealed truth were profound, his thinking still set an insuperable boundary to human knowledge: all the mysteries of the Faith, the Trinity or the Incarnation for example, lay beyond any possibility of proof. Lull himself was far removed from the sheltered convolutions of scholastic disputation; and in his frontal attack on the subtleties of Averroism he could accept no hiding-place which would shield the apologist of Christianity from pursuing and overcoming the delusions of the infidel. For him, the whole complex of Christian truth is open to proof; and in this respect there is no difference between his theology and his philosophy, and there is *a fortiori* no reason to accept a double standard of truth.

This overvaluation of the intellect is thus as such the inverse of the scepticism which emerged after the time of Thomas Aquinas in Duns Scotus and Occam. The criticism of realism which came from this quarter was, of course, aimed with equal intensity at Lull and his extremism.[31] Meanwhile Lull's overvaluation of the intellect took on a remarkable form, one which is of direct interest to us as theoreticians of language. We have in mind his so-called *Ars Magna Investigandi sive Inveniendi et Demonstrandi* ("Great Art of Analysis, or of Discovery and Proof"), otherwise known as *Ars Combinatoria* ("Art of Combination").

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[30] The many-sidedness of his personality lends itself to discussion in countless respects, as is shown by the titles of the works devoted to him; but from the point of view of language, interest seems to have been limited to a single article, to which reference will be made in due course.

[31] For a recently discovered example of this criticism see Vansteenberghe 1936: 41ff. The text contains a sharp attack by the nominalist Gerson on the fantastic quality of Lull's theories.

Lull's most extensive work (10,980 paragraphs), containing the whole of this theory, is the *Liber Magnus Contemplationis* ("Great Book of Contemplation"). The teaching of the Church is demonstrable without any exception, declared Lull; if this were not the case, it would demean the God-given gift of reason to mankind; and the call for faith which would then be necessary would deter the heathen from conversion. God is like nature; he conceals nothing. The simple-minded may have to be satisfied with faith, but the wise can understand rationally, "for having first begun to doubt is the beginning of making philosophical enquiry" (*quam primum incipit dubitare, incipit philosophari*), and philosophical enquiry proceeds through observed resemblances (*per aequiparantiam*); this is in contrast to the process of inference in physics and geometry.

Lull develops his characteristic method in his *Ars Brevis* ("Brief Art"), *inter alia*, and gives a definitive formulation in his *Ars Magna et Ultima* ("Extended [Large] and Final Art"). Lull, who exploits Latin in arbitrary fashion—he creates neologisms such as *homeitas, substanteitas, impulsiveitas* ('man-ity', 'substant(ial)ity', 'impulsivity'), etc.—makes what might be called an inventory of the concepts available to theology and philosophy (he also dealt with other disciplines, such as law and medicine). He then applies the concepts which he has derived in this way to the circumferences or edges of so-called *figurae* (figures), i.e. concentric rotatable shapes (circles, squares, etc.). Figure A, the Figure of God, is circular. A (= God) is its axis, and gives the figure its name. On the circumference we find B = goodness, C = greatness, D = eternity, E = power, etc., in a series continuing to R. These concepts have secondary relationships in turn, for goodness makes greatness good, eternity makes wisdom eternal, etc. On this basis Lull then draws up a second Figure A (*A secunda*), this time triangular in shape, in which the conditions, or states, obtained from pairings of concepts from Figure A, 136 in all, have their place. The second Figure, S, the Figure of the Soul, consists of squares of different colours imposed on one another; the [instrumental] figure, T, consists of five triangles of different colours. And so it continues, with, for example, the figures of virtues and and their opposing vices, truth and falsehood (V, X, Y and Z). Lull adds a figure of derivations comprising syllables, such as *-re, ri-, -ans, -us, in-, prae-*, etc. as elements of grammar.

Further detail is unnecessary. Rotation produces the most astonishing combinations, which lead the thinking mind on to new "unthought" paths, or which act mnemonically to recall to mind associations already thought,[32] com-

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[32] "It was certainly not Lull's intention that the rotation of the rings should take the place of

binations in any case, whether thought for the first time, or re-thought, which for Lull derive without exception from actual relationships.[33]

It will readily be seen how the realistic approach to language, with its tenet of actual conformity, here leads to extreme and absurd conclusions. This is possible as the result of an ontology which distinguishes only substance and accident, and a theory of intellect and language which divides every proposition into subject and predicate, or else each period into noun and verb, in parallel with *ens* and *esse* (entity and being).[34] The path from thing to concept to word can then be traversed also in the reverse direction, starting by combining words, which are always adequate, then reverting to thought, and concluding with the object. This "nonsense",[35] meanwhile, is not as great as it appears, viewed from the system of realistic linguistic thought.

From a functional point of view Lull's thinking-machine and its use provide a model of a thought-process in which language has taken on a leading role in thought, a phenomenon which accounts, for example, for the ability of the rhyme-spinner, *mutatis mutandis*, to produce his truisms from the suggestions afforded by rhyme. But the procedure does not become questionable until its exponent imagines, as Lull does, that he is engaged in autonomous thought which takes facts properly into account. At any rate, there is no longer any mention here of a use of language, of a verbalization ('wording') which is based at least in part on thought, but, on the contrary, *on thought which depends on language*. The fact that Lull, in pleading his case, transposes the results of this thinking into language, does not invalidate this criticism. For this transposition is merely secondary, derivative and subordinate; it verbalizes the thought-products of the apparatus, and these were derived from combinations of words. Here results of thought are obtained in advance, primarily, with, through, and from language, and language as a result functions as a substratum and a component of the process of thinking (*hyponoema* and *ennoema*); and it is essentially the linguistic sign which serves here to attain

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reason; but it is equally certain that he claimed great benefits for the advancement of thought from his technique and his apparatus". See Erdmann 1896: 428.

[33] Lull is convinced of the truth of his discoveries: see Sureda Blanes 1944: 468ff., 502.

[34] See Rotta 1909 *passim:* I have discussed this view elsewhere (Verburg 1950: 438ff). It must be realized that the verb must, in this case, be nominalized: *homo potat* = *homo est potans* (the man drinks = the man is a drinking person)

[35] "We may perhaps be excused from discussing this pedantic nonsense in greater detail." (Vorländer 1927: I, 291) Reference to Erdmann may also be found useful. "Nonsense" often has its sense, certainly when it is pedantic. And above all this nonsense came from a fool for Christ's sake, a *Fool of Love*, as E. Allison Peers entitles one of his studies of Lull.

to new knowledge *within* thought.

<p style="text-align:center">*   *   *   *   *   *</p>

If we did not know it already, Lull's art of combination would therefore con-
vince us of the instrumental character of language. The use of language is an
instrumental action (see Reichling 1955 *passim*), in which a defined and con-
stant set of units of action is revealed, i.e. the words. This aspect of use is a
component of the inherent technical quality of language. To draw an ana-
logy, technical objects, e.g. instruments, are relatively independent; they re-
main dependent on human agency to set them in motion, by turning a switch,
for example; but thereafter they can be set to perform an almost limitless
range of otherwise relatively independent actions. That is to say, an
instrument functions as an independent *operator*, apart from an (initial) depen-
dence on human agency. The nature of words, the units of language, as tech-
nical operators becomes apparent when this principle is applied, however
absurd this may seem, as in the case of Lull's apparatus.

The title of Sureda Blanes' article on the use of symbols in Lull's philo-
sophical thought ("La simbologia en el pensamiento filosofico Luliano") raises
with the word *simbologia* the expectation that Lull's system will at this point be
examined in a spirit of linguistic analysis. Sureda Blanes notes the indepen-
dence granted to concepts, calling this process *personificaciones*, and undertakes
(1944: 472) "to observe briefly the transcendental values which underlie the
fine personifications in Lull's work":

> Symbolic exemplification is not limited to the figure of the tree (with its roots,
> trunk, boughs, branches, flowers, fruit and seed), to the candelabrum of
> luminous flowers, to the circles, triangles, figures and letters. As if these
> resemblances and representations were not enough, there appears in the
> panorama of Lull's work a broad and magnificent procession of symbolical per-
> sonages, ladies, esquires, pages ... , transcendental personalities in which Intel-
> ligence, Purposefulness, Justice, Charm are personified ... to a strictly philo-
> sophical end. We can find abundant personification in a good number of au-
> thors, especially medieval ones, and in poets of all ages, but Lull's personifying
> symbolism undoubtedly excels, both in the number and the vividness of his
> symbolic personages and in the variety of the personifications which richly illu-
> strate the profound conviction of the accomplished master, natural truths, deeds
> and objects which are not necessarily existent, but whose reality lies in
> representation; for the reason that his personages are vivid representations of
> realities. (p. 473)[o]

Quite apart from the fact that Sureda Blanes is observing Lull's realities

from the point of view of a philosophical theory of values,[36] which can cause him to conclude: "How [well] these profound roots present the supreme reasons for all existence and all reality" (*¡cómo designan estas raíces profundas las razones supremas de todo valor y de toda realidad!*)—quite apart from this attitude in an author who is concerned only with items in the real world (*realia*)—which Blanes by no means undervalues, rather the reverse—his appreciation is otherwise philosophical rather than linguistic. At the beginning of his article Blanes notes that "this idea [sc. of a general science] was rethought later by Leibniz" (*Esta idea fué más tarde recogida por Leibnitz*, p. 471), and accepts the view that Lull was a precursor of 'logistic', the theoretical and mathematical or symbolic logic practised by men like Couturat or Whitehead and Russell, or Frege, Dedekind, Schroeder and Hilbert, or Peano and Burali-Forte (p. 472).

Blanes' "symbology" thus seems to be little more than an indication of the fact that Lull, as it were, represented algebraically, with letters, the concepts with which he dealt in his works. He then interprets this independence of the instruments in his system with his term "personification".

In conclusion we may observe two peculiarities in Lull's view of language, or rather in his handling of language: the *trust in objective reality* which he shares with the *Modistae*, and the use of language *ennoetically*, as an instrument of thought. The latter, in this form, is Lull's own discovery, as appears from the title of Zetsner's edition of his works (the *editio princeps* of 1598): *R. Lulli Opera, quae ad inventam ab ipso Artem Universalem pertinent* ("Works of R. Lull relevant to the Universal Art of Reasoning invented by him").

Bruno and Leibniz, to name but two, were apparently to be highly interested in Lull's system, and it will be necessary to recall Lull when we come to consider these two thinkers and their attitude to matters of language. While we shall see that a mathematican and linguist of genius like Leibniz— in that respect unlike Bruno, who at least gave at least as much weight to the mnemonic component of Lull's art—set up the use of conceptual words as part of a mental process after the model of Lull's *Ars*, though in his own way, in his calculus of thought (*calculus ratiocinator*), Erdmann's warning in connection with Lull should be taken all the more seriously to heart:

> Finally, if we consider how much has been calculable only since the extraction of roots of higher powers has been reduced to a process of division associated with looking up logarithmic tables, we shall be able to explain why Lull hoped for such great things from a combination of signs and looking up the formulas he had discovered in his tables ... Man can play only with what lies completely within his command. (Erdmann 1896: 430)[F]

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[36] On the concept of the operator in technical matters, see van Riessen 1949.

THE MIDDLE AGES

Part II: Non-realistic views of language: Abelard, Peter of Spain,
William of Occam

IN ORDER to describe views of language current in the other strand of
mediaeval thought we have to go back a century and a half before the
time of Thomas Aquinas.

The movement known as nominalism[1] is a reaction against realism, more
particularly on account of its view that universals[2] are real. The earliest
scholar who may be called a nominalist is Roscellinus (1050-1125).[3] It was apt
of Stutterheim to apply the term 'sonism' to Roscellinus' theory of *flatus vocis*

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[1]   The term is unsatisfactory, although it is close to the term *nominales* used in the Middle Ages.
"Conceptualism" and "sonism" (see note 4, below) may also be distinguished as variants within
what is generally termed nominalism. "Antirealism" would perhaps give a clearer indication, but
I shall, however, keep to the traditional term 'nominalism', and make the necessary corrections
as the occasion arises.

[2]   I am aware that I have not given a general account of this controversy. In answer to an
objection that I make less use of the distinction between the two schools of thought in describing
realism, I would urge that a "realistic" view of language has continuing validity, even if it has
ceased to be current in linguistics. An interesting example of the survival of this view in non-
linguistic circles may be seen in the "popular philosophy" of Vloemans (1947), where the chapter
on "Logic" in the Systematic Part presents the logical view of language in all innocence—
admittedly with modifications, and untrammelled by the old terminology. Nominalism, however,
continued in renaissance theory, which—with an almost "Copernican revolution" in respect of
language—informs rationalism. That rationalism, having in some instances abandoned scepticism,
sometimes takes up a realist view of language, is a question which will be discussed later; but
since the tradition of logical grammar virtually dries up, it is in order to discuss it in detail here.
Nominalism, on the other hand, is the beginning of a line which continues on into rationalist
thought. Nominalism will thus be discussed repeatedly, and will therefore receive only a more
brief treatment in the present context.

[3]   Roscellinus' view of *flatus vocis* did, however, have its precursors: "In Martianus Capella we
find the statement that a universal is the co-ordination of many individuals under one name
(*nomen*), by one word (*vox*); but the word, as Boethius defined it, is a movement of the air
produced by the tongue" (Windelband & Heimsoeth 1948: 248).

(the breathing of the voice).[4] To judge from the little we know about him, his views were very radical: it was only the sound of words which gave individual objects an appearance of universality.

Peter Abelard

Peter Abelard (1079–1142) is also recorded in the history of nominalism as a "conceptualist". But he is by no means a follower of Roscellinus; on the contrary, he opposed him fiercely, for Roscellinus' extreme individualism led him to adopt a "tritheistic" position.[5] While Roscellinus is a child of eleventh-century thinking based on dialectical argumentation, Abelard is, rather, a child of the twelfth century, influenced *inter alia* by the literary studies associated with Orleans.[6] John of Salisbury was a pupil of Abelard, and it was he who called Abelard the founder of the nominalistic sect. We know he opposed not only the extreme nominalist position of Roscellinus, but also a realism purely based on faith, like that William of Champeaux; and in doing so he took up a central position in the controversy over universals. He introduced, more than his predecessors had done, the dialectical method of argumentation into theology. The two *Analytics* became available in his lifetime, and for this reason, too, he is a transitional figure, standing between the "old logic" (*logica vetus*) and "new logic" (*logica nova*). Nevertheless, he is no one-sided Aristotelian; here, again, he takes up a transitional, median position, clinging to the Neoplatonic tradition, though he had scant knowledge of Plato. Abelard was, and in many respects still is, a problematic figure in the history of mediaeval thought,[7] but it is at least certain that in epistemology he adopted a position of subjectivity. This is indicated by the way he relies upon doubt as a stimulus to investigation and insight,[8] and confirmed by the way he qualifies universals as being in the first

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[4] The subject-matter, and the associated semantic issues, led Stutterheim to consider these philosophical problems in depth in his study on Metaphor (1941: 370). The subject of the present enquiry makes such a detailed investigation unnecessary here.

[5] Some thirty years after the condemnation of Roscellinus (1093) Abelard's own diatribe against Roscellinus, *De Unitate et Trinitate* ("On Unity and Trinity"), was in its turn condemned (1121).

[6] "He confronts us by being at one and the same time a Trinitarian Christian, a Platonist metaphysician, an Aristotelian logician, and in addition, a Ciceronian rhetorician; a bewildering combination which was naturally regarded by his contemporaries as a monstrosity, but which, on the contrary, redounded to his greatest fame". (cf. Prantl 1861: 163).

[7] His more recently discovered writings on logic were edited by Geyer (1913). For textual commentary see also Ostlender (1936).

[8] As in his well-known and influential treatise *Sic et non* ("Yes and No"); but he was no sceptic. See also van Stockum's (1947) chapter on "Scholasticism and Mysticism".

place conceptions of our consciousness. Thought and language are activities proceeding outwards from man, who fashions reality through his activities. This is far removed from the passive, receptive stance which characterizes the view of language of the slightly later intellectualized realism. His contemporaries regarded his anthropocentric views as characteristic of him. (See Prantl 1861: 166). Abelard expresses his views of language on numerous occasions in his *Dialectica* (ed. Cousin, 1836). The work is divided into five parts, viz.: (1) "On the Parts of Speech"; (2) "On Categorical Propositions and Syllogisms, or Prior Analytics"; (3) "Topics"; (4) "On Hypothetical Propositions and Syllogisms, or Posterior Analytics"; (5) "A Book of Divisions and Definitions".

The following extract from the section on the Topics will give a concise survey of Abelard's views on the relationship of language, thought and reality:

> If we were to think aright about the imposition of names, we would consider how a truth might be expressed more simply, and reflect on the need to convey the connection of things more expeditiously. But in the process of considering the imposition of names it remains the province of the discipline of logic to examine how much is conveyed by each single utterance or word. It is the task of natural science to investigate whether the nature of the object conforms to what has been said, i.e. whether what is claimed as the property of the object is present or not. It is also necessary that what applies to the latter also applies to the former. The result of this is that consideration of the one is also necessary for consideration of the other. The first objective of the learner of logic should be to look into the properties of the objects themselves before looking into the meaning of individual words. But since it is necessary to account not for the nature of objects, but for the giving of names, his whole attention should be directed to logic. But once the nature of objects has been perceived, the meaning of words may be distinguished from the properties of the objects, first in single words, and subsequently in extended discourse. (ed. Cousin, 1836: 351)[A][9]

This passage highlights several fundamental features of Abelard's view of logic; he pursues the soundness of its judgments by examining the properties of objects in physical nature, and its content by examining thought by way of *language*, since thought becomes explicit and tangible in the giving of names. This imposition of names on things comes about because names occur as enunciation or utterance, and do so in the context of living speech or discourse. It would be appropriate to categorize Abelard's view as the advocacy

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[9] To this should be added various pages of his work on "Logic for Beginners" (*Logica ingredientibus*), ed. Geyer (1933).

of a logic of language, which seems to have arisen under the influence of humane studies in the school of Orleans. His attitude as a logician to language is not sceptical, and for this reason his view of language is not disparaging, but appreciative.

After the dominance of realism in the thought of the second half of the thirteenth century, logical or 'speculative' grammar, based on a trusting acceptance of language, was to emerge, as indicated above, from about 1300 onwards. In their turn, Peter of Spain and others like him prepared the way for a renewal of nominalism (as in Occam), which again propounds a logic, but one which replaces Abelard's confidence in language with critical disparagement. The world of concepts had by then become a different one: 'term' and 'supposition' (*terminus* and *suppositio*) by then dominate the field.

Abelard differs from this tendency in that he works with a smaller number of terms which, while they do not make the subtle and precise distinctions of 'discourse', 'sentence', 'word' and '[articulated] sound' (*sermo, oratio, dictio* and *vox*) that were to prevail a couple of centuries later, nevertheless constitute a significant part of range of his concepts. It had still been possible for Anselm (1033-1109) to write in his *Dialgus de Grammatico* ("Dialogue on the Grammarian", ed. Schmitt 1938: 162): "But since words signify nothing but objects, it is necessary when we ask what it is that words mean, to say what things are".[B 10] This declaration shows clearly that Anselm's basic principle was simply the representation of object by word. Anselm was a man of the eleventh century. However, it was also in the eleventh century that logic had become dominant on the continent, so making it impossible, if only for this reason, for Abelard and his contemporaries to use such a simple basic scheme at the beginning of the twelfth century. Abelard's "conceptualism" is an exploitation and consolidation of the gains of dialectic in the eleventh century, and his rejection of the extremism of Roscellinus is a mark of his moderation. Against this influence lies that of humane studies at Chartres and Orleans, of which John of Salisbury, "the ripest product of this School" (Sandys), formulated the scholarly principles in the following terms:

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[10] Quoted also by Rotta (1909: 65), who adds: "As may be seen, we find here the reflex of that trust in objective reality which characterized the categorical decalogue of Aristotle, in distinction, for example, from Kant's tetralogy of categories, expressions of the *a priori* forms in the mind". Anselm is a realist. If he were to be discussed in greater detail here, he would naturally be considered in the context of the realist tradition. But on him, see Fischer 1911 and Allers 1936.

It may, incidentally, be surprising that we find a recurrence of a similar theory in behaviourism (which is also Anglo-Saxon). The linguistic theory of Bloomfield (1933: 22-41 and Ch. 9) conceives meaning in literally the same way as Anselm, though he adopts a sceptical attitude to the object, which is alien to the realist Anselm.

"Grammar is the cradle of all philosophy, and, so to speak, the first foster-mother of all literary studies" (*Metalogicus*, I, 13; see Grabmann 1936: 113). We see it as a result of the close relationship which Abelard had with this group[11]—though his artistic personality, his eloquence and feeling for language must also be taken into account —that his concept-based epistemology was combined with a special esteem for language as a form of cognition; and as a result his views have been characterized as "sermonism". An attempt to summarize the contrast between Abelard's point of view and the earlier realism of Anselm could result in some such approximate formulation as Object ~ (Concept + Word).

How does Abelard's "sermonism" regard this relationship between language and thought? In answering this question we must bear in mind that this attitude of Abelard and his contemporaries becomes conscious in and through the dispute about the nature of the reality of universals. Abelard's starting-point is a passage from Aristotle's *De Interpretatione*, which, according to Boethius, runs: "But since some terms apply to things in general, and others to single things, I shall speak of a term as 'universal' if it arises from many things, and as 'singular' if it does not" (see Geyer, 1933: 9).[G] That is to say, a general term is fitted by nature to be predicated of many things.

> The actual partisan slogan of Abelard rests on this point, for it follows, from the fact that the nature of things determines what is said about them, that neither things as such nor words as such are generalities, but that generality is inherent only in the fact of utterance, i.e. in the spoken form of the proposition, or, to put it briefly, in speech (*sermo*); as a result we avoid the mistaken and untenable view that one can speak of a thing in such a way as to imply that the thing is

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[11] There has been practically no attempt to analyse the trends of mediaeval thought in terms of linguistic theory. Sandys, for example, is concerned only to give an account in terms of the history of literature and scholarship. The important study of sources made by Grabmann goes little further in the characterization of views of language than applying such general concepts as 'logic of language' and 'grammar'. Wallerand at least has a more acute view of the lines of development of realistic grammar, but reveals the use of extremely non-linguistic criteria, e.g. in repeatedly describing nominalism—especially that of Occam—as "decadence" (e.g. 1913: 73). Rotta gives what he promises in the title of his work, a description of the scholastic *philosophy* of language; he is mainly concerned with questions of epistemology. (Prantl and the manuals of the history of philosophy naturally offer equally little in this respect.) Thus too little credit is given to a literary movement like e.g. the school of Chartres and Orleans, because the linguistic principles on which it is based are inadequately discussed. It is set in the framework of differences in philosophical attitude towards such topics as the controversy over universals or Platonism *versus* Aristotelianism, etc.; or else it is described in chronological order—which is by no means orderly. What is never discussed is the question of how a linguistic movement based on spontaneity and intuition not only has principles of its own, but can exert a direct influence on views of language which become explicit—no matter from what intellectual persuasion they derive—while its own basic concepts remain implicit. This, too, is virgin territory.

physically present as a discrete object in a plurality of things, whereas, as the expression "a thing may not be predicated of a thing" (*res de re non praedicatur*) indicates, everything which is expressed, and in so far as it is expressed, is not a thing, but an expression. (Prantl 1861: 9, after Remusat 1845)[D]

But what, in that case, about the separate word? Can it serve to predicate things by means of its separateness? Abelard rejects this position decisively; for him it is the total utterance which is predicable (*sermo est praedicabilis*), and it is only in and through the sentence as predication, i.e. indirectly, that the word can be made to serve logical predication.[12] Thus the arrangement in which the *speaking* thought conceives things comes about by a process of *abstraction:* "the perception of universals is brought about by abstraction" (*intellectus universalium fieri … per abstractionem*). Abelard is the first schoolman to adopt this theory (Sassen 1932b: 107); he does not, however, go so far as to leave subjective summarizing thought, the *conceptio intellectus,* without a non-mental reference to things themselves. He establishes a certain likeness or conformity[13] between thought and objects, a congruity which excludes thought from real existence, because it is destined by its very nature (*natum esse*) for predication.

Abelard investigates thought through its expression in language, and argues that it is only here that thought becomes manifest. Thus far thought is dependent on language. The relationship between language and thought is so close that each occurs in the company of the other and each is in turn the cause and effect of the other:

> We may say that the idea in our mind carries both the effect and the cause of our utterance—the cause in speaking and the effect in hearing—because, on the one hand, the utterance of the speaker is produced as it proceeds from his thought, and in turn produces the same thought in the hearer. (*Theologia Christiana,* I, 1192; quoted by Prantl 1861: 196 *n.* 369)[E]

Knowledge of words and thoughts brings about frequent reciprocal transferences (*translationes*) between the two, because signification is added. Such transferences, however, occur in linguistic exchanges between individuals, and most certainly do not imply for Abelard the more general, less individual reciprocity which would make it theoretically possible to create an independent thought-content from the set of words which enshrine it, and make

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[12] Ries (1931) makes the same point; but see also Reichling 1935: 411–416.

[13] This again shows the influence of the Chartres-Orleans school, which was the source of the notion of conformity (see Überweg 1925: 238).

thought deducible independently of language (as in Lull). Ultimately, Abelard can visualize language only as an exteriorization and integration of the under-tanding which forms conclusions and expresses truths. It is in the subjective activity of human understanding that the norm of language, as of other things, in the last analysis resides; and the *raison d'être* of this norm consists in making the subjective conclusion overt, and thus transferable. This normalizing subjectivity places Abelard in the anti-realist camp, and an acknowledgment of universals existing outside the mind does not detract from this. Abelard advocates a language-based logic, and does so, not sceptically, but fully confident both in the ability of logic to create truth through thought and in the ability of language to create a valid exteriorization of thought which has this power:

> A proposition is a sentence which may express a truth or a falsehood; ... for just as all propositions are either positive or negative, with no further possibility, they must also be either true or false. (*Dialectica*, p. 237; quoted by Prantl 1861: 196 *n.* 369)[F]

But it is man who brings out the validity of both. The realism which was to come after Abelard's time and become dominant in the thirteenth century was concerned to stress the receptivity of human thought for true reality, i.e. a reality which is rationally reflected by means of intelligible models (*species intelligibiles*) in human comprehension. Speculative grammar went further, aiming to see metaphysical realities as being enshrined in language, and by this means to establish a theory of linguistics based on logic. We also saw that taking this position to its final conclusion produces—as in Lull—the absurdity of reversibility, the view that knowledge could be constituted by combining linguistic constituents in a mechanical fashion. For Abelard, on the other hand, truth is primarily dependent on the subjective combinatory human activity of forming a judgment; for speculative grammar the point of departure is the static and hierarchical structure of reality as reflected in the human mind.

Activity as a basic factor in Abelard's concept of dialectic was consistent with the practical task of argumentation, of establishing proof, that he assigns to logic. Finding grounds of argument ("Topics") is of great importance to him. In describing dialectic as the establishment of arguments he is reminis-cent of Cicero; he even observes that logic is the basis of eloquence.

His chief logical work, the *Dialectica* already mentioned, which Cousin pub-lished in 1836, may also be regarded as a textbook of argumentation. The first chapter deals with the word (*dictio*)—the so-called Book of Parts [of

speech], the second with the sentence (*oratio*). The logic of *dictio* is divided into preliminary definitions (*antepraedicamenta*), dealing with Porphyry's "Five Voices", together with the concept of the individual; the "predicaments", i.e the ten categories, and the concluding statements, where, *inter alia*, the noun and the verb are treated as the essential elements of the proposition. The "sentence" includes both factual and indefinite propositions. Discussion of this last matter is introduced by a Book of Arguments (*Liber Topicorum*). From these factors what Prantl calls rhetorical interest again becomes apparent.

For what comes after the predicaments a single observation will suffice. Speculative grammar, in keeping with its characteristic way of thinking, attempts to justify the existence of noun and verb by analogy with the dual reality of entity and being, of essence and existence. Abelard had no need of this recourse; his dynamic view of the proposition sees noun and verb as the living factors which realize the proposition. Just as in the case of *syncategoreumata*, particles such as conjunctions and prepositions, and their real content, Abelard takes the side of the grammarians, but as a mediator he considers the meaning of particles to reside in the fact that "they *in some degree* determine *certain* properties *proximate* to the matter of those words to which prepositions are applied" (*quod quasdam proprietates circa res eorum vocabulorum, quibus apponuntur praepositiones,* ed. Cousin, 1836:217, quoted by Prantl 1861:191 *n.* 348; emphasis supplied). Abelard's fundamental position remains that of the subjectivity of human thought and predication, which supplies the criterion of truth from within itself. Elsewhere in the *Dialectica* (ed. Cousin, 1836: 220), in the course of dealing with so-called indefinite propositions, he says that the content of the word is to be reduced not so much to its signification as to *a certain convention of its coiner (causa vocabuli non tam ad significationem reducenda, ... quam ad quandam imponentis institutionem).* This does not contradict Abelard's previous reservation; for if he confronts his thinking—and also its expression in language—with a metaphysical structure of being, this is ultimately a side-issue. In the last analysis the fact of thinking is its own authority; it functions according to its own criterion and makes this productive in argumentation. Since his thought gives functionally dynamic and non-contemplative representations, he can cause it to be conveyed in language, for as language is, like thought itself, dynamic, it gives shape to thought. Hence his logic is unmistakably subjected to the influence of language. (Prantl 1861: 200 calls this the "Ciceronian tendency" in Abelard's logic.) He is in a position to accept language as it is uncritically, since its character as a free institution is in keeping with his non-consecutive, subjective view of thought, thought which does not measure its truth-content by congruence with a real object

under contemplation, but by its force in effectual argument.

Was Abelard a nominalist? It must be admitted that while this classifica-
tion clearly has some validity for his views on language, the present investi-
gations have made it increasingly difficult to apply. Abelard is a non-realist,
to be sure. But if we are to form a correct opinion, it has to be pointed out
that even this does not mean that Abelard did not accept the existence of
reality, or knowledge of such reality, outside the mind; in ontological terms
all mediaeval scholars are realists, whether they are individualists or
universalists. The distinction is valid here only in an epistemological sense:
according to the realist true reality presents itself to thought from above and
without, even if there is collaboration from within, for it is the eternal ideas
of God that underlie all that exists, or at least his will is law (Duns Scotus).
But Abelard's thinking, on the other hand, includes the notion of man as the
measure (*homo mensura*), a notion which must be regarded in the same episte-
mological sense as antirealistic. Abelard is the first schoolman to build up his
ethics as a system of natural moral principles, i.e., as a product of human
thought (See Sassen 1932b: 108). What he accepts has always been first
through the filter of his critical understanding. In this sense Abelard is anti-
realistic; and this explains, for instance, his dispute with Bernard of
Clairvaux, who rejected the authority of the intellect. The criterion of
correctness became more comprehensive because it secured certainty within
itself, and hence it ceased to be necessary to urge the uncertain adequacy of
language as a reason not to use language for the conduct of mental processes.
In this way Abelard was able to share the philologists' reliance on language
and to feel no necessity to vindicate language from the reproach that it
misrepresents thought; but at the same time he was not a philologist, but a
logician. Did his contemporaries (John of Salisbury, Otto of Freising) call him
a nominalist because he was fully satisfied with thought as expressed in lan-
guage—in the Latin of the scholars? And did he do this because he did not
regard correct thinking as depending on an adequate reflection of the world
system, but saw it, rather, as being entitled to determine for itself whether it
was valid, even in the light of the perhaps rather vague signification provided
by language? It seems to me that this can be one reason.

The thirteenth century, of course, ushers in the hegemony of realism. A
reaction against the self-assurance of this mode of thinking was, however,
eventually expressed on the grounds that it was purely ratiocinative, and set
epistemological scepticism against realistic and logical speculations. This scep-
ticism was subjective. Abelard was subjective, but he was decidedly not a
sceptic. Only in so far as Abelard, like Occam (for it is above all his scepti-

cism which now comes under discussion) was a subjective anti-realist, can the two be considered to have anything in common. This position is generally distinguished by the conventional term of 'nominalism'. But it is scepticism which makes the difference; and since scepticism determiness the view of language, and this sceptical attitude in turn influences the Renaissance, we cannot neglect differences within nominalism. From the linguistic standpoint there are two sorts of nominalism, one which shows confidence, and one which shows distrust and scepticism towards language. It is this difference which will now be examined.

Scepticism

V. Brøndal notes, in a posthumous essay: "Our classical languages (Greek, followed by Latin) seemed to the Europeans to be more 'logical' than other languages, and it is for this reason that what has become classical logic for us was inspired by them" (1943: 61).[G] He had earlier spoken of something which had already become apparent in an individual humanist (Vives):

> There is no doubt that Aristotle's logic, as Heinrich Maier has shown, is to a great extent inspired by linguistics; it is among Greek sentences that Aristotle selected certain types which he considered to be fundamental, and it is through the analysis of Greek words that he arrived at certain predicaments, which are conceived as essential categories. (1943: 50)[H]

The theme of the inconsistency of language and logic had developed over a long period. Vives was aware of this, but was inclined to praise Aristotle for his emphasis on language. That Vives paid any attention to this problem at all may perhaps be ascribed to a line of thought to which he himself was bitterly opposed, but which, as a result of its critical direction, had opened up the question. This new intellectual movement, represented by such figures as Peter of Spain, has been called 'terminism'; and Occam based his ideas to such an extent on this strikingly modern tendency in logic that Prantl prefers to call him a 'terminist' rather than a 'nominalist'. While Abelard had still in good faith built logic on the basis of language, and while the realism of Thomas Aquinas and like-minded scholars was later succeeded by speculative grammar which aimed to establish a congruency between language and the metaphysical system it adopted, there suddenly emerged in terminism a new movement, one which still practised logic on the basis of language, but subjected the giving of names to a criticism which descends into hairsplitting distinctions, and did so in a manner which seems to go against the grain of current development. Prantl saw a source for this development in Psellos and the

cultural renaissance of the Byzantine empire. The parallels between the word-
ing of Psellos' *Synopsis* and the writings of William of Sherwood, Lambert of
Auxerre and Peter of Spain are indeed so close that it is impossible to deny
an extremely intimate relationship. For this reason Prantl speaks of a Byzan-
tine invasion of western logic, and in doing so credits Psellos and his followers
with originality. Prantl's view has been disputed very convincingly by Thurot,
Grabmann, and others.[14] Although I accept the views of these critics, this last
question applies more particularly to literary history, and is thus only of
minor importance here. What is important for the purposes of the present
investigation is the great influence that Peter of Spain exerted on western
thought in general, including linguistic thought,[15] and on Occam and his fol-
lowers.

We shall see later that the humanists disputed the sceptical criticism of
language contained in the theories of the nominalists, and that the Renais-
sance proper made use of these theories just because they are sceptical, but
applied them generally in its conflict with the realistic attitudes of the school-
men. We shall find, however, little express scepticism in Occam's two logical
works, and still less in the terministic logicians we are about to study. What
we do find is a logical subjectivity which passes language through the filter
of logical criticism. Scepticism must be considered a negative attitude rather
than a positive system; it is inevitably self-contradictory when it comes to be
expounded as a valid theoretical system (see Hönigswald 1914). What makes
terministic theoretical systems sceptical lies therefore in the tenor of their
application to the argument against assured realism rather than in their being
an acknowledged theoretical system. The scepticism of the terminists is even

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[14] It is now almost certain that the compendium which goes under the name of Psellos was a
fifteenth-century compilation by Gennadios Scholarios. Simonin (1930: V, 267-278) also claimed
that Peter of Spain and John XXI (d. 1227) cannot have been one and the same person, since
Peter of Spain must have written his work about 1311. As Aquinas was clearly familiar with the
lexical usage of terminism, but never mentions Peter of Spain—who according to the earlier view
would have been his contemporary—in this connection, and as we can establish that the work
of William of Sherwood and Lambert of Auxerre is less well thought out, and hence probably
of earlier date, there seems to be something to be said for a later dating of Peter of Spain. Grab-
mann (1937), however, accepted that Peter of Spain came later, and—significantly—confirmed
the authenticity of the old dating of Peter of Spain by removing inconsistencies in the dating
of William of Sherwood. The silence of Thomas Aquinas is not crucial.

[15] His authority was apparently supported by the fact that he ascended the Papal throne.
Prantl gives a respectable list of 48 printed editions of his major work. Among the places of
publication we find, alongside great cultural centres like Paris and Cologne, such places as
Deventer and Zwolle (Prantl 1861: 31f.). The mnemonic terms for the modes of syllogistical
figures, *inter alia,* derive from terministic logic.

more clearly restricted to logical criticism; and in Occam, at least in his logic, the sceptical application of this criticism remains more or less implicit. When the Renaissance adopted nominalist criticism, it became a means of questioning and undermining mediaeval certainties. The reason Moody largely overlooks the sceptical trait in Occam's writing is precisely that his monograph deals with Occam as a logician.[16] I now propose to examine Occam's scepticism more closely in the light of an outline of the character of the age in which he lived, beginning with a summary description of the terministic logic of Peter of Spain and his associates; but since it was Peter's work which was most widely distributed and had the greatest influence, continuing into the age of printing, discussion will be confined, in the main, to his views.

While the complete restoration of the *Organon* had replaced the old logic by the new logic in the course of the thirteenth century, other disciplines, e.g. natural science, ethics and law, had gained prominence alongside a general ontology, known at the time as metaphysics. This development gave logic no chance to rest on its laurels after its victory over the humanities. In the flux of action in thirteenth-century intellectual life, logic was confronted with the two-fold task of developing the new material further, and also of redefining its position in the context of scholarship. The realization that the acquisition of knowledge was not restricted to the paths trodden by logic deprived logic of its place as a general theory of knowledge and reduced it to the status of a theory of thought, of arbiter of truth and falsehood in the acquisition and assessment of knowledge. While the dominant systems of the high scholasticism of Aquinas and Duns Scotus were from the very beginning affected by a certain inflexibility in their view of the reception of reality, what emerges now is the logic of the new school (*logica modernorum*), which sets out from the subject. Durand of St Pourçain, Petrus Aureoli and Henry of Harclay[17] direct the

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[16] Moody (1935) attempts to show that Occam set out to be a more refined Aristotelian than his contemporaries, and "what Ockham's much heralded 'nominalism' *is.*" But although I accept that Moody demonstrated the refinement of Occam's Aristotelianism, this does not invalidate the contrast between Occam and the Aristotelian realists. There are many ways of appealing to Aristotle. It was gratifying to note that Zuidema (1936) also rejects Moody's arguments, formulating his view in the seventh thesis (*Stelling*) appended to his dissertation as follows: "Moody is wrong to claim that Occam's logic is to be interpreted as a survival of Aristotelianism".

[17] Of Durand of St Pourçain Sassen says (1932b: 243): "he rejects mental images derived from sense-perceptions (*species impressae*) and regards knowledge not as a representation of reality as understood from without, but as an independent understanding by the mind of the real nature of things from a general point of view"; and of Petrus Aureoli: "The concept is the actual object of knowledge; it has no objective value of its own. Logic operates with words which are the expression of these concepts." Henry of Harclay criticizes Thomas Aquinas.

arrows of their criticism in this 'modern' sense against realism, and above all against Thomas Aquinas. They are of the generation which followed Aquinas, but the seeds of the logic of the new school had already been sown by Thomas's contemporaries (William of Sherwood, Lambert of Auxerre, Peter of Spain), even if the controversy had not yet broken out.

Peter of Spain

Peter of Spain (1226-1277), later Pope John XXI, wrote one work, the so-called *Summulae Logicales* ("Brief Summaries of Logic"), which in more than one respect determined the future course of views of language.

Like Abelard, Peter of Spain builds his logic on an investigation of linguistic phenomena, but while, as already said, Abelard's view of language—under the influence of pre-humanist respect for the authors—was predominantly one of trust, the newer logic approaches language with the scalpel of criticism. We are thus dealing with a linguistic logic which is critical of language.

The principal methodological concepts which this logic applies to language are 'term' (*terminus*) and 'supposition' or implication (*suppositio*).[18] Peter of Spain spoke of 'terms' because logic for him can be objectively investigated in the spoken utterance of discourse, which he regards as a syllogistical argument. Reasoning is a collection and concatenation of assertory sentences, these being considered as predications. The elements of the assertion are words. He regards words in their function of conveying thought as *termini*. But Peter does not use *termini* as the starting-point of his logic or of his differentiation between true and false. This criterion is applicable only when we come to predication and the combination of predications. But when predications are at variance (*homo* [man] is fallible, *homo* is a four-letter word, *homo* is a genus, etc.), the supposition with which the word is being used, or what the word implies and why it does so, is called into question.[19] Thus the word, as

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[18]   This tendency in logic must have been very familiar to the *Modistae*. Thomas Aquinas, for example, operates to a great extent with the concept of supposition. In Thomas of Erfurt's speculative grammar the expression *terminus* also occurs among the methodological concepts defined at the outset; but it is characteristic of his logical grammar that he makes very little use of the term in the course of the work. The same holds good, more or less, for the concept of supposition, which was, however, not announced in advance.

[19]   *Supponere* is used both transitively and intransitively. In intransitive usage *supponere pro aliquo* ('to be a substitute for something') = *stare pro aliquo* ('to stand for something'). In transitive usage, e.g. *supponere aliquid* ('to imply, to [pre-]suppose something'), the items in question are the *supposita* ('suppositions'), and the terms are the *supponentia* ('supposers'). The traditional definition of *suppositio* is that it is the representation of that which lies within the compass of a concept by the word which represents that concept. See Überweg 1926: 578.

a 'term', becomes a matter of predication lying outside and beyond what is predicated, and has its source in the predicating individual as subject. The basic theme here is not a reflection or representation of reality within the human mode of understanding and mode of signifying, but the service which language gives to predication and the expression of thought, in which the only requirement is a constant application of suppositions in order to arrive at predications which are correct in themselves, and therefore reach correct conclusions. The truth value in the real world of what has been thought and named can thus be disregarded. It remains to be seen whether this terministic logic can be completely successful. In any case, it is to be expected that a radically idealistic rationalism—which at best allows what is actually existent to survive as the inherent quality of the object (*Ding an sich*), but also causes all being to be assimilated in the sovereign autarky of thought—would consistently produce a subjectively based formal logic. This we do not find in any mediaeval scholar; nevertheless an a-prioristic parallelism between the object which exists and its image in the mind can lead to a formal logic. While the possibility of a false predication may be acknowledged and investigated, the source of its falsity may also properly be sought in the intervention of a use of language which deviates from parallelism. But criticism of this use of language cannot ultimately escape a confrontation between at least one of the components (the conceptual or the linguistic component) of the term under investigation, and objective reality. While this is assumed *a priori* to have been in principle correctly understood, the confrontation is still inescapable. It is in fact here, to my mind, that the key to the understanding of the concept of supposition lies.

The first treatise of the *Summulae* begins with the theory of predication, propounding definitively a principle which was to become fateful for later scholars in the logical analysis of language,[20] the tripartition of the indicative predicative sentence into subject, copula and predicate:

> A proposition is an utterance which indicatively expresses a truth or a falsehood, e.g. "[the] man runs". ... In this proposition "man" is the subject, and "runs" is the predicate, and what joins the one with the other is called the *copula*, as is apparent when we analyse it, e.g. "man runs" is the same as "man is running"; here the noun "man" is the subject and "running" the predicate, and the verb "is" is called the copula because it joins the one with the other.[1]

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[20] For a critical discussion of the subject / complement sentence see Pos 1926, Dialogues II, IV, VI, VII.

The question 'Which?' is answered by 'categorical' (factual) or 'hypothetical', 'What kind?' by 'negative' or 'affirmative', 'How much?' or 'How many?' by 'universal' or 'particular', or 'indefinite' or 'singular';[21] for these questions there is a mnemonic verse running *"Quae cat vel hyp, Qualis ne vel aff, Quanta u par in sin"*. There follow, *inter alia*, the familiar conceptual distinctions of "contrary", "contradictory", "subordinate" or "subcontrary", the threefold transformability of the predication, hypothetical predication (conditional, copulative, disjunctive) and rules for determining the truth or falsehood of such predications; while modal predications are developed by means of the adverbs "necessarily", "conditionally", "possibly", "impossibly". The whole is interlarded with mnemonic words and verses. The second treatise deals with the so-called "Five Voices" of Porphyry's *Isagoge* as *praedicabilia*, the third with the Categories, the fourth with Syllogisms, the fifth with the Topics, the sixth with the Sophistic Elenchs (modes of argument)—all of this worked out in the manner familiar from traditional logic, and provided with all kinds of mnemonic devices for use as paedagogical drills. Among the matters considered in these treatises is the repositioning of dialectic between her sister arts of the Trivium; and the relationships within the Trivium will be examined in later pages, as the occasion arises (e.g. in discussing Agricola).

The final treatise "On the Properties of Terms" is of special importance here, since the relationship of language to thought begins to be complicated at this point. To gain a proper view of this we must first go back to the beginning of the whole work. This arrangement—which is that adopted by Peter's associates, and also by Psellos—begins with the assertion that dialectic is the art of arts. By means of the etymology of "dialectic" it is established that conversation, involving at least two persons, is an exchange of ideas between a speaker and a respondent (see Prantl 1861: 267 on Psellos' *Synopsis*). But since dialogue is possible only through the medium of the word, terministic compendia begin with sound (*sonus* or ψόφος) and word (*vox* or φωνή). The ten speech-organs (*instrumenta*) are the throat, the tongue, the palate, four sets of teeth in pairs, two lips, and the lungs (*guttur, lingua, palatum, quatuor et dentes pariter, duo labia, pulmo*).[22] There are sounds which are words, and sounds which are not words. There are also significative and non-significative words:

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[21] These details are reproduced here not in order to dilate upon them—that would lead us too far—but to use them as symptomatic of the manner and organization of the work as a whole.
[22] Prantl 1867: 41. The four sets of teeth are upper and lower, front and back. Some editions omit the lungs, leaving nine organs.

The word of arbitrary signification is one which, at the instance of its first user,
means something, e.g. "man"; some words of arbitrary signification are com-
plex, e.g. discourse, others simple, e.g. noun or verb. It should be noted that the
dialectician or logician acknowledges only two parts of speech, viz. noun and
verb; he calls all the other [words] *syncategoreumata*, i.e. [words] contributing to
meaning in association with others. (Prantl 1867: 41, *n.* 150)[J]

Comparison with speculative grammar makes it immediately apparent that
language is here regarded functionally; in the basic pattern of terminism the
human participant has an essential role as producer of language and listener
to it. While speculative grammar was based as it were on the formula Object
→ Concept → Word, in which there is no place for man, a comparable for-
mula for terminism would look approximately as follows: Speaker → (Concept
+ Word) → Hearer / Speaker → ... and so on round and round, a formula in
which the Object, in turn, has no place in the sequence. Language, as the
conveyor of thoughts, mediates between participants in discourse; and it
seems that dialectic as the art of speaking *truthfully*—grammar is the art of
speaking *correctly*—has nothing to do with the mode of being (*modus essendi*) of
the matter under discussion. As long as the premises—Peter of Spain was the
first to use this term—are correct, truth is satisfied.

The use of the term 'instrument' may have made us prick up our ears
momentarily. However, it is applied only to the physical organs of speech.
Language mediates between the speaker and the listener, and in doing so, it
conveys thoughts. There is no discussion here of using language in order to
construct thoughts within the mind.[23] The hearer, too, immediately extracts
the thought content from the transporting medium as it reaches him. No, the
relationship between Concept and Word in terminism is extremely close,
since in the terminists' view thought can be investigated only through
language; but there is no trace in it of the use of language as an ennoetic
instrument (i.e. as a component of thought). Language does, indeed, stand in
the service of thought, but does so, as it were, externally; it makes thought
sensible, i.e. perceptible to the listener's organs of sense, and therefore, by
transference, for the speaker.

Let us now turn to the properties of terms.[24] What is a term or *terminus*

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[23] With an eye to the development of the concept of linguistic function among the rationalists,
it may be noted that nominalism is often uncritically imputed to them, and to Hobbes in
particular; but however insignificant such a remark may seem and however justifiable the
imputation may be, it is worth stressing the point that Hobbes's nominalism shows a totally
different character on this very issue of the instrumentality of linguistic function.

[24] "... by which, largely owing to the authority of Peter of Spain, a considerable amount of
labyrinthine nonsense was handed down to succeeding generations", complains Prantl (1867:

(ὅρος in Psellos)? A term is a concept in linguistic form which lends itself to use as a component of a predication, i.e. as subject or predicate, since as a word it has a signification, either universal or particular. And the signification is an arbitrary representation of an object through the word (*rei per vocem secundum placitum repraesentatio*).[25] The word signifies either substantivally or adjectivally. "Nouns substantive are said to make a supposition, but nouns adjective and verbs are said to conjoin" (*Nomina vero substantiva dicuntur supponere, sed nomina adjectiva et verbi dicuntur copulare*). "To conjoin" thus means "to serve as predicate". What is *suppositio? "Suppositio* is the acceptance (*acceptatio*) of the substantive term for some object". The word *acceptatio*—a term frequently employed by Peter of Spain—is interesting. (Psellos uses for this πρόσληψις, i.e. 'adduction', 'application', 'use'). Thought thus *uses* the term to visualize something, or to cause the term to visualize something. But in this case the signification is anterior to the supposition, and they are therefore different. In fact: "signification is anterior to supposition, and is different, in that signification is a property of the word, while supposition is a property of the term which in this case is compounded from the word and the signification".[K] Here, then, we are given a closer description of the expression *terminus* as a compound, with word and meaning as its components. "Signification, again, is a property of the sign with respect to the referent, while supposition is a property of the supposer with respect to what is supposed [i.e. implied]" (*Item significatio est signi ad signatum, suppositio vero est supponentis ad suppositum*, see Prantl 1867: 51). Thus signification lies dormant, so to speak, in the word, ready to be applied by the supposer to what is supposed (implied). If we substitute 'name' for 'suppose', we come to Husserl's well-known dictum that language 'names' by making use of meanings. While there is a difference of principle here, residing precisely in the substitution—for supposition is logical, while naming is linguistic[26]—terministic logic must be credited with being on the track of an

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50–51). But see, however, Beth (1944: 81): "K. Prantl, the greatest authority the nineteenth century produced in this field, was an outstanding historian and philologist; he laid the foundation of our knowledge of earlier logical writings. But he was not, by and large, a logician, as is clear from the low opinion he held of the Stoic logicians. His work is in need of revision at most points." Psellos (pseudo-Psellos, in fact) has been discussed above, p.72 and note 14.

[25] The very expression *secundum placitum* marks a distinction from realistic grammar. For realistic speculative grammar—which always uses for preference the term *repraesentare—repraesentare* is, as it were, a passive reflection of an objectively received image through a mirror, a *speculum*. For the subjective terminist it is a free representation, or misrepresentation as the case may be, of the object of thought. The addition of *ad placitum* may be seen as a correction in advance of a realistic interpretation of the terministic 'representation'. Occam was to speak out more clearly against this latter representational relationship.

[26] There is, however, more to be said about naming (*appellatio*) in dealing with Peter of Spain.

important distinction.

After the co-ordination of supposition and conjoining[27] ("conjoining is the acceptance of the adjectival term for some object"), we are given, as the major part of the treatise, an elaborate exposition of supposition and its properties. There is no need to go into these involved divisions and subdivisions and sub-subdivisions (natural, incidental, simple, personal, determinate, mixed supposition, etc.; *suppositio naturalis, accidentalis, simplex, personalis, determinata, confusa*, etc.) in any detail; it will be enough to take a few striking instances adapted from what Professor Beth says of the logic of the new school (*logica modernorum*):

> " 'Man' is a word of [three] letters"—*suppositio materialis* (material supposition)
> "*Man* is a species of the genus mammal"—*suppositio simplex* (simple supposition)
> "this *man* is objectionable to me"—*suppositio singularis* (individual supposition)
> "every *man* is fallible"—*suppositio communis* (general supposition). ... In a thorough analysis of an argument such distinctions are indispensable. Similar conceptual formations have also been developed afresh, entirely independently, by modern logicians (R. Carnap: "diction based on content", in contrast with "diction based on form"). (Beth 1948: 37)[L 28]

There is no need to enter into further detail about *restrictio, ampliatio* and *distributio* (limitation, expansion and distribution) which are often discussed in close association with supposition; and, moreover, individual terminists differ greatly from one another and from Occam on these matters. The analysis of linguistic expression becomes all too readily lost in hairsplitting in this area. An exception will be made, however, in the case of *appellatio* (naming). As said above, it remains to be seen whether terministic logic will succeed in filtering out the truth value in the real world of what has been thought and named. We may now note that it does indeed break down in the case of *appellatio:*

> Naming is the acceptance of the term for the existent object; I say "for the existent object" because the significative term does not give a name to something which does not exist, e.g. Caesar or chimera. Naming is different from signification and supposition, because name-giving applies only to an existent

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Appellatio is a favourite term of Hobbes.

[27] 'Conjoining' was not developed by Peter of Spain, but by William of Sherwood.

[28] The school of Carnap, the Viennese group, was actively interested in the logical analysis of language, and was occupied with this after many of its members settled in the U.S.A. For specifically grammatical work see Schächter 1935. Ayer ([2]1948) derives from this circle. Wittgenstein, the founder of the school, came upon the relation of language and logic through the philosophy of Brentano and Marty. In the U.S.A. Morris (1946) is also associated with this school of thought.

object, while supposition and signification apply either to an existent object or
to a non-existent object. (Prantl 1867: 57, *n.* 228)[M]

Occam was to attempt to create greater consistency—from the terministic
point of view, that is—by making naming part of supposition. But Peter of
Spain reveals in addition traces of realism in his thought, and is not so far
removed from realistic concepts as Occam.

The concluding remarks, dealing with *exponibilia* (items requiring elucida-
tion) reinforces the critical attitude to linguistic phenomena, as we read in the
following definition: "A proposition requiring elucidation is a proposition
which has an obscure sense which needs explanation because of the presence
of some associated signification".[N] In other words, then, there is a special
class of sentences which are in need of explanation. The offenders are such
words as 'unless, apart from' (*nisi*), 'except' (*praeter*), 'whole' (*totus*), 'whatever'
(*quaelibet*), etc. It is here, if anywhere, that an extralinguistic criterion is clearly
revealed. Words which fulfil their linguistic task to complete perfection and,
judged linguistically, function regularly according to the rules of language—
i.e. are clear to both speaker and listener and deal appropriately with the
matter in hand—are here denigrated simply because the logician cannot come
to terms with them. The diligent logician places them in various drawers of
the poison cabinet with warning labels such as "exclusive", "exceptional",
"reduplicative", etc. "Comparative" and "superlative" are likewise among the
indicators which "require more detailed examination".

Terministic logic has a latent tendency to construct an autarkic deductive
epistemology independent of a reality which lies outside the mind or a meta-
physics which invokes such a reality. Although it was burdened by a concept
of *logos* inherited from antiquity which failed adequately to distinguish the use
of language and thought, and although it classified dialectic or logic uncritic-
ally as "the art of speaking truthfully" (*ars vere loquendi*), self-criticism of truth
and falsehood now inevitably demolishes its coherence by applying the stan-
dards of the logical component to the linguistic component. This demolition
is an advantage which accrues from the contention that (logical) supposition
is the result of acceptance of the (linguistic) significance inherent in the word.
But while the terminists believed that in measuring linguistic expression exclu-
sively by logical intention they remained within the magic circle of the logical,
the necessarily synthetic character of thought imposed itself on the theory of
suppositions, which in turn takes cognizance of the extramental real nature
of what is 'supposed' (implied) by the term. This formal logic is thus by no
means consistent; but what interests us most as theorists of language is that

language is devalued. Language, that is to say, is inadequate in terms of logic; but the logician is demanding of language something which does not lie within its province.

A statement like, e.g. *Homo currit* ("the man is running"), according to the views of terministic logic, is true only of one man running here and now. It is possible to make a philosophical criticism of this, for example by concentrating on individualism; but that is not our purpose, for this point of view is to be rejected in the light of linguistic theory alone. *Homo currit*, as a natural practical linguistic expression, is unjustly treated when its cogitative content, which is subfunctional, is isolated and as a result measured by logical standards. This is to judge language for the way it performs actions which it does not set out to perform, in other words, which do not lie within its *raison d'être*. The same injustice would be perpetrated if one were to accuse a surgeon of criminal wounding on the ground that he is always putting his knife into people, which, of course, is to misunderstand the purpose of the action. Similarly, it is wrong to judge language as thought. Absurd as it may still sound in an age which has not entirely eliminated rationalistic views of language, it is worth while saying again that *Language does not think;* in operating language man does not think—nor does he feel, as the psychological theory of language maintained, nor does he classify, as behaviourism maintains. In using language, man is purely and simply using language; this activity can be measured only by its own criteria, and if we disregard for a moment the countless rules and conventions for special linguistic phenomena, the norm of language is centred on the simple aim of clarity. Only in subordination to this aim, applied as a basic criterion, is it possible to investigate and select the organizational character, the cognitive method and other subfunctional aspects of language—at least, if these aspects are consistently regarded as subfunctional. Language is not described or examined, for example, as a manifestation of physical strength, even though tiredness, for example, undoubtedly affects our capacity for clear expression; and the presence of this influence, and the contribution of organic life in general to language must be fully taken into account. But this must be subordinated to the autonomous nature of language as language, and therefore remain *sub*-functional. What terministic logic does is to summon language before the court of logic and confront it with the extralinguistic demands of correctness (ὀρθότης), of accuracy, of precision, of adequacy, or whatever norm of thinking one wishes to use.[29]

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[29] Language may be judged for its accuracy only where it is used in the service of thought, e.g.

Language so envisaged and examined must be disappointing. For the logician is constrained to depreciate anything which is logically incorrect, but this is just what, from its own point of view, is the great advantage of language. "Charlie, just go out when the sun gets up tomorrow and have a quick look to see if the flowers have come out." How many headaches would such a garland of subtly nuanced clarity, addressed to and understood by a father's favourite son, cause a logical examiner of language!

In any case, the "irrational residue" of language offered the terminists so much resistance—even if they took up the challenge with marvellous subtlety —that language, its signification, and with it the sign, came to constitute for them the representation in sound of vague, incorrect and defective thinking. When Occam rebelled against the self-assured verbosity of dogmatic realism, this terministic depreciation of language and sign crystallised in some remarkably theoretical systems. And so we come to Occam, a figure of such great importance for later times.

William of Occam

Before discussing the views of William of Occam (*c.* 1300 – *c.* 1350), some attention must be given to the radically changed atmosphere which existed two hundred years after Abelard. A few factors may be mentioned. As a result of the decline of the Augustinian doctrine of the fundamental depravity of man and of the sovereignty of divine grace, and by the rise of semi-pelagianism, which regarded redemption as a gift granted in addition (*donum super-additum*) to continuing natural grace, the primary mission, and with it the authority, of the church as the agent of salvation was undermined. Favoured by contact with a non-Christian culture, in particular with that of the Muslim world, there had grown up a non-clerical enlightenment at the hands of a political and commercial class of educated men for whom the Christian religion had lost its uniqueness. Indeed, when the church again excommunicated the emperor in the thirteenth century, it was demonstrably no longer in a position to enforce a Canossa. The state had no more need to fear the

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in scholarly use; though there, strictly speaking, one is only using language to judge ideas which are being reproduced in language. And in that case, any apparent shortcomings of language cannot be held against it, since it is being used in accordance with the requirements of another discipline. This is why it is preferable, where possible, to create a precise artificial language, that of symbolic logic, for example; even though it will then be found that such an artificial language is an even more defective artefact as a language because it has distanced itself from the almost boundless possibilities of natural language.

church. She had lost her authority, even if her outward power was still great;
the Greek church was subject to Rome for a time, and imperial power was
weakened for a time. In scholarship the dominant role was taken up by
Thomas Aquinas and his associates, but at the same time the Papal inquis-
ition was established.

Around 1300 intellectual life displayed a remarkable dual nature, a
reflection *inter alia* of the dissociation of church and world, of the sphere of
grace and the sphere of nature, brought about by the factors mentioned. Even
among the greatest figures of the age there is a double strand of thought:
Albertus Magnus, Thomas Aquinas, Duns Scotus all think in two modes,
adopting neoplatonic ideas in Christian theology and Aristotelianism in
philosophy. Mutual dissension, like that, for example, concerning Duns
Scotus' voluntarism, does not detract from the fact that even as realists they
are subject to a transcendency of the divine, whether this is conceived as
being primarily a transcendency of intellect or of will.

Antirealism had continued in the thirteenth century, at least covertly, in
Peter of Spain and his terministic predecessors and contemporaries, and more
overtly in Roger Bacon; beyond them the line of the subjective rationality of
"truth in philosophical matters" continues down to Occam. For them, and as
a result of their work, epistemology again becomes important. This brings far-
reaching consequences for views about language.

The voluntarism of Duns Scotus (1265-1308) is of less importance to us.
His voluntarism is no more than a palace revolution within realism, no matter
how much this rebellion, as a reaction against intellectualism and its exten-
sion, prepared the way for the anti-realism of Occam. But Duns Scotus and
Thomas Aquinas share the common feature of pointing back over their
shoulders, so to speak, to the source of the authority and warrant on which
they rely; the word takes its authority from the concept, the concept takes its
authority from reality, and finally authority goes back past reality to the
divine intellect or will. Occam and his followers, on the other hand, attempt
to attain the truth from their own resources.

Occam's most important writings, both in general terms and for the
purposes of the present study, are his Commentary on the Sentences of Petrus
Lombardus, written in his early days at Oxford, and the *Summa totius logices*
("Comprehensive Summary of Logic"), the *Expositio aurea super totam artem veterem*
("Golden Analysis of the whole Ancient Art") and *Quodlibeta septem* ("Seven
Informal Discussions").[30] These will be examined here.

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[30] As in the case of Peter of Spain, the statements made here draw on Prantl. The vast range

At the end of the discussion of speculative grammar mention was made of two Occamists who are known to have attacked the *Modistae*. Speculative grammar provided a view of language inspired by a form of realism which had moved in the direction of an unbalanced receptive objectivity. Here the intelligible phenomenon (*species intelligibilis*) made a bridge between the mode of being (*modus essendi*) and the mode of understanding (*modus intelligendi*); it made knowledge possible as that from which understanding derived; and the support of such a realistic attitude meant that the intelligible phenomenon guaranteed and revealed knowledge of the truth. But Occam has no feeling for the introduction, or rather for the exploitation of such a guarantee; the act of comprehending (*actus intelligendi*) is sufficient for knowledge:

> All things, therefore, which are retrieved by applying a given distinct component from the act of understanding may be retrieved without such a distinct component, because making a supposition of something and indicating something can coincide with the act of understanding as well as with the thing as viewed in the mind. Hence it is unnecessary to apply anything other than the act of comprehending. (*Summa totius logices*, I, 12; Prantl 1867: 339 *n.* 768)[O]

What theory of knowledge does Occam put in the place of that of the realists? And what is the role of language in it?

Intellection, or the act of comprehending, takes cognizance of reality by direct self-motivated intuition, and in direct relationship to objectity as presented to the senses, which consists of singulars. The result of this will to know, the *ens rationis*, is the *signum*, or sign, not a reproduction of reality, but a formulation which attempts to create a likeness of reality. While it thus lacks typically realistic adequacy, i.e. the adequacy of a copy, knowledge is saved from presenting mere figments of the imagination by having significative value for the individual user. Thus Occam's application of the concept of sign as the concept of a gnoseological model faces two fronts. On the one hand it is the characteristic quality of a knowledge which is not reproductive; on the other it is protected from agnosticism.

Occam made many statements about language, directly or indirectly, and these will be examined in due course; but it is of great importance here to

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of texts which Prantl quotes *in extenso* makes it possible, even if original works are unobtainable, to make a more or less independent judgment. The influence of Zuidema (1936) must also be acknowledged. I examined his work in detail when it appeared, and consulted it again as the occasion arose, after my chapter on Occam had been written. For this reason alone the importance of this work is not shown more extensively by quotations and otherwise in the course of my discussions.

examine his remarkable use of the concept of sign. It is the key to under-standing the critical attitude of the nominalists to language, and more still of the sceptical renaissance attitude which drew heavily on Occam's postulates.

Occam makes a clear distinction between natural science, metaphysics, and philosophy with its attendant logic. Metaphysics is virtually impossible from human resources; its objective is to receive knowledge by means of divine revelation. Occam rejects the notion of any limitation, even a self-im-posed limitation, of divine power to rationality to such an extent that he speaks, as is well known, of a God bound by no law (*Deus exlex*), whose unlimi-ted will is the highest law—so taking the voluntarism of Duns Scotus to a self-contradictory conclusion. Natural science (*philosophia naturalis*) does, indeed, lie within human capability, but even here Occam rejects the realistic pseudo-guarantees of truth, viz. the rational imprints of reality, or intelligible pheno-mena (*species intelligibiles*). While man by no means lives on earth surrounded by inexplicable phenomena, he does not live among intelligible phenomena, but among signs.

Behind the concept of each sign there ultimately lies language: speculative grammar reveals how familiar men had become in the course of time with a qualification of linguistic phenomena as significative. The way in which Oc-cam uses the concept of sign thus establishes, as it were, the key of his ling-uistic music. The burden is as follows: knowledge is not impressed on the mind, but for all that, knowledge is by no means pure fiction; knowledge is just like language, i.e. it is a sign! This implies that language is, indeed, know-ledge, but superficial rather than thorough (or, in the mediaeval, non-mathe-matical sense of the word, adequate) knowledge. That is to say that language is disqualified, indirectly by way of the concept of sign, from being exact knowledge.[31] This is a depreciation, but a gnoseological depreciation, not a linguistic one. If language falls short of the mark, it fails, not by the measure of its own standards, but by cognitive and logical standards.

We must not forget in this connection that Occam is a controversialist. There is always opposition in his theoretical systems, he lives by criticism of the philosophy of triumphant thirteenth-century realism and its followers. He is not content with throwing at his opponents such remarks as, "Your know-ledge is nothing but bombast, empty verbiage"; he is radical, and says, "All

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[31] Admittedly, Occam does accept the adequacy of the sign of first intention (*signum mentale primae intentionis*). But this is a sign which, in his own words, is independent of any specific language (*idioma*). His analysis and criticism of natural language confirms this.

natural knowledge is sign."

How did Occam work out this significative theory of knowledge? The main topic of the *Expositio aurea* ("Golden Analysis") is the place of logic. Logic is not a speculative discipline,[32] that is to say, it does not deal with any object outside the mind. It is a collection of habits of thought used in the service of natural science, and constitutes its tools of discourse. Metaphysics, the first philosophy, is non-discursive; the factual sciences are discursive, they come about as a result of discursive thought. Discursive thought is *per se* that which logic examines for truth or falsehood and analyses by examining determinations and propositions. Thus logic itself is not a 'real' science, but a rational science. Occam warns that logic does not refer, either, to mental conditions (*status in anima*), for if it did so, it would once again be a 'real' science. It is the determinations of first intention (*primae intentionis*) which logic isolates, and which it then itself determines in the second intention (*per intentionem secundam*). Logic thus consists of terms for terms, and defines neither objects, nor merely concepts, but terms as such, i.e. the elements of predication. Can this self-sufficiency of logic be maintained? Does the investigation of the mental construction (*fabricatio*) of the terms—a favourite expression of the *Expositio aurea*—lie within the magic circle of reason? Although Occam's logic is expressly not concerned with the differences between actual non-mental objects themselves, but deals exclusively with the ways in which significative concepts, i.e. the terms, are built up, substance and accident are nevertheless noted as general principles of discursive thought, in the service of any objective science whatsoever:

> Whether this distinction is properly included within logic or belongs only to natural science as a "real distinction", so that logic to this extent presupposes a distinction that belongs to physics, is not explicitly stated by Ockham ...

says Moody; but when he goes on to say, "... and is perhaps not of great importance", I take issue with him.[33] For here it is the consistently formal

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[32] Occam uses the term 'speculative' where we could reasonably say 'objective' or 'practical', that is, so far as natural science is concerned. But on the other hand he uses 'practical' to describe ethics and logic; in this case many present-day speakers would tend to use the term 'speculative'. (The need to transpose 'objective' and 'subjective' in the interpretation of mediaeval material is more familiar.) Has our reading of the term 'speculative' arisen from the application of the concept to metaphysics, and has the devaluation of this discipline brought the term 'speculative' also into disrepute?

[33] Cf. Moody 1935: 36. I have found no better analysis of the place of logic in Occam's *Expositio Aurea* than the one given here by Moody, and for this reason I have based my remarks so far on Moody, at least to the extent that they are descriptive. Moody's main concern is to show

character of Occam's logic which is at stake, and he seems to me to throw this away with his principle of substance and accident. That direct intuition, incontrovertible evidence, finds this distinction in nature, according to Occam, does no more than establish that this preconception does not originate in the mind.[34] That Occam was not blind to such inconsistencies is proved by his criticism of Aristotle's *Categories* on this very point. In treating logic as a practical science on the ground that it deals with our actions, i.e. with our intentions, as ethics also does (though in this respect logic is ostensive,[35] while ethics is prescriptive), Occam is forced to accept, against his own views, that the *Categories* are partly practical and partly speculative.

It has been observed on one occasion that it would be useful to distinguish theories and philosophies of language according to whether they are directed to the speaker's or the listener's standpoint. In this case speculative grammar would be positively aligned to the listener's view.[36] Occam's view of language begins, as it were, from the speaker. Thought, presenting itself in linguistic form, is an *intentio;* it is an act of comprehending, of perceiving, an intellection (*actus intelligendi, actus apprehendi, intellectio*). In examining language to find the

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that Occam was not opposed to metaphysics, as some modern historians of philosophy have maintained, and that Occam simply set out to be a better Aristotelian than his predecessors or contemporaries. (cf. p. 37 and the introductory chapter on "Ockham and the Scholastic Tradition"; also the concluding chapter, pp. 297ff.). Moody criticizes Überweg & Geyer and others, *inter alia,* for their partisan characterization (found in many sources) of Occam as an individualist. To begin with the last point: what I should like to call the symbolic universalism of Occam seems to be unfairly assessed in this respect. It was because Moody devoted his studies more particularly to Occam's logic that he is able to make corrections here. But this concentrated concern with Occam's logic has the defects of its virtues, in that it pays too little regard to Occam in the context of his time, and therefore does not see Occam's scepticism in the perspective of his age. Moody also tries to rescue Occam from the charge of scepticism, and criticizes Michalski's excessive emphasis on "those elements which can be exhibited as anticipatory of later developments" (p. 2 *n.*). To indicate the sceptical nature of Occam's philosophy—not least in respect of language—I have sketched in summary fashion the intellectual context of his time. That his followers—the *via moderna* or 'modern route'—took scepticism to the extreme does not detract from the fact that Occam started the trend. These remarks must suffice for the present, but I shall return to this problem later, in the context of the Renaissance and rationalism. In my view, however, Occam's scepticism in the area under discussion in the present study is made clear enough by his rejection of *species intelligibiles.* That his scepticism lay not so much in natural science or in logic as in metaphysics, has, however, been unintentionally shown by Moody.

[34] Such transcendental preoccupations recur in Hobbes's 'Kinematics' (to adopt Tönnies' [1896] term).

[35] This is, in any case, logic together with the two other arts of language, i.e. grammar and rhetoric.

[36] Wundt is thus said to have defended the speaker's view, and Marty the listener's (location not established). In principle a starting point of this nature is impractical. Bühler, too, attaches great weight to this distinction.

underlying thought, however, the listener's view again seems to predominate; yet in the question, "what supposition are we dealing with here?" the activity of the speaker is again implicit. Thus we have little of this kind of distinction between speaker and listener in terministic logic, which speaks—and rightly so—against the distinction, and in favour of the logic.

Thought is accomplished in terms; terms are thoughts, whether the words are spoken or written, in so far as they can occur as subject or predicate of a predication.[37] A one-term observation (*apprehensio*) concerning an object is possible, but it is non-complex, while actual discriminatory thought is accomplished in the complex combination of thoughts in predication. Knowing a thing is a signification, but this can come about in two (or three) ways:

1. through—or perhaps, rather, more precisely—*in* the wordless concept;
2. through the word, either (a) spoken, or (b) written.

The relationships of concept and word to the thing signified are co-ordinated and equivalent to the extent that both relationships—that is, including also that which starts from the wordless concept—are *significative*. Occam, then, also classifies the concept as a sign. Both the concept and the word signify, mean and indicate the object.[38] It is this relationship which Occam calls the first intention (*prima intentio*). In this respect concept and word, in their capacity as sign, and therefore also as term, are aligned with one another:

$$\left.\begin{array}{c} \text{Concept} \\ \text{Word} \end{array}\right\} \underline{\qquad} \text{significative} \longrightarrow \text{Object}$$
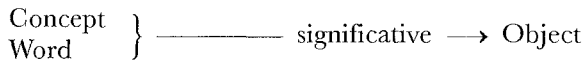
But the difference is also asserted. The sign-relationship between concept and object is natural and anterior to the word, i.e. precedes it; the sign-relationship between word and object is posterior to the concept, i.e. follows it, and does so by voluntary imposition, arbitrarily (*per voluntariam institutionem,*

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[37] Repetition of remarks made in connection with Peter of Spain and similar figures cannot altogether be avoided. Occam's logic is described by Prantl (1867: 327-420).

[38] This is in opposition to Duns Scotus, for whom the word signifies the concept (the *species intelligibilis*, i.e. the perceptible aspect of the object). "The *species intelligibilis* is signified directly by the word, but this can be seen from two points of view, either in so far as it is attributive or incidental (i.e. informs the mind), or in so far as it represents the object itself. In the first case it is not represented by the word; in the second case it is" (*species intelligibilis immediate significatur per vocem, sed illa dupliciter consideratur; aut in quantum est quid accidens* [Prantl here suggests *excitans,* 'evocative'], *sc. informans animam aut in quantum repraesentat rem. Primo modo non significatur per vocem, ... sed secundo modo*). The word thus signifies the representation of the object in the mind, which brings us close to the development from object to concept to word. Cf. Prantl 1867: 214, *n.* 216; quoted from Duns Scotus' *Quaestiones super Perihermeneias.*

ad placitum). Hence the following diagram gives a more precise representation than the previous one:

$$(1) \text{ Concept} \xrightarrow{\hspace{3cm}} \Big\} \longrightarrow \text{Object}$$
$$(1) \text{ Concept} \longrightarrow (2) \text{ Word} \longrightarrow$$
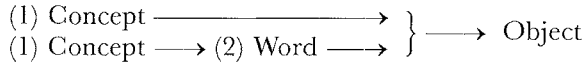
Does Occam, incidentally, assume wordless thought? Indeed he does:

> When anybody utters a verbal proposition, he first forms a mental proposition internally, one which is not couched in any language, given that many people frequently compose certain propositions internally which, however, they are unable to express in the absence of language. The parts of such mental propositions are called concepts, intentions, parallels, instances of comprehension (intellections). (*Summa totius logices;* quoted by Prantl 1867: 339, *n.* 769)[P]

Having come this far, we may, however, now open the question—a question which will be seen to become a key one in the further continuation of our study—whether Occam ennoetizes language, i.e. incorporates it into thought. In my view, he does not. Language remains for him an exteriorization of thought (see the previous quotation). By means of language thought becomes communicable, and as such perceptible, and hence accessible, for example, to investigation by a logician. Language plays no part in thought; it is not a foundation on which thought depends, or an instrument which is necessary for its own inner integration. Not at all: thought is classified here functionally as signification; so there emerges here a certain move in the opposite direction of the conversion of thought into language. This is not to deny that language is subsumed under thought, for the very reason that it is the expression of thought, or act of cognition, and thus is deprived an objective of its own. This will become apparent later.

The relationship just outlined (see the two diagrams) to the object considered, mentioned or described, then, is what Occam calls the first intention. It is this intention which prevails in the objective natural sciences.[39] The whole inventory of concepts, in this case the terminology of these sciences, signifies, "stands for" real objects, for what lies outside the mind. These sciences are directed at objects, and examine objects; in this sense they are "speculative",[40] they make distinctions about objects which exist outside the

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[39] The way Occam considers logic and ethics both as intellectual disciplines and as practical knowledge has been described above. The meaning of 'practical' here is equivalent to 'instrumental'. Occam finds objective thinking and meaning themselves predominantly in the natural sciences, i.e. not in logic. This is a position which the Renaissance was pleased to take up later.

[40] It is perhaps superfluous to repeat the observation made above (p. 86, *n.* 36) that here, too,

mind (*determinant de rebus extra animam existentibus;* see Moody 1935: 33*n.*). But when these thought processes within the physical sciences are considered separately and in isolation by an act of understanding, we are dealing, according to Occam, with an entirely different intention. That is to say discursive thought examines discursive thought itself. This is the second intention, and it is on this intention that logic is built. This new relationship is non-significative. When Occam, in his *Summa totius Logices,* investigates the suppositions of the terms in a predication, the so-called personal supposition (*suppositio personalis*) is allotted to the first intention, and the so-called simple and material supposition (*suppositio simplex* and *materialis*—especially the former) to logic. Terms in the first or second intention are all of the first supposition; it may be said that they consist of terms for objects (*termini realium*) in the first intention, and terms for terms (*termini terminorum*) in the second intention. Occam also acknowledges in addition terms of the second supposition; these relate to terms of grammar, i.e. conjugation, declension, etc. When we reflect that Occam challenges the status of these very phenomena as acts of perception, in other words gives them no place in logic, the second supposition can be described as that of terms for non-terms (*termini non-terminorum*).

Like his terministic predecessors, Occam goes far in the subtlety of his distinctions; but while it is not necessary to pursue this matter any further here, the question still remains, "What happens to language in all this?"[41]

To see this clearly, we must set out from Occam's distinction between the first and second intentions. In the physical sciences, discursive thought, i.e. thought which makes use of language,[42] is directed to external existence, the first intention. Logic, in its turn, examines the construction of these terms, predications and arguments, and in doing so operates with them in the second intention.[43] By this means logic dissociates itself from the synthetic

the meaning of 'speculative' differs from what is now usually meant by the term.

[41]   A philosopher reading this study will probably have noticed that it is not greatly concerned with the controversy over universals. I hold this question to be clearly less important than that of the difference between realist and non-realist. The question whether truth is represented in the mind as on a *tabula rasa* or whether man classifies reality on the basis of his own criteria is much more important. If the term 'nominalist' is used for 'non-realist', the connection between these problems is naturally closer.

[42]   Occam expresses this exploitation of language with the same words as those used by the terministic logicians: *accipere, sumere, imponere, uti* ('adopt', 'assume', 'impose', 'employ'), etc.

[43]   Reichling's important distinction between use of language and views on language (on which see Langeveld's appreciative review (*Museum* 43 [1936], 251-252) shows a resemblance here, as Stutterheim (1949: 134) also notes—but it is no more than a resemblance.

validity of predications in respect of the nature (*ratio essendi*) of the objects or facts mentioned and concerns itself solely with testing the immanent functioning of discursive thought, that is to say with investigating the manners of signifying or supposing. To this end Occam was constrained to develop a theory of signs, or rather a theory of meanings, and in fact does so, as has already been indicated. Aristotle had declared that the written word was a sign for the spoken word, and this in turn a sign for the concept; and Boethius had adopted this view. Occam makes polite objections to this: "but I would prefer not to speak so generally about the sign" (*sed tam generaliter non loquar de signo*). In a broader sense one may say that the word signifies its concept in this way, but strictly speaking the word signifies, and refers to, the same object as the concept itself:

> We say then that words are signs which are subordinate to concepts or intentions not because, correctly understanding the term "sign", the words themselves signify those same concepts properly and primarily, but because words are imposed to signify the same things as those which are signified by the concepts in the mind. (*Summa totius logices*, I, 1.iv; see Moody 1935: 41)[Q]

Occam sees things as follows: while the word does indeed refer back to the concept, this concept is not a feeling of the mind (*passio animi*), but an intention; both concept and word, however, are directed forwards to the act of signifying. In this the concept draws on the assistance of the word; while it is a natural sign in its own right, it makes use of the word as an institutionalized sign. An example of such a process of signifying is "Man is an animal". Here the term functions in personal supposition,[44] in other words the term 'man' is used to make a supposition which it is intrinsically qualified to make. It is at this point that the concept of supposition becomes problematic for Occam.

"Supposition is the substitution of one thing for another, as happens when a term in a proposition stands for an object, and we use that term in place of the object".[R] Supposition is also a property of the term, but it does not coincide with the signification of the object. When a term is used to stand for that to which it was allotted, it both supposes (implies) and signifies (denotes), e.g. "Man is an animal"; if it does not stand for that to which it was allotted, then it implies, but it does not signify, e.g. " 'Man' is a noun", or " 'Man' is a concept" (*homo est conceptus*). The principle of supposition thus has a broader

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[44] " 'Man' is a name when the word 'man' implies itself, and yet does not signify itself". (*Summulae totius logices*, I, 63. 24)

compass than signification.

It is now clear why Occam had to object to the Aristotelian view of signification adopted by Boethius. For there the word had to look backwards, so to speak, and as a result to lose its sense, its actual significative function. Occam's view may be represented in the following diagram (in which signification is shown by a solid line, and supposition by a broken line):

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       | ←  —  —  —  —  —  —  |
     concept          word        object
       _____V_____/
             | —————————————————————————————→ |
             | —  —  —  —  —  —  —  —  →  |
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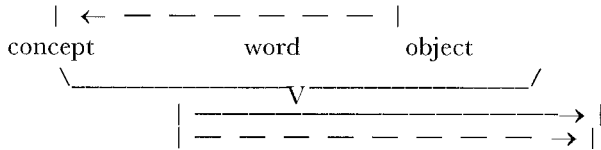
One dark evening John and Peter are standing by the roadside. Somebody comes staggering along; is he injured, dizzy, or drunk? They both look at the approaching figure. John has sharper eyes than Peter. John says suddenly, "It's Johnson!" And a moment later, "Looks like he's drunk again." This is a linguistic account of an event, but: (1) in the two linguistic acts two rational, two cognitive appraisals are set aside; (2) John could also have established the situation in his mind and kept his thoughts to himself; and (3) John might have said, "What the devil!" or "Terrible", when he recognized who it was. In everyday experience we encounter such situations, and tens of thousands more like them, with complete confidence. We can cope with them. But can we do it in theory and in principle? Modern thought, at all events, is concerned to build its theories on the observation of real everyday phenomena; but for mediaeval man this basic attitude is not so self-evident——it is only occasionally that he can be seen to make an inductive investigation. Our three instances illustrate in turn a use of language involving an assessment, an assessment without use of language (or without audible use of language), and use of language with an emotional response. Such a primitive analysis of these three instances implies:

1. that we do not identify (interpretative) thought and language (those who uphold the immediacy of the word might, however, invoke extra-sensory perceptions);
2. that (interpretative) thought can indeed be shown to be effective in language, but that another factor, for example, feeling, can nevertheless predominate.

The scholastic theory of language and Occam's terminism make different approaches to "natural" facts. Thought and language are treated as identical, and there remains only a faint afterglow of the essential difference between them in the recognition that they are the inner and outer surfaces of the same thing. Language is the expression of thought. Thus before Occam, the act of percieving (intellectio) was inner speech (sermo interior), i.e. language in embryo (in nuce),

and for Occam it is a sign (signum). Both concept and word are two steps, two stages in the same movement of thought and language acting together. As a result, this leads, in association with such an a priori concern for linguistic phenomena, to the fact that speculative grammar proclaims as straight what, in the light of this prejudgment, is crooked, and that terministic logic, and with it Occam, eliminates anything which is opposed to its preconception. Neither of the two systems may be corrected by opposing antinomies; in the first case blind faith in language is engaging, but theoretically not very productive; in the second, criticism by means of logic is equally objectionable, but does offer some theoretical advantages.[45]

The logical basis of Occam's views on language goes beyond simply regarding the sentence as the expression of what amounts to a complex of thoughts. Occam gives weight——a tendency observed by all his terministic predecessors——not to practical everyday thinking, but to such theoretical thinking in the sciences as will lead to correct statements in the form of subject and predicate. We need to bear this in mind when we come to realize that Occam does not express the view that the term makes a supposition by means of signification. Quite apart from the fact that significatio in Occam is always better rendered by the dynamic, functional term 'signifying' than by the more static term 'signification', and that therefore the instrumental intervention represented in a phrase like "by means of" is to be seen in Occam as a functional factor and not as an discrete item (it would in any case be more difficult to do this, just as it is more difficult to regard the act of ploughing as an initiating factor than to regard the plough as an instrumental component); setting all this aside, it has to be admitted that to imply (supponere) and to signify (significare) are either one and the same thing, or they are not. Occam knows of no so-called disjunctive application of meaning. " 'Man' is a noun" is different from "Man is an animal", not as a result of activating different nuances (notae) implied by the meaning (compare the way "This creature is an ape" differs from "John is an ape"), but by complete exclusion from signification. And he is right. How does it come about that Occam can here give an example of non-significative supposition, of a noun which does not refer to any "thing meant"? His examples and his own prolegomena tell us that he is not investigating natural language so much as scientific and technical language. It is here that a sentence like " 'Man' is a noun" can comfortably be accommodated.[46] And subsequently, what is meant by 'Man' is not called in question; it is simply disregarded, and supposition has

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[45] It has given valuable insights to philosophical thought about language (in Husserl), and to linguistic theory in its own right (in Reichling).

[46] Even a naive writer would probably, in a modern text, have noted with quotation marks the non-natural use of language, as in the last example.

nothing to do with it.

This assertion can be supported by a further instance. Occam also encountered linguistic phenomena which do not derive from a theoretical use of language, e.g. metaphor. This has become explicable in linguistic theory in the semantic system developed by Reichling (1935, ch. 8), a theory which is thoroughly discussed in Stutterheim's better known monograph on Metaphor (1941: 578–589). This is the view which determines the metaphorical amplitude of the meanings attached to objects by changing the activation of the various denotations available within the meaning, taking now one, now another; metaphor thus acquires a linguistic explanation within the metonymic practice of naming objects by means of what they imply. To return, then, to Occam: he says, inter alia, the following about metaphor:

> It should be noted that, just as we speak of a proper supposition when a term supposes (implies) precisely what it actually signifies, we speak of an improper supposition when the term is understood improperly. However, improper supposition takes on many forms, e.g. antonomasic, or again, synecdochal, or again, metaphorical. (Prantl 1867: 379, n. 891)[§][47]

A metaphor is therefore an improper supposition.

If we ask what is at one and the same time both a proper and an improper supposition, the above remarks give an answer. A proper supposition coincides (sicut, ita) with signification (see the diagram on p. 91). In this case the term "proper" is pleonastic. Improper supposition, however, is not one which coincides with an improper signification; it stands on its own, for in this case signification simply falls out of consideration, since signification, in Occam's view, cannot possibly be improper. Further, he does not admit that a term can be implied (supposed) by means of its signification, and certainly not by exploiting the various denotations inherent in the signification, but allows only that it can be congruent (or not congruent) with the signification. An improper supposition does not actuate signification in any way, even disjunctively; and even proper supposition makes no use of signification. It is the word 'term' to which πρόσληψις, the act of adopting and using, refers. For the very reason that the terminists acknowledged no practical quality or associated instrumental quality in language, apart from the term, i.e. the word in its function as an expression of theoretical thoughts —or in other words because they examined only the availability of words to be used as subject or predicate— for this reason terminism did not approach the instrumental aspect of language in general, i.e. the natural use

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[47] Discussed by Stutterheim (1941: 117-123). Stutterheim wrestled with this difficulty, and finally came to the justifiable conclusion that "There are plenty of difficulties". However, I hope I have resolved some of the problems in the preceding paragraphs.

of language.

It is also appropriate to examine summarily how the sickle of Occam's logical criticism cuts through the harvest-field of language, especially in his Summa. He finds more straw than grain. The arrangement of subjects treated in this text is as follows: the term (as an element of predication), proposition (predication itself), reasoning or deduction (argumentatio sive syllogismus, i.e. the combination of predications). Logic "directs the intellect in those of its operations which lie in its power thanks to the intervention of the will" (dirigit intellectum in operationibus suis, quae sunt mediante voluntate in sua potestate). For this reason, logic, in conjunction with grammar and rhetoric, constitutes practical knowledge. A term can, strictly speaking, be used only

> for that which may be adopted by virtue of its signification as subject or predicate of some proposition; and in this way no verb, or conjunction, or adverb, or interjection can be a term, for [even] many nouns, e.g. nouns which form part of a construction, are not 'terms'; since although such nouns might occupy the final place in a proposition if they were understood materially or simply, they cannot occupy the final place when they are understood in a significative sense. ... But how a term in an oblique case may be the subject, and in respect of which verbs it may do so, and in respect of which it may not, is the business of the grammarian, whose task it is to investigate the construction of words. (Prantl 1867: 362, n. 823)[T]

It will be seen that grammar is to content itself with what falls from the table of logic; its task is to examine constructions.

The contradictions in his concept of the term become apparent where Occam assigns specific properties to the noun spoken (nomen vocale) which is part of the term, others to the noun thought, and some to both. The noun spoken has the accidents of the noun thought, but not vice versa. The accidents of the noun spoken, such as gender and 'figure', (i.e. the form of the root) and the conjugation and figure of verbs,[48] which exist merely for the decoration of speech or for congruity (propter ornatum sermonis vel propter congruitatem) are not, however, as such available to the noun thought, or therefore to the term. Accidents may arise from the exigencies of signification and expression (propter necessitatem significationis et expressionis); in this case, the terms of thought acknowledge them. Such necessities are case, number and comparison in the nouns, and mood, tense, person and number in the verbs. From the last quotation it may be seen that the so-called syncategoreumata (particles) are also

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[48]   An occasion to deal with these features will arise in the discussion of Leibniz's rational grammar.

excluded when they are judged by logical criteria. Here we may take note of another comparison which is of importance for the further development of our theme:

> particles ... do not ... have a limited and fixed signification, nor do they signify distinct objects different from those signified by independent terms, just as a figure placed on its own in a calculation has no signification, but when added to another figure gives that a signification. (Prantl 1867: 363, n. 825)[U]

It will therefore be seen that for Occam:

1. an arithmetical figure in a calculation serves as a model of vagueness, uncertainty, indefiniteness;
2. that he does not see the arithmetical component as being instrumental within subjective thinking.

Roger Bacon saw things differently. Galileo's rationalism, an offshoot of the scientific Renaissance, was to see the polar opposite in arithmetical calculation. It will be applied instrumentally in natural science (cf. 2) and thus become the epitome and pattern of scientific certainty (cf. 1). And when this comparison is again drawn, but in the reverse direction, and language is characterized as an essentially instrumental token for forming ideas, the fundamental and fatal principle of the subordination of language to reason and logic is completed; this principle deprived language of its independence, a development from which linguistics was unable to disentangle itself for a good three centuries. By comparison with this the way the Middle Ages intellectualized language and converted it into thought is mere child's-play.

As for the question of particles, this has of course always been a debating point in grammar. For example, the old distinction is clearly indicated in Marty's (1908, II: §§36–59) 'autosemantic' and 'synsemantic' and in Vendryès' (²1950: II, 85–105) 'sémantèmes' and 'morphèmes'. In Chapter 7 of Het Woord, Reichling set the limits of this distinction conclusively and convincingly in the course of a confrontation with Husserl. There is no need to go into the matter further here;[49] the present concern is to show how linguistics can eradicate the

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[49] A single very compact extract, here repeated *in extenso*, may fairly serve as an example of Reichling's conclusive argumentation, and also as a background to my own analysis of Occam's views on particles: "There has been a serious error ... in the examination of 'terms', which has had far-reaching consequences for linguistics. Is it in fact true that there are words with 'dependent' *meaning?* What is dependent meaning? If this expression really means anything when applied to a word, this can only be that the thought-content of such a word does not constitute an established unit, but is in itself a component of a specific larger established unit. We must, indeed, speak of established units, for as Husserl rightly observes, to be co-significant (*mitbedeutend*)

logicalization of its concepts with its autonomous dialectic and autochthonous methodology.

Occam is not exhaustive in his discussion of the copula, but what he says is important enough. He feels as little urge as did the Modistae to analyse the verbal predicate into a form of the 'verb substantive' plus a participial adjective (e.g. Homo currit = Homo est currens), indeed, he rejects it emphatically: "There are those who would claim that the predicate is the copula together with what follows the copula" (Volunt tamen aliqui dicere, quod praedicatum est copula cum illo, quod sequitur copulam, Prantl 1867: 368, n. 852). Here, apparently, Occam as a subjectivist is chary of the intrusion of metaphysics into logic. We do, indeed, say "the predicate is immanent in the subject" (praedicatum inest subjecto), but this is not a practical immanence of accidents in a substantive, but an immanence deriving from the act of predication (inesse per praedicationem, ibid., n. 853). It is important to notice the view of the so-called 'verb substantive' which Occam takes here. It is a formulation which we will find useful later on. Leibniz was to operate eagerly with this verb substantive in his grammatical theory, and, astonishingly, Bopp, the linguist par excellence, was to work it, inter alia, into his explanation of the *s* of the aorist.[50]

In his further analysis of the term Occam introduces, besides the personal supposition (suppositio personalis) the following subdivisions: discrete (discreta) and common (communis), the latter into defined (determinata) and confused (confusa), the second of these further into simple confused (confusa tantum) and confused and distributive (confusa et distributiva). Finally, there are some suppositions that cannot be named, or rather linguistic phenomena which defy Occam's logical principles. The power of language (virtus sermonis) was too strong for him when he came to deal with the simple confused supposition, as Prantl has already noted with the remark: "Thus linguistic usage here plays a

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does not mean that words 'acquire meaning only in the context of other [words]', but that such words lend a 'characteristic colour (*Bedeutungsintention*) to meaning'. But such words are never components of greater established units, for their characteristic feature is just that the units in which they occur are completely different in respect of the component which their 'meaning' is said to complete. [Four Dutch examples, for which English parallels might be: *on* board, *on* time, *on* purpose, *on* show.] What is 'dependent' about these meanings? To put it bluntly, we could say, 'Nothing!' Husserl himself, in any case, cheerfully admits that this 'dependence' lets a word remain a word. There *is*, indeed, something dependent about these words; but their dependence lies not in their meaning as diacritical appendages to words, or in their referential value in the structuring of words, but rather in the way they define. We perform a useful service in giving the concept of 'dependent meaning' its own proper place in linguistics. But its place is not a feature of word-meaning, but of the categorial value of words." (See Reichling 1915: 276-277).

[50] This is, moreover, not the only indication of the background of Bopp's views. See Verburg 1950: 438-468.

more important part than the logical and conceptual meaning of the parts of the sentence" (... So daß hier der Sprachgebrauch eine entscheidendere Rolle spielt, als die logische begriffliche Bedeutung der Satztheile, 1867: 377).[51] Instances of confused terms, of which Prantl gives no examples, appear to be "conditioned by the position of the sign of generality". Omnis ('all') is such a term (1867: 61, n. 239). For our purposes the important thing is to keep the concept of "confused" firmly in mind; it will have a part to play in the fringe area between language and thought, especially in Leibniz.

In Chapter 2 of his Summa Occam deals with the proposition as such.[52] A consistent consequence of his subjective attitude is, for example, the slight difficulty he finds with negation: "Privations and also negations are not different in relation to the object from matters of position" (privationes et etiam negationes non sunt a parte rei distincte a rebus positionis). Elsewhere, in the "Golden Analysis" and the Quodlibeta (quoted by Prantl, p. 384, nn. 898 & 899), "not-white signifies negative states of whiteness, but affirmatively it implies them" (non albedo significat negative albedines ... , affirmative autem et pro illis supponit), but there is no need to pursue these hair-fine distinctions and analyses any further.

In the question of the truth of oblique cases Occam is again at a loss: "to the truth of the proposition of which the other end is an oblique term ... it is not easy, either, to give a general and certain rule for these".[V] [53] Connotative and relative terms (N.B., relative pronouns, however, are connotative) are explicanda (exponibiles), as they were for Peter of Spain (see above, p. 80). That is white which has whiteness, so that Socrates est albus ("Socrates is white") is expounded or explicated by two predications, i.e. Socrates est and Socrati inest albedo ("Socrates exists", and "Whiteness is present in Socrates"). At the end of his theory of propositions Occam gives a further summary of sorts of sentences: conditional, copulative, disjunctive, causal, temporal, each introduced in turn by

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[51] As Occam himself says, "But it is no concern of mine whether this may be said of the power of the word or not, but it is expedient to say so, in accordance with the usage of speakers." (ibid., n. 886)

[52] Prantl says (1867: 379: "However, it must be stressed from the outset that it is of the greatest significance that, while Occam gives a painstaking and faithful exegesis of Aristotle's book in his 'Golden Analysis', he lays Aristotle's theory aside in his *Compendium,* and sees the whole demonstration of predication as being absorbed in the material of Byzantine logic". It is remarkable that Moody relies for the most part on the *Golden Analysis* to substantiate his contention that Occam was a faithful follower of Aristotle. The theory of contraries and contradictories has here receded into the background in favour of the terministic analysis of propositions.
[53] See Prantl 1867: 385, n. 913. He gives considerable weight to the oblique cases; see also p. 399 (on Argumentation).

"[it] is needed for truth" (ad veritatem requiritur). There follows an analysis, which may be useful for the logician, but which scarcely addresses our problem even remotely. The Summa concludes with the theory of argumentation, the Syllogisms.

This completes my analysis——with due acknowledgment to Prantl——of Occam's views. Each point has been examined with such criticism as is necessary. As is necessary: the twofold "legalities"——to use Serrus' term (1933: x, and passim)——of language and thought are often so strikingly at variance that no further analysis was necessary. Occam is only too willing to leave the inexplicable remainder to grammar, which he uses to cover up inadequacies. Prantl indulges in fierce invectives against the "Byzantinists". The indefatigable thinking power of Occam and his peers deserves better treatment, and is beginning to receive it, now that the depreciation of the "dark" Middle Ages is blowing over. The fault is that they built their theories on linguistic phenomena without taking into account the fact that they were entering a separate world, an autonomous territory, and without considering that the use of language, the presentation of thought in words, does not consist of an expression of concepts (expressio conceptuum) but a conversion into something different (μετάβασις εἰς ἀλλογενός). Later on a new structure would be tested against another system of signs, the mathematical system. At any rate, the mutability of existence is fossilized in them, and difficulties like those which Occam has with "begins" and "ends" (incipit and desinit), for which another special class of propositions was reserved (cf. Prantl 1867: 393), are superfluous,[54] to say the least.

It is not to be expected a priori that the terminists who busied themselves day and night, so to speak, with the criticism of language, should not have made some apposite conclusions about language, even in disguise. Such a conclusion is, for example, the dictum (Prantl 1867: 332, n. 749): "I declare that an object may be distinctly known without a definition of its nature" (Dico, quod res potest distincte cognosci sine eius ratione diffinita). With this, Occam aims to formulate his basic principle that logic may be made separate from and independent of the total truth or untruth——which he regarded as transcendental——concerning the nature of the objects under consideration. He does not, however, say "may be truly known", but "may be distinctly known". He regards this "knowing", of course, as significative; in this "distinctly" there may be seen, I think, a faint glimmer of recognition of the true state of affairs, which can be accounted for approximately by a claim that "the object can be clearly expressed without being able to explain why" (res potest distincte dici, sine ratione eius cognita). When functioning as a linguistic creature man fortunately does not need to wait until

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[54]   To begin with, at least; but not later, when Leibniz' infinitesimal calculus and its 'language' provide a way out.

his thoughts about an object have reached their goal in order to speak clearly about that object or to comprehend, to understand, a statement about it. Language can function in its own right and without taking account of alien rules, and the implications of thought in language, i.e. in the component of thinking and knowing inside the system of language by no means compels language to shadow the results of thinking. The moment of cognition comes about with language, sub-functionally and in the manner of language, and it is only comparable by analogy with thinking in its own right, thought as such.

Occamism achieved an extensive circulation: Oxford, Cambridge and Paris fell at its feet, and after Paris many other centres of study, in the Netherlands, in Germany. Louvain and Cologne, however, clung to the old tradition, the via antiqua. But elsewhere it was the nominalists, supported above all by the faculty of arts, who won the day, or at least attained equal status alongside the realists (see Sassen 1932b: 247–248). The process of decay in metaphysics was hastened by the avidly critical and sceptical new system constructed on Occamist lines, in which scholars escaped the Inquisition by occupying themselves more particularly with the natural sciences and astronomy——the beginning of the Renaissance. John of Mirecourt, the Descartes of the Middle Ages, and Nicolas of Autrecourt, the Hume of the Middle Ages, go back to Occam; and both were condemned for heresy. And Buridan, better known for his ass than for his theory of impetus, lies in the same line of development. Pierre d'Ailly and John Gerson have already been named as opponents of the *Modistae*.

<p style="text-align:center">*   *   *   *   *   *</p>

I shall end this chapter with an attempt to sum up Occam's view of the function of language. I shall also include a brief retrospect of the Middle Ages.

This conclusion cannot be made without repeating that, for Occam, the concept is a natural sign, and the word an arbitrarily established sign. This standpoint has to be considered in its entirety. Occam's emphasis on singularity comes into its own in his theory of propositions. Since it is only the singular that is real, complex predication is no more than an assembly of non-complex concepts. Even when a single concept nevertheless appears to function as a general sign, the disqualification of the non-singular must be maintained. The concept is nothing but a sign, a construct. While traces of a depreciation of language can be found in Peter of Spain——on the grounds that language was unable to reproduce thoughts (which he still regarded as reliable) ——Occam's depreciation is much more serious, since his scepticism also applies to thinking itself. This scepticism goes back to his view of thought as an act of will, a view which he derived from Duns Scotus (Sassen 1932b: 247). The essence of the soul lies ultimately in the will. This does not detract from the fact that Occam intellectualizes language as constructions of reason (entia rationis), even if this

subsumption is the work of an intellect which is itself conceived as acting by volition, and therefore lacking final certainty.

For Abelard the universal lay in the conceptions which acquire form in speech; here we may see a confidence in language which agreed both with the view of language of the school of Orleans and with Abelard's reliance on rational argumentation.

While realism was moderated in Thomas Aquinas, and considerable scope was left for the active intellect (*intellectus agens*), speculative grammar set out from an extreme objectivistic realism, which allowed intelligible phenomena (species intelligibiles) to be seen as validating truthful representatives of the mode of being.

As we have seen, Occam regards them as superfluous. The subjective make-up of the mind has developed to meet its task for itself. Occam's subjective intuition has no need of objective preparations. Indeed, his logic aims merely to bring about an internally consistent set of concepts and predications; it finds its strength in isolation. Mental images cannot, of course, bridge the gap between constructions of reason (entia rationis) and real objects; their sole property is a resemblance which gave the lead in their formation and construction. Real objects outside the mind are individual entities; and the universality of the concept can therefore be regarded as no more than a kind of mental short-cut, i.e., as no more than a sign. Looked at in this light, language, then, is another sign, a sign, as it were, of second degree.

Yet there is an inconsistency in Occam's sign, for resemblance to real objects outside the mind, which are singular entities, seems after all to permit primary signs to have universal features. This is in fact the case, but it is explained by what we mentioned above, the need to face in two directions. Gnostic pride in subjective thought does not saw off the bough on which it is sitting. Scepticism is destructive (antithetisch) rather than constructive (thetisch). This is because resemblance——which derives, as we saw, from Abelard——safeguards what is composed as a concept from being a chimerical figment, i.e. from being a mere product of the imagination.

What is the historical place of Occam's view of language in relation to the time which followed? The Renaissance found support in his anti-realism. Further, men of the Renaissance continued in the scientific direction which Occamism had opened.[55] Buridan established his theory of impetus, and this influenced Leonardo da Vinci and the Italian scientists of the sixteenth century.

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[55] Occam himself acknowledged the value of experiment only in words, although the value he attached to the natural sciences would tend towards such an acknowledgment.

Nicolas of Oresme, a pupil of Buridan, is a precursor of Copernicus, and is called the discoverer of the laws of gravity and the founder of analytical geometry; and Pierre d'Ailly and John Gerson, as noted earlier, were critics of speculative grammar (Sassen 1932b: 253). Occam's influence affected rationalism through the mediation of Renaissance thinking. But we should nevertheless treat with caution Siebeck's suggestion (1897: 321) of a comparison with Hobbes: "And, in fact, what he further prepares us for is that strand of English subjectivism which classes thinking, as Hobbes puts it, as calculating with concepts,"[w] adding a little later (p. 327):

> What remains as the character of scientific knowledge is what Hobbes later called calculation with concepts by means of words, i.e. with mental constructs introduced into the mind through observation as inferences concerning the objects observed, with no suggestion of any a priori considerations.[x]

The difference between Occam and Hobbes lies precisely in this "calculation" with concepts. For Occam the arithmetical was still inherent in the objects themselves (see above); but it was precisely their removal from objective existence into the mind in Galileo's computational scientific thinking that completely reversed the role of language. For Galileo, and for Hobbes after him, number was incorporated into thought as a means of thinking; as a result the equation number = sign, in association with the equation word = sign, produced the formula reason relates to number as reason relates to word. That was how Hobbes saw it. It leaves nothing more of an agreement with Occam than a common subjective concentration on the singular, and disregards the fact that Occam took language to be neither the base nor the instrument of thought, nor did he locate it within the intellect; what is more, voluntarism and scepticism have completely disappeared in Hobbes, who holds language in high esteem, even if only as a loyal steward of thought. Rather than turning language into thought, Occam's characterization of the concept as sign turned thought into language. In this the quality of the sign as comparison served him as a suitable characterization of inadequate thinking. On the other hand, language as such is for Occam an extension of the intellect, and in this way subsumed in the intellect.

Even with this "gravedigger of scholasticism" there is ultimately no realization of the effective and energetic functioning of language, any more than there is in the realistic scholasticism he opposed. It is in the linguistic field that reaction against both appears in the new movement of humanism.

CHAPTER 5

HUMANISM

Part I: Introduction. Humanism in Italy: Bruni, Valla

ALTHOUGH the transformation of western cultural life which took place between approximately 1400 and 1600 affected everyone at the time, and has since been universally recognized, it is nevertheless one of those phenomena which seem to teem with problems when we try to give a historical account of them. This cultural transformation may be compared to a spring-tide—or rather to a landslide, for there was no going back. It is a blend of spontaneously explosive discharge and of consciously calculated reflection; it is enthusiastic for renewal and construction, and at the same time cynically subversive and destructive; it is earnestly investigative and bombastically fanatical; it reveals sacrificial humility and merciless arrogance; it is beautiful and ugly, pious and godless, a prayer and a curse.

Since Burckhardt published his *Cicerone* (1855) and *Culture of the Renaissance* (1860) in the last century—at first finding very few readers—and above all since Nietzsche discovered in the Renaissance a spirit congenial to his own turbulently brilliant critique of culture (see Rehm 1929), the dawn of the New Era has never ceased to be a fascinating subject of discussion. There are many investigators, and many points of view, for example those of Michelet (even earlier than Burckhardt), Sabatier, Thode, Brandi, von Pastor, Burdach, Cassirer, Thorndike, to name but a few; and here in the Netherlands Huizinga (1919; 1926: 239ff.) and more recently Schulte Nordholt have contributed to the discussion.[1]

I do not propose to go more deeply into this set of problems than is necessary to reach the goal of seeing whether there emerges, and if so how there

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[1] For general discussion of the question see Eppelsheimer (1933); for the history of attitudes to the question see Schulte Nordholt (1948), especially the first two chapters on "The Christianization of the Concept of Renaissance", and "The Adaptation of the Renaissance Ideal to Nationality".

emerges, along with the transition to the New Era, a view of language which shows awareness that language functions as an autonomous entity free of the rules of thought, or at least with sufficient significance of its own to stand alongside thought. For the relationship which comes into consideration is above all that between thought and language.

It is, of course, in full recognition of the complexity and, to a limited extent, of the plurality of motives in this intellectual revolution that I begin by accepting Schulte Nordholt's criticism of the "wearied wisdom" of Huizinga and the sceptical compromise of the "chorus of dreamers", when he remarks (1948: 308):

> Anybody who does not believe in the possibility of a rebirth, i.e. of a change which affects life to its foundations, which comes about suddenly and is final, will see every one of his preconceptions shatter in his faltering hands. Not only will he not see the kingdom of God; he will not see any of the kingdoms of this world either, and never that of the Renaissance. Iridescent fragments, glistening splinters, are all that remains.[A]

He speaks, too (p. 309), of a manner of description which sets out from

> the persuasion that while it is true that every form of culture, every thought, changes with its time, there are nevertheless times when many forms and thoughts change, times when streams become torrents, or even cataracts, times pregnant with new life, times in which belief in one's rebirth moves mountains.[B]

Of such a mode of description Schulte Nordholt remarks (ibid.):

> We adopt such views more readily than our grandparents did. The reason is obvious. And we turn our attention to the possibility of such a renewal, for we cannot dispense with the spirit which works miracles, we ask to be suddenly delivered from this fragmentation, we want to take part in something entirely new, in which the wearied wisdom of Ecclesiastes and of Huizinga's hypothesis is left behind. Then we shall feel again the fresh breath of the Renaissance, and shall realize better than the learned pluralists that it is a marvellous transformation of the spirit, which we see fulfilled in a dense series of smaller transformations of lesser perfection.[C 2]

The present enquiry need not, in fact, entail a loss of clear perspective by revealing a boundless plurality of motives; on the contrary, several very clearly demarcated trends may be distinguished. It is certainly possible to establish a firm grasp of this "great transformation" of the times, and most

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[2] I accept Schulte Nordholt's rejection of historical scepticism, but expect little to come of the "fresh breath" of the Renaissance.

definitely of the "lesser transformation" which is of special concern here. It will become clear that while Antiquity and the Middle Ages did not achieve the notion of the independence of language in their philosophy, in their literary studies or even in their rhetoric, the New Era suddenly, as it were, vindicated the principle of the autonomy of language, or even its primacy.

Judgment after the event, and even contemporary judgment of the event, distinguishes between the three factors of Humanism, Renaissance, and Reformation; and while a combination of humanist and renaissance traits is occasionally found in a few individual scholars, the two movements cannot be regarded as identical.

Humanism may be seen as a movement which has subsequently enjoyed two further recurrences, viz. the second humanism of Winckelmann, Lessing, Herder, Goethe, Schiller, Wilhelm von Humboldt and others (see Billeter 1911), and the third humanism of Nietzsche, E. and A. Horneffer, Rohde, Zielinski, and above all W. Jäger. The two latter-day humanistic movements are characterized by Rohde as follows: "I am experiencing for myself the gradual refashioning of an aesthetic and absolute evaluation of antiquity into a historical and relative one".[D] The third humanism is characterized above all in Zielinski's (1905) motto, "not a norm"—this was how the second humanism saw Greek culture—"but a seed" (*Nicht Norm, ... sondern Same*), not the adoption of the ancient patterns of life as a norm, but rather the adoption of ancient principles as a fruitful seed in the field of European culture. The feature common to all three versions of humanism is that they derive a paedagogical vocation—a refined edifying mission to men of their own days—from an idealized vision of Antiquity, or of a period of Antiquity. In this apostolic campaign the three kinds of humanism unite poets and thinkers, fanatical enthusiasts and lofty "Olympians", heathens and Christians. It is this first humanism to which we now turn.

The prelude and the first phase, so-called Early Humanism, developed in Italy from about 1300 onwards. It is, as I have just said, a movement which is possessed of an urge to edify, and strives to educate mankind according to ancient models. At the same time, anticipations of Reformation manifested themselves in England and Bohemia. Here too, there was a reversion to Augustine, but from entirely different motives; here Augustine was not, as he was for the humanists, a Roman who happened to be Christian, but a Christian whose faith rested on the Bible. This proto-Reformation was unsuccessful to start with; the early Humanism of Italy, by contrast, was continued in a direct line by the northern Humanism which succeeded it; it also entered into associations with the Renaissance, the Reformation and conservative

Roman Catholic thought, which soon came to form a reaction in the Counter-Reformation. Humanism was ultimately absorbed, virtually in its entirety, in these movements.

If Humanism offers philosophical conceptions only to the extent that they are demanded by paedagogical ideals, the Renaissance has from the very beginning a distinctive attitude to the world and to life—a feature which it shares with the Reformation and with Roman Catholic thinking. The Renaissance is profoundly religious and yet anti-Christian. When it comes in contact with ancient thought it looks for its pagan elements, and when it encounters a synthesis of pagan and Christian elements, it breaks the synthesis apart.

There is a strong tendency in the Reformation, too, to break this synthesis, but in this case in favour of its inherent component of Christian revelation.

Roman Catholic thinking is modified to some extent under the influence of the new ways of thought, but remains faithful to the synthesis.

It is against the background of the cultural movement of the fourteenth, fifteenth and sixteenth centuries outlined here that we have to set the thinkers and authors whose views on language are of importance for our survey, beginning with the humanists.[3]

Petrarch, Boccaccio, Salutato

Occam was to succumb to the Black Death, an expelled monk, repudiated and persecuted as a heretic, far from his homeland as an exile in Bavaria; but at the time when he was fighting his war of words against Church and Pope, against luxury and delusion—for though he was a pale Franciscan, he was invincible in the razor-sharp criticism with which he reduced all knowledge to signs—life was just beginning to burst into new vigour to the south of the Alps, and cultural activities were beginning to unfold into a blazing rivalry of town against town and citizen against citizen. Italy was the scene of lust for power and possessions, the focus of the commerce and politics of magnates and soldiers of fortune, the scene of high policy and hazardous undertakings; above all, Italy was the ancient seat of an empire which had controlled the world, where the inhabitants of the city felt the exhilaration of being worthy successors of Eternal Rome, reborn Romans, in fact. It was in this spirit that prayers were uttered and faith maintained, justice administered and business

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[3]   My general sources for the literary history of Italian humanism are Rossi (1897/1956), Voigt (1893), Flora (1948).

conducted—or neglected; in this spirit that buildings were erected, pictures painted, poems composed, speeches delivered—above all speeches delivered. For the mark *par excellence* of being Roman, of ancient erudition and humanity, of the harmonious cultivation of spirit and thought, is oratory. Reason (*ratio*) is integrated into oratory (*oratio*), the mind possesses in mastery of words and eloquence its worthiest faculty and function.

Virgil appears, not merely as a name, but in person, in Dante's (1265–1321) *Divine Comedy.* Petrarch (1304–1374), called the first modern man, was the first to evince a lyrical feeling for nature and romance; he was a wanderer through the lands, and his work reveals passion and remorse as well as learning and elegance. He was the first man since Cicero to reveal himself in his letters, and he consciously made a demand that every man should write in his own style. The warmth of his affection for his idolized Virgil and Cicero emerges in his letters to his "father" Cicero and his "brother" Virgil. Aristotelian scholasticism is, in contrast, an arid skeleton which he despises and ridicules. His attitude to Plato, compared to that towards Aristotle, is, however, one of respect rather than knowledge. Like his original idol Augustine he viewed Plato only from a distance—in fact from a much greater distance. In Petrarch's eyes, Augustine was the Christian in Roman guise. The failure of Cola di Rienzi, and the impossibility revealed by this failure of re-establishing the society of ancient Rome, forced Petrarch to abandon his romantic love of the past. His ideal then shifted rather to the search for Cicero's urbane humanity, and he devoted himself to advocating it and realizing it. And this humanity is not based on anachronisms, but is attainable in all ages by following in the steps of ancient eloquence. Petrarch the individualist set up the humanity and eloquence of the ancients, so intimately interwoven in his sensibility, as an objective and normative model.

Petrarch did not leave us a theory of language, but he injected new life into language as a typically human activity, broke its subjection to the analysis of details and turned it into free oratory.[4] In comparison with the mediaeval tradition of figures and tropes this appreciation of the rhetorical force of language marked a fundamental renewal. Petrarch did not, indeed, yet regard language as autonomous, inasmuch as he made it subservient to the encouragement and development of humanity; but its subservience was a spontaneous and vital, an aesthetic and ethical service to an ideal and freely

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[4]   The spontaneous vigour of his usage is not impaired by the fact that his free expression was in writing rather than in speech, for "writing and living were to me one aim". (Quoted by Voigt 1893: I, 33).

established goal. In following classical models there resides, also, something of an appreciation of objective norms, but in his insistence on an individual personal style he anticipates a change in the direction of Valla's subjective humanism.

Giovanni Boccaccio (1313-1375) and Collucio Salutato (1330-1406) mark the change which spread from Petrarch's individualistic poetics. While the one moved towards generalizing the new view of culture, the other moved towards erudition. More and more manuscripts were discovered in these years; rhetoric and eloquence were practised in the new spirit and taught, both academically and in public lectures. Something like a humanistic version of "sophistics" emerged; ancient literary genres received new life in poetry and prose, and an ever-widening stream of copies of ancient authors—Boccaccio knew Greek, Petrarch did not—found its way to educated citizens. Poggio Braccolini (1380-1459) found long-forgotten classical texts in English and German monastery libraries, and every discovery spread like wildfire in the streets and squares of Florence: Quintilian, new Cicero texts, Pliny, Tacitus, Suetonius, and Homer, too, passed from hand to hand.

Boccaccio was not, however, a linguistic theorist. He was a brilliant teller of tales who possessed a direct linguistic mastery of objects and events like no other of his day. Reverence for Ciceronian Latin initially remained in the background, for he was writing in the vernacular. There was no imitation here; a positive concentration on his own time and environment is at once his strength and his limitation. In his later years Boccaccio turned to the study of the classics; but here, too, he remained true to himself. He found in the classics a source of inspiration rather than a model for formal imitation. He introduced Greek into literary and academic life, and he promoted the translation of Homer. (Greek scholars fleeing the Balkans were entering Italy in increasing numbers at this time.) At their death, the two friends Petrarch and Boccaccio left Italy the inheritance of a new literary spirit, started in poetic individuality by the one, and continued on broad lines by the other, a spirit which discovered language as the original power of the human heart. Salutato, from the outset more of a scholar than Boccaccio ever became, continued Petrarch's reverence for Cicero: he is a Stoic.

Leonardo Bruni

Some twenty years after Salutato, Leonardo Bruni (1370-1444) occupied the office of Chancellor of State in Florence. Persuaded by Chrysoloras, the first Greek refugee to teach Greek officially, he had devoted himself to the study

of ancient writers, and particularly the historians among them: Caesar, Sallust, Livy, Xenophon, Thucydides. He himself became the author of a Florentine history, and a historical treatise on the Goths, besides other works. He was as competent in Latin and Greek as he was in history. He also wrote biographies of Dante and Petrarch in the vernacular, and his *Dialoghi* ("Dialogues"), also written in the vernacular, are an account of his own part in cultural education and moral guidance in his own day. While Boccaccio, as it were, lived two lives, first as a brilliant writer of widely-circulated prose works, and then, after becoming a friend of Petrarch, as a connoisseur and champion of the classics, Bruni was from the very beginning actively engaged not only in improving the culture of his day, but also in looking back in his study of the classics. It is for this reason that his standpoint right from the start is more consciously selective, not imitative, but actively inspired. It is the task of the humanist himself to lead a harmonious life, a life in which letters constitute the central part, inspired by Antiquity (in which he emphatically included ancient Greek culture), but not through lifeless literary imitation. That his works are nevertheless inevitably full of imitation does not detract from the fact that his life as he lived it is the affirmation of his fundamental principles.

It is above all his wide literary culture which gives authority to the retiring and dignified figure of the Florentine chancellor. But to what ends was this culture to extend its influence, and how did Bruni regard this living effect of letters and language?

The humanist's literary worth is exhibited in epistolography, an activity which in Bruni's time was about to develop into a literary genre. Literary culture, however, comes to its own only in eloquence, which was exercised in practice in the innumerable declamations which were made on the occasion of public rejoicing, or above all addressed to eminent persons. For all that, political circumstances became a powerful factor here, as they had been in classical oratory. The humanistic man of letters and orator, being all too often at the mercy of the patronage of one ruler or another, had to reckon with the atmosphere of the court for which he was bound to conduct correspondence, to act as tutor to the princely family, and frequently, in addition, to act as an occasional speaker. In his later years the republican Bruni wrote a remarkable treatise with an eye to education in this sphere.[5]

In Bruni's *De Studiis et Litteris tractatulus* ("Brief Treatise on Study and Let-

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[5] See Voigt 1893: I, 461. Voigt had not seen the treatise, which was edited by H. Baron (1928).

ters")[6] we possess what might be called his curriculum for cultural paedagogy. Other humanists, too, wrote similar programmes, but this was the most widely read, at least in the fifteenth century, and rightly so, for this short work is concise and clear. Humanistic culture must have practical use in society and public life: "The concept of letters as 'culture' in the modern sense leads Bruni to equate the study of literature directly with cultural florescence" (Baron 1928: xvii).[E] Bruni combines his ideal of humanity very closely with the sense of free citizenship of a city-state like the Florence of his days; only in such an environment could literary skills become the nucleus of a general human and communal culture rather than a mere school subject. Only from this combination of literary accomplishment (*peritia literarum*) and practical knowledge (*scientia rerum*) can gentlemanly scholarship (*ingenua eruditio*) be derived. The main object of literary accomplishment is

> that we may spend as much time as possible in reading those books which were written by the best and most reliable authors in the Latin language, and that we may guard against unskilfully or inelegantly written books as a threat of disaster and destruction to our minds. (Ed. Baron 1928: 7)[F]

There follow some instructions about selecting authors: Augustine, Jerome, Ambrose, Cyprian, and, when well translated, Gregory of Nazianzenus and John Chrysostom. And then, naturally, most of all Cicero, Virgil, Livy, Sallust. The second part of this brief work is taken up with an exposition of practical knowledge. This covers disciplines "in which to be an ignoramus is deemed totally unacceptable, and even attaining the heights is by no means a matter for special praise".[G] These are geometry, arithmetic and astrology (p. 11). It is the disciplines "which relate to holy religion or to righteous living" (*quae aut ad religionem divinam aut ad bene vivendum pertinent*, p. 12) which must form the foundation. This is developed through knowledge of history, of orators and poets.

This central theme returns in the conclusion: "What is the good of knowing many fine things, if you cannot speak of them with dignity or cannot commit them to writing without making a fool of yourself?" (p. 19)[H] Practical knowledge becomes fruitful only through literary accomplishment. This is the conclusion to which the arguments of Bruni's programmatic treatise lead.

Bruni was, as already said, a good Greek scholar, and he produced a

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[6] Written between 1412 and 1415; a more exact date is difficult to establish. See Baron (1928: 5-19), where the text is reproduced *in extenso*. Bruni wrote the text for a gentlewoman called Baptista de Malatesti.

number of translations. However, he attached little cultural value to Hebrew.
And what did he think of his native Italian? It is the language of the common
people, to whom Latin was not accessible. As far as that goes, the unlettered
herd of ancient Rome would, in Bruni's view, not have understood Cicero
when he delivered his speeches in the language in which he subsequently
circulated them. That sort of Latin was much too difficult for the uneducated
even then. And what of Plautus and Terence? Here, too, according to Bruni,
the actual dialogue was a closed book for the mass of the public. Costume,
gesture and also music would have had to make good this deficiency. Bruni
deals in a letter to Flavius Foroliniensis with this question of "whether the
public and men of letters spoke in the same manner and idiom at Rome",
and it is here that Bruni remarks that "the orators themselves did not write
their speeches in the same way as they spoke them".[1] They avoid vulgarity in
their written speeches (1724: 223). Bruni's unmistakable preference for the
literary and the polished may also be seen in the fact that he places artificial
rhetoric above natural rhetoric; he makes this clear in another letter, this time
to Alfonso of Aragon (1724: 290-296), accompanying a copy of his translation
of Aristotle's *Politics*, in which he gives Alfonso his view of the dignity and
office of kings (*dignitas et officium regum*). He bids Alfonso make himself as
familiar as possible with the book he has sent him, for

> Nature is one thing, formal knowledge is another, as may be seen in rhetoric
> and music. For though some persons endowed with great mental powers have
> attained fluency in speech without training, training is more certain than nature.
> (1724: 292).[J]

Unfortunately, Bruni went no further into this difference between learned and
cultivated language on the one hand and natural and vulgar language on the
other (see Beck 1912: 38-40). Although the supposition was incorrect, the very
suggestion that such a difference had existed in the past was in itself in ad-
vance of its time. It might have prevented many a hypercritical blunder in the
nineteenth century. For Bruni it was not so much a discovery relating to lin-
guistic history as an argument for his own élitist view of language.

Within practical knowledge, Bruni ascribes a very special educative role
to history. He was himself better informed in Greek and Roman history than
any of his predecessors or contemporaries. The republican age of Rome was
in his view exemplary; emperors are despots and bloodthirsty tyrants. Bruni,
here closely following Salutato, called for and proclaimed a virtuous life like
that lived by the republicans of old, based on Stoic principles and active
engagement in the enlightened pursuit of duty. He makes this point in his

tract on morals, the *Isagogicon moralis Disciplinae;* but further details about this are not germane to the present study.

Bruni is an indispensable link in understanding the development of humanism in the hundred years between Petrarch and Valla. In Valla, humanism at once rapidly attained its zenith of self-examination and the conscious adoption of an attitude towards antiquity and current reality. Until Bruni's time the prevailing view was the negative one that scholasticism was sterile intellectualism, and mediaeval Latin was denigrated as a withered plant. The latter reproach was unreasonable; whatever one may think of the way it had developed, mediaeval Latin had to some extent become a living language again in the service of philosophy and theology. But the reproach made against scholasticism of linguistic thraldom and servitude certainly hit the mark. Bruni saw literary scholarship as the crown of a free republican citizen's life. Even in his own lifetime, however, the Medici family had begun to clamp down on this freedom, and his ideal of grafting a living linguistic culture on to the stem of a free urban patriciate was therefore already out of date when he wrote it down. With Valla, humanism is conscious of its own identity, and detaches itself from a role in the community, preserving only an ideal of individual linguistic culture. For Bruni literary skill was to serve as an expression of the culture of free citizens; for Valla language serves nothing, no ideal, no society, no nation. It dominates; and the individual linguistic scholar dominates others by the criticism he bases on it.

Lorenzo Valla

Lorenzo Valla (1407-1457) was primarily a critic and scholar, even if he did not yield in passion and inspiration to some of his predecessors. He took the step which Petrarch, Boccaccio, and certainly Bruni, too, had hesitated to take; he broke with the acceptance of authorities, even within the circles of humanism itself. The aim of his life was not objective imitation, but subjective expression.

It is for this reason that he seems, early on, to have chosen Quintilian in preference to Cicero; a youthful work, now lost, was concerned with a comparison between these two authorities, and amazed his contemporaries with its outspoken criticism, especially of Cicero.[7] Though Quintilian seemed to

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[7] Colson notes in the Introduction to his edition of Quintilian's *Institutio Oratoriae,* Book I (1924: lxiv ff.) that there is no conclusive evidence in Valla's work for this preference. The year 1416 is of profound importance for our knowledge of Quintilian, as a result of the discovery by Poggio

leave him the room he desired, he did not accept him as an alternative authority in place of Cicero. Valla acknowledges no specific authors as authorities; nowhere is the content of any work binding on him; he simply looks formally for Latin in its finest form: one might say that language itself is his only model. His model is not, therefore, the language of Cicero or Quintilian or anybody else; it is excellent Latinity,[8] no matter in what author it may be found. It is her language which made Rome eternal: "We have lost Rome, we have lost sovereignty, we have lost dominion ... ; [yet] because of this (sc. the Latin language) we still hold more glorious sway to this day in a great part of the world". [9]

While Petrarch still justified language before the tribunal of the intellect because it was an instrument of affective speech, Valla no longer defends it, but on the contrary allows it to appear in its own right and summons thought, especially scholastic thought, before the court of language. We have to accept the authority of language as it is, or was. His criticism of the Vulgate, published only about fifty years after his death by Erasmus with the title *Adnotationes in Novum Testamentum*,[10] boldly juxtaposes the Latin translation and the Greek source; the translation, even where it is justified by dogma, will have to give way to the original text, whatever the consequences. This demand is not made because Valla assigned a higher intellectual content to the

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in a manuscript in the monastery of St Gall of a complete text of the *Institutio Oratoriae*. "The interest aroused in the learned world was immense. Of this the most remarkable example in the next half century or so is L. Valla", who claimed to know Quintilian almost by heart (*quem prope ad verbum teneo*) and regarded him as an oracle in this world (*tamquam terrestre oraculum*).

[8] "I accept as law whatever pleased the great authors." This brief remark of Valla's (from *Elegantia*, Book III, chapter 17) has frequently been quoted. The context is as follows: "Although I accept as law (in respect of elegance) whatever was pleasing to the great authors, of whom Pliny stands in first place, especially when Cicero ... , etc." The matter under discussion in this passage is the so-called ablative and genitive of quality. Both occur, but are used very rarely without an adjective, and then only in a genitive construction. They must not both be used together in one and the same sentence. However, Pliny does this. Valla gives an example. He could have used two ablatives (*poterat dicere*). One can almost hear Valla's listeners drawing in their breath at such outspoken criticism. After this comes the passage quoted, with the implication, "but for my part I keep clear of such practices; this is Pliny, and he, after all, must know." Then there follows an admission—with an example—that Cicero, too, uses genitive and ablative in a single sentence, but separately and not in conjunction with one another.

Here too, then, we can see Valla's free criticism at work: this use of genitive and ablative in close proximity offends his sense of symmetry. The quotation clearly does not imply what it appears to mean when taken out of context.

[9] Preface to *De Linguae Latinae Elegantia libri sex* ([1444] 1688). This passage is quoted again in a wider context below (p. 118).

[10] Valla worked on this text from 1440 to 1442. See Wolff 1893: 101-102.

wording of the Bible, he did so simply because of the verbal quality of the divine Word. We must make a clear distinction here. Valla accepts the authority of the Bible implicitly, but he demands that our acceptance should not derive from pedantic intellectualism, in such a way that indifference to the Word is concealed beneath a rationally-based faithfulness of translation, or mistranslation. In objective correlation to this position he rejects the view that the word of the Bible should primarily be studied for its factual content. It is a word, it is language, and must have validity as language. Valla is not here questioning the Bible as the revelation of truth; his position here is entirely practical and secular.[11] For all that, this work was not published by Valla himself,[12] though he did enter publicly into controversy with Poggio over the right to criticize the Vulgate; and for this reason we may reckon with the distribution of these ideas of Valla's in his own lifetime, if only by the circulation of single transcriptions.

He ventured even further. Inquiry into language and its result undermined

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[11]   The Council of Trent placed the book on the Index in 1546, and declared of the Vulgate: "[The Council] establishes and decrees that this ancient Vulgate edition should be regarded as authentic, and that no one may dare or presume to reject it on any pretext whatever." Erasmus prefaced his edition of the Vulgate with an Apologia, "in which he attempted to demonstrate the necessity of a new translation of the Holy Scriptures, and recommended a study of the language of the original as a matter of urgency. He already made a demand at this point that it was necessary for knowledge of biblical thought to go back to the source text, and to establish the true sense of the Bible from grammatical exegesis, and without theoretical preconsiderations. ... The whole task of translating the Scriptures was wholly and exclusively a matter for linguistic scholars, he maintained. 'Indeed, Theology, the queen of all the sciences, is not demeaned if her servant, philology, takes an interest in her and seeks to show her submissiveness. Even if this discipline is of lesser independence than all others, its office is nevertheless the most indispensable of all' " (See Bludau 1902: 3-4). Valla also criticized the authority of the so-called Apostles' Creed, *inter alia,* inasmuch as each of the twelve articles was assigned to one of the Apostles. "Valla elevates the personal well-being (*Wohlsein*) of the individual to the highest law" (Monrad 1881: 5). "Valla stands in our eyes as an incarnation of free thought" (p. 4).

[12]   Erasmus found a copy of this text in a monastery near Brussels, and had it printed in 1505. "In these *Notes* we may see the first suggestion of the edition of the Greek Testament with its version and notes which Erasmus published in 1516" (Woodward 1904: 13 *n*). Erasmus wrote ecstatically about his find to Christopher Fisher. Smith (1923) writes at length about this discovery, which in his view was made at "the Premonstratensian Abbey of Parc near Louvain." I append Smith's view (1923: 161-162) of the *Annotationes:* "The work had more importance than is generally recognized. With this initiation into biblical criticism we see the unfolding, or budding, of a new spirit. Sick and tired of the old glosses, the interminable subtleties that seemed beside the point, the age had at last found something fresh, *the Bible treated in the spirit of Quintilian, not as an oracular riddle, but as a piece of literature.* It was the skeptic Valla that first disclosed the true, sound method of exegesis, and thus uncovered the long-hidden meaning. The cock had found the pearl; the careless wayfarer had chanced upon the nugget of gold; the scoffer who sought to shame truth by unveiling her had made her more beautiful. And Erasmus was the man to perceive the value of the new treasure and to set it in a blaze of brilliants."

even more important authorities. When the Donation of Constantine, which appeared in 1440,[13] seemed to his historico-critical insight into language to be a forgery, he kicked away this support for the Papal Throne and its temporal power.

His starting-point is language as a fundamental universal factor of culture. It is fundamental in his own life,[14] not only in his historical enquiries into language, but also in practice. Language is not a faded letter on yellowing parchment, but a reality which still has its validity and a functional potential for renewal at the present day. Valla was appointed professor of Eloquence at Pavia in 1431, and while there wrote the two works which established his reputation, the *Disputationes* and the *Elegantiae* ("Elegancies");[15] both were conceived simultaneously, and planned—as has sometimes been forgotten—with an eye to his teaching of rhetoric.

The most important elements of eloquence are style and the development of ideas; elaboration of the second point leads to criticism of scholastic dialectic and logic. We find this in his *Disputationes Dialecticae contra Aristoteles* ("Dialectical Disputations in opposition to Aristotle") of 1439, alternatively called *Repastinatio Dialecticae*—the disinterment of dialectic.[16] His attack is directed not so much at Aristotle as at his modern editors. Is not loyalty to Aristotle imposed on the scholars of many universities under oath? Dialectic is a simple matter and can be taught in as many months as grammar takes years. What Valla had in mind is essentially the subsumption of thought in lan-

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[13] The full title reads: *De falso credita et emendita Constantini donatione declamatio* ("Exposure of the falsity of Attribution and Emendation of the Donation of Constantine", 1440). "As a result of this work Valla became the founder of historical criticism; nowhere else does he display his critical genius so magnificently as here. Valla argues against the genuineness of the notorious Donation of Constantine on political, historical, linguistic and juridical grounds, and the historical and philological analysis in particular demonstrates not only a remarkable skill, but also a minute accuracy and painstaking application, of which any similar scholar would be proud even today." (Schwahn 1896: 37-38)

[14] "He concentrated his intellectual activities about a centre where his greatest strength lay; grammatical studies and textual criticism. From here he sought out those areas which provided a showplace for his talent." (Voigt 1893: I, 463)

[15] To illustrate the differences in their thinking, it is perhaps not inappropriate to point out here that Agricola shows greater interest in the *Disputations*, Erasmus in the *Elegancies*. The former work adopts a more theoretically defensive stance against logic, the latter a more positively specialized philological one.

[16] On this work and Bruni's *Isagogicon Moralis Disciplinae* ("Introduction to Moral Philosophy") and George of Trebizond's *Dialectica,* Voigt (1893: I, 53) observes: "But these three works constitute the sum total of the contributions of the early humanists to systematic philosophy. In contrast to the schoolmen, the humanists claimed to bring philosophy out of the schools and into [everyday] life. In fact, however, they only brought it to a different school."

guage; dialectic in the service of rhetoric. But this dialectic will have to be a radically simplified and completely refashioned art of reasoning which derives from the sound common sense manifested in the use of language which controls and informs it. Thus he reduces the categories to three: substance, quality and action (*substantia, qualitas, actio*). In fact, he traces all others back to the last-mentioned:

> All the fundamental concepts of Aristotelian philosophy are ... subjected to an exceptional judicial enquiry and judged on the evidence of sound sense and linguistic usage. ... In the area of judgment a broad field of observations, grammatical rather than logical, on the use of ... signs is opened before him. From the same linguistic standpoint he raises lively objections to the mechanism which Boëthius had advocated. (Cf. Vahlen 1870: 13–14)[K]

The book imparted a shock of heresy, and aroused great attention.[17]

His more positive work of this period, the *Elegantiae linguae latinae* ("Elegancies of the Latin Language"), which appeared in 1444, brought him greater fame. Here he undertakes, in the interest of reconstituting an eloquence which scholasticism had corrupted, a stylistic analysis of classical Latin linguistic usage. The whole work is imbued with enthusiasm for the language of Rome, which is eternal (see p. 113, *n.* 11). The *Elegancies*, then, are by no means a grammar, even though they still show some respect for Donatus and Priscian. Taking Cicero and Quintilian as his models, and above all going back to Livy and Virgil, Valla attempted a regeneration of Latinity, of the ancient idiom, an enterprise going far beyond the aims of producing a grammatical textbook, and provided the study of language with an ideal which was anything but rigid classicism. All this was achieved not in a form where enthusiasm and charm were made to compensate for a lack of expert knowledge, but with a mastery of his material which totally nonplussed his adversaries. Valla claimed with pride that he had touched on 2,000 points which had never previously been discussed. It is right, then, that he should be numbered among the founders of classical philology (see Schwahn 1896: 33–34). But this linguistic work is underpinned by a fundamental attitude which transcends mere technical expertise. The roots of Valla's devotion to language strike much deeper. His view is that the central nature of the cultivated man lies in his speaking, and it is in his capacity as a speaking

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[17] "Dialectic does not, in fact, coincide with rhetorical 'invention' [the selection of topics], but serves as a basis for it; and although Valla does not lose sight of rhetoric, his view is broader, and his ultimate aim is the complete restructuring of traditional logic." (Vahlen 1870: 10-11). Agricola was to make a definitive conclusion to the work begun by Valla.

creature that man establishes the rules of cultural life.

But what does language *do*, what does it achieve, what does it perform
—'to perform' (*praestare*) is one of Valla's own terms—what does it create; in
short, what is its function? To these questions, which are actually only one
question, Valla gives the famous answer of the preface of the *Elegancies:*

> Often, when I consider the deeds of our ancestors, or those of others, whether
> kings or common folk, our own kinsmen seem to me to have excelled all others
> not only in the establishment of power, but also of language. ... [It may be said
> that] no others extended their language as ours did, who in a short space of
> time made the Roman language famous and virtually queen throughout almost
> all the West, in the North, and in no small part of Africa, offering mankind, so
> to speak, an excellent fruit from which to extract the seeds, a work which was
> certainly much more distinguished and much more splendid than the creation
> of an empire. ... Thus our ancestors overcame all other men by the arts of war
> and earned great praise as a result; but they excelled themselves in extending
> their language, as if, having left their dominion on earth, they joined the fellow-
> ship of the gods in heaven. If Ceres is reckoned as the inventor of corn, Bac-
> chus of wine, Minerva of olive-oil, and many others were elevated to divinity
> on account of some beneficent act of this kind, will it be less to have distributed
> the Latin language among the nations, the best of fruits, food not for the body
> but for the mind? For this language instructed those nations and all peoples in
> all the arts which are called liberal; it taught the finest laws; it paved the road
> to all knowledge, and finally made it possible for them no longer to be spoken
> of as barbarians. For what impartial judge of affairs would not prefer those who
> were famed for cultivating sacred letters to those famed for fighting bloody
> wars? ... They understood that their position in the world was not diminished,
> but confirmed by the Latin language, just as the subsequent discovery of wine
> did not stop the use of water, or silk the use of wool and linen; nor did gold
> replace other metals in men's possession, but added to the store of the other
> good things. And just as a jewel set in a gold ring is not a blemish, but an em-
> bellishment, so did our language, when it was introduced, not detract from the
> splendour of the vernacular speech of others, but added to it.[L]

"Our ancestors" did this in three ways: by developing their minds in all man-
ner of studies, by "wisely offering excellent rewards to the teachers of letters
themselves, and by encouraging all provincials to become accustomed to
speaking in the Roman tongue whether in Rome or in their province ... ".[M]

> The [maintenance of the] Latin Language is a great mission, indeed a great
> divine command which has been observed religiously and sacredly for so many
> centuries among pilgrims, among barbarians, among enemies; so there is no
> cause for us Romans to grieve, but rather to rejoice, and for the rest of the
> world which hears us to rejoice. We have lost Rome, we have lost sovereignty,
> we have lost dominion; but we are not to blame, the times are to blame. For,

indeed, because of this (sc. the Latin language) we still hold more glorious sway to this day in a great part of the world. Italy is ours, Gaul is ours, Spain is ours, Germany, Hungary, Dalmatia, Illyria and many other nations. For where the Roman Empire is, there the Roman language holds sway. ... *And just as there is one Roman law, so there is one Roman language for many peoples; ... in this language are contained all arts worthy of a free man, and while it flourishes, who can fail to observe how all studies, all arts flourish; and if it fails, they perish too. For who were the greatest philosophers, the greatest orators, the greatest lawyers, in short the greatest authors? For sure, those who most keenly studied the art of eloquence.* (Emphasis supplied)[N]

But while a general decline has now set in, Valla by no means despairs of the future:

Students of philosophy have not heeded and do not heed the great philosophers, nor advocates the great orators, nor pettifogging lawyers the great legislators, nor readers in general the books of the ancients; as if they did not think it proper to speak Latin or to know it, once the Roman Empire had fallen, [and] allowed the very gleaming brilliance of Latinity to perish on the spot and turn to rust. ...

Indeed, there were much greater troubles in earlier times, when no man of learning was found, and therefore I commend to your praise those of our contemporaries in whose hands I trust that the language of Rome, rather than the city, will continue to flourish, and that with the language all the other arts will soon be restored. (Emphasis supplied)[O]

The main features of Valla's missionary zeal for language are expounded in this introduction to his masterpiece. The religious mission of which Rome is the source gives place to a linguistic one, and beside the queen of sciences there appears another queen, a queen of languages. The mission of Latinity had once conquered the world, it had declined, it has to be regenerated. Latin provided the peoples with all the arts, it encompasses all the arts (disciplinae); philosophy, law, letters, all were brought into culture by Latin. Latin is the language par excellence, and in it all language is integrated; Latinity does not demean other languages, it confers dignity on them, it provides an enhancing spice (condire).

What is proposed here as a norm for language in general is ultimately one specific language, but it is no part of Valla's purpose to account for the superiority of Latin over other languages in functional terms. There is merely a trace of such thoughts where he exalts the unity of Latin as one law (una lex) above the fragmentation of Greek into dialects. But even this can scarcely be called a functional account. Even within Latin, it is, once again, pure Latinity, the norm within the norms, as it were, which is enthroned by Valla's subjective critical preferences. However, it is perhaps for this reason that the power of language to function as a cultural stimulus is proclaimed with greater personal conviction.

It is not as a subjective individualist that Valla is a unique phenomenon in the history of western attitudes to the world and to life, but as a linguistic functionalist. For him language is central to existence, and man, by encoding experiences as language, holds the norms of his life within himself. The fundamental self-sufficiency of language controls life and orders the state of affairs. In the beginning, and in the end——the goal——was the deed[18], the linguistic act. He adopts Quintilian in place of Cicero, presumably because of the broad range and extensive cultural role Quintilian assigns to eloquence. Cicero the objectivist departs; and Quintilian the subjectivist enters, maybe not abso-lutely, but certainly as Valla's preferred model. In addition to this preference, Valla's advocacy of spontaneous subjectivity has an objective: the harmonious humanity of man made complete in his linguistic erudition.

Language proves its power over things in history: Valla is intoxicated, as it were, by Thucydides and Herodotus; language shows its power over one's fellow-men in rhetoric. I have repeatedly mentioned Valla's reverence for Cicero and above all for Quintilian. Language establishes and releases man's dormant possibilities in social life (grandezza), in Valla's circle it is the interpreter of trade and commerce, it creates and administers——or bends——the law (as in Valla's study of the pandects). And above all it creates the beauty of humanity, the harmonious ethos.

This shows a great overestimation on Valla's part of the function of language, but ultimately he is a linguist who stresses the primacy of language rather a man of letters who achieves it. As Rossi puts it (1897: 60):

> Essentially he is a literary scholar, but synthesizing power is not one of his accomplishments, nor is what today is called genius; he is a master of style, but no stylist; he has an exquisite sense of the beautiful, but he is no artist.[p]

It is in his capacity as a linguist that he comes into conflict with other disciplines which could not withstand his philological criticisms, well-founded though they frequently were. Theology considered itself to be under insidious attack in practically all his work, starting, of course, with the Donatio, but also in other works down to the Elegancies; [19] the jurists never forgot his Letter of 1433 against the

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[18] *Translator's note:* The author uses the German words *Anfang* and *Tat* for 'beginning' and 'deed', alluding to the passage in Goethe's *Faust* (Part I, lines 1223-37) where Faust rejects the opening words of St John's Gospel (*Im Anfang war das Wort* in Luther's translation) in favour of *Im Anfang war die Tat.*

[19] Both in the official charge of heresy brought against him, and in the accusations of one Fra Antonio (see Schwahn 1896: 41-44).

Jurists (see Voigt 1893: II, 447); scholastic dialecticians accused the Disputations of heresy. But it is just these disputes with other disciplines which prove that Valla also remained true to the spirit of humanism when he gave humanism, which had originally been completely immersed in letters, an impetus towards science, in conformity with a movement which ran from the linguistic artists Petrarch and Boccaccio, through what Rossi calls the "impressionist school" of Poggio, the great paladin (il gran paladino) and his like, to the scientific school (scuola scientifica) of which Poliziano (1454–1494) was to be the leading figure. Had not Petrarch, before him, been at variance with astrologers, alchemists, physicians and dialecticians (see Voigt 1893: I, 72ff.)? His trust was in humanism as a rebirth of language; or rather, as the liberation of language from the old conception which maintained that it should be a mirror of thought——a distorting mirror in the eyes of some logicians, but a mirror none the less——and as the positive vindication of the nature of language as a function.

The central thrust of what has been called Valla's "religion of philology" (see Toffanin 1941: 21) leads him to try to find views in the philosophy of anti- quity as the basis for his efforts at creating a subjective and autonomous aesthetic form faithful to his visions. His work De Voluptate or De Vero Bono ("On Pleasure", "On the True Good"), which first appeared in 1431, contains a careful delimitation of his position vis-à-vis classical Epicureanism and its principle of eudaemonism, in favour of free will. The moderate happiness of the Epicureans is not, indeed, in his view the highest good; it is part of the lower, non-transcendental endowment of mankind, but it is nevertheless very valuable. According to Christian principles enjoyment, the satisfaction of bliss, is in any case awaiting man beyond the grave. This incursion of Epicureanism, however modest, gives much food for thought. Valla could have observed from Cicero himself that in philosophical matters he was no more than an epigone, but Cicero certainly did not point towards Epicureanism. The Church, too, had consistently eschewed Epicureanism as atheistic. The Academy, the Lyceum, the Stoa were acceptable, but not Epicurus. In Valla's De libero arbitrio ("On Free Will"), we hear similar sounds. This strand in his thought thus reveals a turn in the direction of the anticlerical mode of the Renaissance. Has this any further connection with language?

It is perhaps worthy of note that Valla did not adopt Epicurean semiotics, as Occam's terministic nominalism seems to have done.[20] But, as explained

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[20]   In this respect Valla is remote from Occam, who had been led by his scepticism to disallow the ability of language and thought to act as signs, a feature of his thinking which was itself abstracted from language and was the result of intellectual disillusion, occasioned in the main by language. This came about because Occam measured language against an alien scale, that

above, a devaluation of the rhetorically effective power of language was clearly in operation here. And Valla could not accept this devaluation. After all, his fundamental concern is ultimately not the truth, but learning through language; language is education. It needs no further justification. As human life, in Valla's experience, comes into its own by exercising autonomously the dynamics of language functioning in its own right, it is reasonable that he should clutch at Epicurean indeterminism (free will), and yet leave Epicurean linguistic theory aside. From an ontological point of view which considers language to function in its own right Valla offers no criticism of language; on the contrary, he proclaims language, and lives language, as a function of free human sovereignty.

I will conclude with a characterization of the Elegancies of Valla, and his characterization of Italian humanism as a whole, as given by Flora:

> Here is the charter of humanism, the exaltation of that language which had brought into the world the purest spirit of Rome, superior to the Roman spirit of arms. Here is founded a grammatical and rhetorical theory, drawing on specific and selected examples, which replaces crude empiricism by documented experience. (1948: 416)

> Humanism, the literary aspect of the Renaissance, is ultimately [sic] and above all [sic], an awareness of the human value of letters. If language distinguishes man from the beasts, language which is raised to the arts, to creation, to thought, to knowledge of the divine, is the most humane reason of man made in the image of God. (p. 408; emphasis supplied)[Q]

Flora was writing a history of literature and deals with entirely different "categories", but he, too, in his way, made a discovery and a statement which an analysis of functions in Valla and Italian humanism will confirm.

In Valla the path of humanism reached a high point and changed course; a high point in awareness of its origins, its standpoint and its aims, and a new course in the direction of the Renaissance. The further development of early

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of cognition, and demanded logical accuracy of language, something which it is not the role of language to supply. If it seems that nominalism is some sort of a language-based system, a comparison with Valla makes it clear that Occam's views are based on the primacy of thought, and hence are bound ultimately to take refuge in scepticism. Valla, on the other hand, gives language a positive evaluation. Language is power; it orders facts in the practice of history, which trains and directs man in eloquence and rhetoric. — For scholasticism, with its implicit confidence in language, language is also the guiding star, the shadow of logical thought, which in turn is concerned with reality; a representation of the intellect which in its turn contemplated pre-existent objective data (the *formae*). For Valla the humanist it is the integration of the process of formation emanating from the free will, a controlling unitary action. — It is for this very reason that Valla levels his aim in the *Disputations* against Occamism and Varroism alike; i.e. he attacks both scepticism towards language and intellectual reliance on language.

Italian humanism does not again reach such a high degree of awareness; and even mainstream humanism does not repeat such an approach to the combination of religious and philosophical power; it develops increasingly in the direction of letters. At the beginning of the fifteenth century hundreds of manuscripts came to Italy from the East; the great humanistic libraries, the Marcian, the Laurentian and the Vatican, etc. were established. (On the other hand the so-called Platonic Academy founded in the fifties by Cosimo de' Medici at Florence——a curiously pagan undertaking which resulted mainly from following the theories of Pico della Mirandola——had a distinctly Renaissance character; and we shall return to this.) A further achievement of humanism is the development of a primitive archaeology. Ancient inscriptions, sculpture, ruins were collected or investigated; vast collections and topographical studies were established, and they still have their value today. This took place mainly in the fifteenth century. And although textual study still retained its polyhistorical nature (as e.g. in Poliziano's Miscellanea), it nevertheless gives a glimpse of the astonishingly broad literary knowledge which will gradually be retained from the humanistic study of letters which emanated from idealistic humanism. Finally, printing is a prosaic factor in the development of humanism; it is technical and practical, for sure, but none the less decisive for that. In 1480 there were already forty printing-houses in Italy, and in 1500 almost as many in Rome alone. The possibility of bringing the fruits of one's own pen before the eyes of thousands stimulated displays of scholarship; and on the other hand the basic texts were multiplied in print and became accessible to much wider circles.

After losing its original infatuation with the national heritage of Rome, humanism spread all over Europe, transmitted by students of all nationalities who had pursued their studies in Italy. From the second half of the fifteenth century, humanism gradually came to dominate the curriculum of northern universities, which had previously been organized on scholastic lines. But the absorption of humanism in the minds of the educated classes as a result of the cultural paedagogy of travelling humanists was at least of equal importance. From this florescence of scientific humanism we shall first deal with Agricola, the pioneer, then Erasmus, the greatest figure, and then Vives and Ramus.

While all this was going on, humanism underwent a gradual shift of emphasis, something of a metamorphosis, from enthusiasm to research, from rhetoric to literary appreciation, from eloquence (oratio) to reason (ratio), from imitation to scholarship, from Roman-ness to classical philology. Humanism left its isolation in Italy as soon as its inner development, which we have sketched above, enabled it to do so.

CHAPTER 6

HUMANISM

Part II: Humanism north of the Alps: Agricola, Erasmus, Vives; —
Philology, Comparison of Languages, Erudition; — Ramus

AMONG THE students and proponents of humanistic views of the kind
mentioned at the end of the previous chapter was the Dutchman
Rodolphus Agricola (Roelof Huusman, 1444-1485), an outspoken champion
of Italian humanism, who studied for ten years in Pavia and Ferrara, after
completing courses at Erfurt, Cologne and Louvain. He was an eminent scho-
lar, an outstanding connoisseur of the two classical languages and their litera-
tures,[1] and also had a command of Hebrew. His first and most celebrated
work, *De Inventione Dialectica* ("On Dialectical 'Invention'" [i.e. the discovery of
arguments]), dates from as early as his time in Ferrara; an oration delivered
there entitled *In Laudem Philosophiae et Reliquarum Artium* ("In Praise of Philosophy
and all the Other Arts") is also of note.[2] Agricola elaborates this theme into
an encomium of the effort to gain knowledge and scholarship in general. The
basis is the pattern of Logic, Physics and Ethics; logic is composed of the
three arts of the Trivium, an arrangement which presented no difficulty—in
fact anything but difficulty for the humanist, with his emphasis on the lin-
guistic component of the concept of *logos*—as Vives was later to bear out.

    De Inventione Dialectica[3] is Agricola's principal work, and is the basis of his

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[1]   Agricola was, in addition, a talented musician, draughtsman and poet. His Latin style and
pronunciation evoked the greatest admiration of the Italians. Even a scholar like Erasmus (who
had not actually studied in Italy) was later to avoid declaiming Latin orations in Italy (van der
Velden). Poetry was also no more than a secondary concern for Erasmus. Such small traits are
a clear indication of the increasing distance from Italy which soon became apparent in Erasmus'
works.

[2]   In Ferrara he also wrote his *Praeëxercitamina* (exercises in rhetoric) and a *Life* of Petrarch.

[3]   Printed at Cologne in 1539 in a revised edition as Rodolphi Agricola Phrisii *De Inventione
Dialectica libri omnes integri & recogniti*. Part II is, *inter alia,* an encomium of philosophy. There was
an earlier edition by Peter Egidius of Antwerp (Louvain, 1511?).

fame and influence on later scholars.[4] A glance at the title might suggest that we have to do here with a very un-humanistic work. After all, invention is part of the vast syllabus of rhetoric. But what happens here, *mutatis mutandis*, is in principle just what Valla had done in his *Disputationes*,[5] i.e. Agricola makes a rhetorical incursion into the domain of dialectic, and attempts to subject logic to rhetoric, doing this in line with the programme of Cicero and Quintilian. Agricola had already made the following statement in his "Praise of Philosophy" about the relationship of dialectic and rhetoric:

> It is the task of dialectic ... to assemble the *arguments*, and also both to elude and to attack an *opponent*, and after *parrying* the opponent's repeated assaults, finally to slay him with his own weapons. Dialectic, to be sure, provides access to all the arts and applies invention to specified topics, indications of the points to which one has to direct one's attention in order to be able to ponder the pros and cons of each item. The view which carries most weight, to my mind, is the one which asserts that *what the orator demands from invention is actually a matter for dialectic*. Arranging, decorating and polishing, however, which the *orator uses, as it were, to put the final touches to his speech*, these are definitely *matters for rhetoric*. (quoted by van der Velden, 1911: 169)[A]

These are Agricola's views. We can see what has happened here. It is easy for Agricola to allot invention to dialectic, because the whole Trivium is founded on language. Any investigation of arguments for and against, of like and unlike, of the same and different, any explanation by means of definition, any division of the subject-matter into parts is done in the interest of expressing the argument in words, of convincing others by one's speech. Indeed, to know an argument and work it through is to speak about it.[6] That Agricola—we should perhaps say as a cool Northerner—is somewhat more restrained, that he *can* be more restrained, about rhetoric as an art than about dialectic is the result of his approaching the whole trivium from a consistently linguistic point of view. His concept of language is in functional terms rhetorical,[7] although

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[4]   It was only about fifty years after his death, when his works were published by Alardus of Amsterdam, that his influence became more widespread.

[5]   Van der Velden's monograph (1911) was very useful for the present study, but it says nothing about the influence of Valla on Agricola, and for that matter nothing at all of significance about the influence of any scholar on any other scholar. The study is limited to an account in terms of literary history of the life and works of Agricola, without any marked concern for his influence, let alone any critical view of linguistic theory.

[6]   Cf. Agricola's typical remark, "Let the best thing in your life be what you are looking for, that is a contented mind doing what is lawful, and doing so by speech." (See Sandys 1908: 254).

[7]   In his *De Formando Studio* ("On the Organization of Study") Agricola himself declares that "the reputation of being an orator is the greatest good he knows". (See Lindeboom 1913: 13*n*.).

he sees the actual art of rhetoric as lying in its declamatory and aesthetic effect, an application which he had been able to observe in the practice of oratory in the Italian courts. The predominant trait of language as such is for any humanist its function as rhetoric, and this function is seen by Agricola in terms of argumentation and proof.

What Agricola provides in his *Inventio* is the application of his theoretical vision to the relationship between dialectic and rhetoric. Invention, which is customarily assigned to rhetoric, but which Agricola considers actually to be a part of dialectic, consists specifically in the manipulation of the so-called "Topics", the principle of commonplaces (*loci communes*),

> the source of proofs; and using these as signposts, as it were, we may cause our thoughts to circulate through the whole range of things, and thus discover what is implicit in each and *suitable for the purposes of our speech*. (Van der Velden 1911: 169)
> Men of great intellect have ... selected common features from the broad generality of things. (p. 170)[B]

In spite of his admiration for "men of great intellect", Agricola is not content with Aristotle, nor with Cicero, nor Quintilian nor Themistius, let alone Boethius. Thus we find in Agricola the same non-imitative eclectic attitude towards the ancients that we found in Valla. In the first of the three books into which the treatise is divided he provides his own differentiation and classification of the *loci*. While Cicero listed 17 types and Themistius 22, Agricola has 24. He arranges them in an order beginning with those which are most closely linked with the substance or nature of the object, e.g. definition, class, subclass, peculiarity, totality, parts, and concluding with those which are most remote from the object, e.g. applicability, purpose, result, confirmation and contradiction, miscellaneous (*efficiens, finis, effecta, destinata* and *opposita, diversa*).[8]

Book II deals with the application of the *loci*, and their skilful use for the purpose of constructing an argument. Agricola begins here with a very trenchant criticism of the scholastic conception of dialectic. Quoting Demosthenes' reproof of the Athenians for getting down to deliberation only after the event, instead of deliberating first and then taking action, Agricola observes that this back-to-front procedure gives an accurate picture of what the dialecticians of his own day were doing. While a proper dialectic, as an art of drawing up arguments, had first to follow the sequence of invention—cor-

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[8]   Agricola presents his *loci* as a tree branching into contrasting pairs of options. Did Ramus, who called himself a pupil of Agricola, and who applies this principle of binary opposition to the extreme, derive it from Agricola?

responding to deliberation in the Athenian model—and proceed afterwards
to judgment, decision and resolution—initiation of action in the Athenian
model—scholastic dialectic reversed the sequence. After the event, from the
resultant judgment, the old-style dialectician derives a pseudo-inventive argu-
mentation to demonstrate that the judgment was just. They are unaware, says
Agricola, that no reasoning is necessarily cogent just because it is derived
from such-and-such a class or sub-class, or any other *locus*—for inconsistent
and illogical arguments can always be derived from the *loci*—but because
reasoning reaches its conclusions when and only when the relationship of
what is under consideration is such that it can be classed under a recognized
form of argumentation, in which the facts are clearly seen to hang together
and to be consistent. Why are the dialecticians so proud of their art? It exists
merely in order to assist and benefit other people. No practice of the arts, no
manner of speaking, is compatible with the majority of present-day dialectical
precepts. Instead of expanding to give benefit to all the arts, it is isolated and
taught for its own sake. Aristotle, Cicero, Boethius, all expounded the *loci;*
only Quintilian attempted to teach how to apply them, how the *loci* may be
used to 'invent'. But how few of those who take upon themselves the name
of philosophers have studied Quintilian![9]

Agricola goes on to give further instruction in this use of the *loci* in Book
II. The material consists of the questions at issue. Agricola arranges them in
a manageable order, and, once again, aims from the outset at the construc-
tion of a demonstrative oration. The status of the question depends on the
status of the argumentation in hand, a plea before a court of law, a speech
of condolence, an encomium, etc. Then he comes to the instrument of
dialectic, the oration. The decisive factor here is the intended effect. If the
purpose is to convince, then the appropriate path is argumentation. And in
this connection, Agricola deals with the way arguments are to be derived
from the *loci*. The *loci* themselves must be thoroughly mastered; and Agricola
demonstrates the handling of the *loci* by a number of examples.

Book III deals in addition with the affective use of speech (*affectus*), the
arousal of the listeners' sympathies, with pleasing the listeners (*delectatio*) and
with the arrangement (*dispositio*) of the arguments 'invented'.

We can draw some conclusions. The aim of Agricola's work is twofold: on
the one hand, he proposes to give a new task to the *loci*, which the schoolmen

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[9] Cf. van der Velden 1911: 117-118. Here, too, van der Velden's study presents for the most
part *ad hoc* extracts.

had, as it were, isolated and sterilized within dialectic; in his view their characteristic task, the only one which gave them validity, was to serve as the basis of deliberative oratory; on the other hand the tradition of invention in rhetoric, under which the preparation of speeches had hitherto been classed, is now seen much more analytically and discursively, and clearly falls together with a re-established dialectic. In other words, Agricola reforms and re-establishes dialectic in order to produce solid, persuasive and convincing oratory. This is the controlling principle of his work. Thus although he apparently reduces the scope of rhetoric as an art by the transfer of invention to dialectic, he in fact incorporates dialectic in language, which is now seen to function as an instrument for influencing people by effective rhetoric. The disappearance of invention, the central area of rhetoric, is, however, illusory; in reality it is affixed as a superscription to the home of its rival, dialectic. This is now, as it were, the gateway and guardroom of rhetoric, or rather of the whole use of language considered under the aspect of its rhetorical effect. To this end, the traditional content of dialectic has been overhauled, and several new items have been added; and as a result dialectic is exploited for its usefulness. Invention is given rather more spacious quarters, although it is now to be found at a new address on the other side of the street. But we are still in the area of language.

Agricola continues the line which Valla had started in the *Disputationes* with a restitution of what had been Aristotelian property; in particular he allots the tasks of preparing speeches and inventing arguments to the 'Topics'. In contrast, Vives was to regard language as being capable of making direct judgments of truth and falsehood. Finally, Ramus, in the footsteps of Agricola, would try to make the reorganization of dialectic definitive, but although he in fact took thinking in language as the starting-point and model of his "natural thinking", we shall find that he shifted linguistic thinking imperceptibly in the direction of a pre-rationalist attitude of mind. The men of the Renaissance, for their part, would develop a fundamentally different method of invention; they would not gauge questions with a set of instruments based on *loci*, but set up a non-linguistic method of establishing knowledge inductively through ever-increasingly deliberate observation of relations in the natural world; a method which will convince rationally without having any recourse to the rhetorical arts of persuasion.

To sum up: Agricola makes logic linguistic, and makes it part of the rhetor-

ical function of the use of language.[10] He does this as a child of his times by associating invention with dialectic, allotting what had traditionally been a component of rhetoric to an art which had long been its rival. It is in this spirit that he wrote his book "On Dialectical Invention", i.e. on invention which is actually nothing other than dialectic.

In his work on Biblical Humanism (1913), Lindeboom speaks of Agricola's "formal humanism". "It is the cult of the word, not of thought"; "What is this but de-forming, in a formal way, from one formalism"—Lindeboom is thinking here of scholastic attitudes—"to a new formalism?" The term 'formalism' is not apposite for this theory. In using this term Lindeboom is attempting to contrast Agricola's humanism with that of, for example, Wessel Gansfort and Erasmus, the central feature of which in his view was faithfulness to the Bible. But Agricola's humanism was no empty form, precisely because of the functions he allotted to language; he was an accomplished orator. It is just in this respect that Erasmus is much more "formal", for Erasmus is a writer, not an orator. What Lindeboom sensed is the overvaluation of the linguistic function; the use of a function in one area leads to the removal of the same function from other areas, in this case the ethical. Agricola's—and Valla's—functional use of language has, however, the distinction of having brought language to some extent back to itself. In their rhetorical theories Valla and Agricola saw language as an activity with an effect, i.e., as a function—and that is anything but formal. But Erasmus, while preserving the same high valuation of language, associated language with moral demands on life. And that certainly makes a difference, though not in respect of the place and sense of language in life as a whole.

Desiderius Erasmus

The most distinguished exponent of northern humanism is Erasmus (1466-1536). Is this a rejuvenated or an obsolete humanism? The youthful ardour which characterized humanism from Petrarch to Valla seems to have abated; or have the ardour and impetus remained the same while the tone has become more serious, less striking; and has conviction become more profound while outward display has become less ostentatious? Has language, or, should we say, has literature maintained its central place? And what, then is Eras-

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[10] Cf. Hartfelder (1886: 7): "He thus possessed eloquence, the acknowledged ideal of all humanistic culture. This is not eloquence in the accepted sense of the term, but embraces knowledge of language, history and civilization."

mus' view of it?

Erasmus left an extremely extensive body of writings.[11] Whether language is the immediate subject, or whether it is treated more implicitly, there is always room for it in his works. For all that, the other subjects in which he was interested are so overwhelmingly numerous that it is necessary to begin by setting aside those which, to judge from their titles or the comments of literary historians, are concerned with language only peripherally, if at all. Although it is impossible to gainsay the view that everything which a man as versatile as Erasmus wrote had a bearing on language and his views of language, it is unnecessary to establish this position with the texts in hand.

A great deal has also been written *about* Erasmus, not only about his birth, youth and life, about his residence in Holland, in Brabant, in England, in Italy, in Basle and Freiburg im Breisgau, but equally about his character and personality, about his religious convictions and theology, about Erasmus and the Church, Erasmus and the Papacy, Erasmus and the *devotio moderna* (i.e. the new attitude to religion), Erasmus and missions, about Erasmus as a reformer and a true Catholic, as a philosopher and moralist, and also as a free-thinker, as a humanistic author and scholar, as an exegete, as an epistolist, as a paedagogue, as a pacifist, as a poet, as a draughtsman and painter, as a humorist and satirist, and as a tragic figure; about his death and his will, about his estate, his grave, his skull and skeleton, and about Erasmus returned to life. There are works on Erasmus and antiquity, Erasmus and education, Erasmus and monastic life, Erasmus and women, Erasmus and his houses and furniture, even on his Aryan descent, his illegitimate birth or his affliction with gout, but on Erasmus purely and simply as a theorist of language there is apparently nothing.[12] Naturally material may be found in the accounts of his humanism, his literary studies, his classicism, etc., but to the best of my knowledge, discussion of Erasmus as a linguist has hitherto been no more than implicit, if this aspect of his work has not been completely disregarded.

Let us turn, then, to the texts themselves.[13] Since the Bible, and more particularly the New Testament, had such a decisive influence on Erasmus, it seems appropriate to investigate what he had to say about language when

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[11] Ten large folio volumes (one in two parts), containing up to 1000 columns each, in the so-called "Clericus" edition of 1703-1706.

[12] Not, at least, as a specialized study. The list given here was compiled from the *Catalogus* of writings on the life and works of Desiderius Erasmus held in the Rotterdam municipal library.

[13] Preserved Smith (1923) gives a good conspectus of these, though they are covered piecemeal in the course of discussing individual works.

he moved in this frontier zone between literature and theology. He published Valla's *Adnotationes in Novum Testamentum* ("Notes on the New Testament") in 1506, and his biblical activities reached their peak with his translation of 1516. Attention will first be given to more expressly literary works, followed by a glance at a work from his later years which is still semi-"theological", *Ecclesiastes sive de Ratione Concionandi* ("Ecclesiastes, or the Method of Composing Speeches", 1535). Two works from 1511, viz. *De Ratione Studii* ("On the Method of Study"—this one little more than a pamphlet) and *De Copia Verborum et Rerum* ("On Abundance of Words and Things"), which stand very closely in mutual dependence, will be discussed next. The last works to be discussed will be a few texts from the years between 1521 and 1529, "arduous but fruitful years"[14] largely spent at Basle, i.e. *De Lingua* ("On Language", 1525), *De Conscribendis Literis* ("On the Writing of Letters", 1522), *Dialogus Ciceronianus* ("Ciceronian Dialogue", 1528), and some pithy observations from *De Pronuntiatione* ("On Pronunciation", also 1528).

One or two remarks about Valla's *Adnotationes* were been made in the course of discussing his works. Erasmus, however, had an even more profound concern than Valla for the Greek New Testament. Lindeboom has given us an account of Erasmus' Christian philosophy in his dissertation (1909) as well as in *Het Bijbelsch Humanisme in Nederland* ("Biblical Humanism in Holland", 1913; see above, p. 124, *n.* 7). In the dissertation he describes (1909: 13–31) how Erasmus, although initially averse to theology, set about theological studies, taking the Bible as the basis and norm of Christian life. But Erasmus never became a theologian. Lindeboom begins with a quotation from his first *Apologia* against Lee (not included in the Clericus edition), in which Erasmus says that he will leave higher things for the more blessed; for his own part, he chose a more modest role in practising theology, viz. grammatical analysis (1909: 13). Although Erasmus' ethical and religious convictions clearly influenced his views on language, these views interest us not so much in their own right as for the light they shed on the way Erasmus looked upon questions of grammar in his work on the translation of the New Testament.[15]

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[14]   "Années laborieuses, fécondes" (Renaudet 1939). There is little in this work which is relevant to the purposes of this study, not even in the five pages (54–59) devoted to Erasmus' humanistic works and publications. Renaudet concentrates in this work on the matters which are explicitly mentioned in the subtitle of his earlier book on Erasmus (1926): "Erasmus, his religious thought and activities as revealed by his correspondence (1518–1521)".

[15]   See Bludau (1902). The first edition appeared at Basle in 1516; the second is dated 1519.

The title of the work reads:

A completely New Instrument,[16] *carefully edited and revised by Erasmus of Rotterdam, according to the true Greek and also the faithful accuracy of many manuscripts, both ancient and emended, in the two languages* [sc. Latin and Greek] ... *Together with Annotations. Whoever you be who love true theology, read, learn, and judge thereafter.* Basle 1516.[C]

(The second part, which contains the *Annotationes,* is actually dated Basle, 1515). After a dedication to Pope Leo X, Erasmus gives an account (expanded in later editions) of his aims and method.[17] He scrupulously traces the patristic tradition down to Augustine. However:

They were men, they were unaware of some things, and in some they were deceived. They nodded off anywhere; nevertheless, they provided a good number of telling points against heretics, whose provocative utterances were at the time causing general confusion.[D]

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[16] Erasmus gives a definition of this term in his Ep. 882 (1703-1706: III, 998B-1007D) written from Basle to R. Aldrisius on 23 August 1527; drawing on patristic authority, he uses the term (col. 1006D) in the sense of a legal document, i.e. God's (new) covenant with man. See Bludau 1902: 12.

[17] This *Methodus* was expanded in subsequent editions, and not reprinted verbatim. The issues raised are not those of Greitemann (1936), though they are associated. Greitemann points out how the study of the Holy Scriptures had acquired a dominant place in Erasmus' life (1936: 295-296), and that Valla's work had a decisive influence on Erasmus' form and method (p. 297): "The New Testament was discovered as a literary document in which various stylistic features came to be recognized" (p. 299). The paraphrase-commentary as used by Erasmus was new and very successful (p. 302). Inspiration "is always assumed by Erasmus, although he says little about it". "It was an advantage that Erasmus, who had an eye for literary qualities and difficulties, for this very reason underlined the human element in the process of inspiration, in a manner rarely encountered in the Middle Ages" (p. 367). "Erasmus concerned himself for preference with literary criticism, in which he raised questions, some of which are still awaiting an answer today. It is here that he most clearly departs from mediaeval practice. For although the schoolmen were capable of dealing with separate questions of canon, many were unable to distinguish between the canonical and the authentic, as Erasmus was to do later" (p. 369). "Erasmus is a model of the difference between the theologian and the literary scholar, which is often difficult to resolve" (p. 376). In a summary entitled "Back to the sources", Greitemann deals with Erasmus' method, though he never analyses what Erasmus says about it. Greitemann says: "Humanism had made an end of the scholastic "method of reading with questions" (*modus legendi cum quaestionibus*), and by doing so gave exegesis a special place in the theological curriculum. In addition the way was opened for the so-called biblical prefaces, when Erasmus introduced practical hermeneutics in his *Ratio seu Methodus compendio perveniendae ad Veram Theologiam* ("System or Method of Comprehensively Attaining True Theology"). It is true that the Council of Trent condemned some of his works, and subjected his Annotations and Paraphrases to amendment; but for this very reason it is noticeable that at this same Council proposals for the reform of Bible studies were presented which derived, sometimes even literally, from the *Ratio et Methodus.* Greitemann finally regards Erasmus as a consistent, thoroughgoing scholar in all matters. "He loved language, expression, speech itself, he let it pass through his hands as a connoisseur lets precious old fabric shimmer in the sun" (Quoted from Huizinga 1925).

None the less, the Fathers deserve high praise. It is scholasticism which comes in for censure here: "It is preferable to be ignorant of a few of Aristotle's teachings than not to know the commands of Christ. For I would rather be a pious theologian with Jerome than an invincible one with Scotus".[E]

Erasmus concludes his *Methodus* with words significant for us, as follows:

> Let us make a careful collation of our studies. Let each one consider his own speciality the best. ... Let him who takes pleasure in scholastic debate follow what is accepted in the schools. *But anyone who desires more earnestly to be instructed for piety than for disputation should first and foremost make himself familiar with the sources, should turn to those authors who drank nearest the fountainhead. Oratory will repay you for what is lost in syllogisms.* And you will be a sufficiently *invincible* theologian if you go so far as to succumb to no vice, to yield to no desires, even if you come off second best in a captious disputation. *He who simply teaches Christ is enough of a teacher.* (Emphasis supplied)[F]

So much for Erasmus' views on method.

"Let each one consider his own speciality the best"; this sentence reveals a temperament different from Valla's. Valla is a pioneer, Erasmus a consolidator, anything but a fanatic demanding a categorical yes or no. Anyone who wishes to follow scholastic disputation and what it assumes may follow it. But anybody who chooses piety in preference to disputation should remain beside the springs, and the Fathers who stood so close to them. Then follows the central statement of this passage, which also offers a striking expression of Erasmus' attitude to language: what is lost in hair-splitting argumentation (in syllogisms) will be made good by oratory. What is the implication of this central tenet of humanism in Erasmus? To put it as briefly as possible: the possession of language as a factor in ethical culture. This possession is acquired at the authoritative springs of Antiquity, ancient no doubt but equally, and here predominantly, Christian. This possession reveals its power in making us invincible not on the speaker's platform, but in the silent conflict against wickedness and lust. The shift in opinion by comparison with Valla is apparent. We still have a language charged with convincing force, but it is much less of a rhetorical language than in Valla; rhetorical and disputatious eloquence or artistic and demonstrative (epideictic) eloquence is unmistakably disqualified by Erasmus. Even if you lose a debate, that does not detract from the possession of this kind of oratory.[18] A superlatively eloquent teacher is one "who simply teaches Christ"—simply, that is, according to the original sour-

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[18] Erasmus' strength did not lie in oral debate, but it must be remembered that he was not an orator; and in this respect his sojourn in Italy cannot be compared with Agricola's.

ces. In this way Erasmus' view of language announces itself here as having a literary function with a strong ethical dynamic.

I am certainly not exaggerating the significance of these words at this juncture, for they form the peroration of an extremely important account of Erasmus' method,[19] prefacing a work that in its turn was in his own judgment one of the most important works he produced, his new translation of the New Testament. "Not the least part of the task is to know how to begin the task" (*Non minima negocii pars est adeundi negocii viam nosse*), he says at the beginning of this preface.[20] Other works will, indeed, confirm this attitude to language. It is functional and dynamic, but there are ominous signs of deterioration in the high preference for literary sources, and there is a non-functional component inherent in the ethical factor, just as non-functional as the aesthetic component of Italian humanism, which, we may note in passing, Erasmus nowhere abandons, though he nevertheless subordinates it to the ethical factor.

Before looking at the two works written before the overtly literary studies of 1511 and 1512 and similar works of the 1520s, some further consideration of the direction of Erasmus' literary theology would be in place. It can be stated here that, whatever else he did, Erasmus always kept the living use of language in mind—the use of Latin, that is; there will naturally be more to say about this later. It is only because education towards a living linguistic usage was so close to his heart, that letters, i.e. "grammar", occupy such a large part in his thought on faith and the church. Although he wrote no *Rhetoric* as such, his *Ecclesiastes* of 1535, which has the subtitle *De ratione concionandi* ("On the Method of Making Speeches"), may be regarded as a rhetoric for clerics.[21] In this treatise on preaching, too, we find "letters". In what way?

> First, *the fact that grammar is the foundation of all disciplines*, the neglect of which has brought about the destruction or corruption of so many good authors and disciplines, is too widely known for it to be demonstrated here. But when I say 'grammar', I am not thinking of the inflection of verbs and nouns, and the

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[19] This treatise was greatly expanded in the second edition, and also published separately in 1522. See Bludau 1902: 13.

[20] This Preface comes with another addressed to Pope Leo X and an Exhortation to the Reader (*Paraclesis ad Lectorem*), and precedes the numbered pages.

[21] In Book II, Erasmus shows that it is only a natural gift of eloquence (*prudentia*) and not an art which is appropriate ("I fear that some may think it out of place to recall the teaching of the Rhetoricians here"); but in that case Dialectic, which is also an Art, should be eliminated. "The cleric should have learnt of these arts, not be in the process of learning them now; and he should have learnt them thoroughly, not by rote." But what basis does the method of making speeches require in this case? At this point comes the passage quoted.

agreement of predicate with subject, but the *rules for speaking correctly and appositely*, an aim which cannot be achieved save by *the manifold reading of ancient authors* who excelled in elegance of language. And we rightly congratulate our own day, which has raised that kind of writing from literary games, which in the past inculcated the *modes of signifying* and other spurious difficulties—and did so in deceptive and sophistical words, thus teaching boys nothing but how to speak *barbarously*, while Grammar is the art of speaking correctly. This economy (*compendium*) seems to be rather something which would more accurately be called extravagance (*dispendium*). They rush boys before their time to Dialectic and even to Sophistry. *Nevertheless, without grammar dialectic is blind. Whatever dialectic achieves, it achieves through the word; by the word it proclaims and defines, differentiates and combines.* For these tasks a knowledge of words is necessary, for by words single objects are introduced, then their connections; and each of these activities depends not on arbitrary decisions of the contending speakers, but on the practice of the ancients who spoke precisely. (Erasmus [1535] 1703-1706: V, 851B ff.; emphases supplied)[G]. (The "Clericus" edition is cited, by volume and column only, in further references to Erasmus' works).

This passage is extremely interesting for the investigation in hand.[22] To begin with, we find here an express mention, and rejection, of speculative grammar (speaking of "that kind of writers who ... inculcated the modes of signifying"—*illud litteratorum genus, qui ... inculcabant modos significandi*); Erasmus congratulates his own times for the abandonment of this pseudo-grammar, which led to barbarous speaking. More positively, he gives us here a concise and telling presentation of his conception of grammar, the rules for pure and apposite speech, an art which does not fall from the skies, but is acquired by reading the authors of antiquity, who excelled in the beauty of their language.

We may ask whether this extremely broad conception of grammar was Erasmus' own. Although it was, so to speak, given flesh and blood by Erasmus, it derived, in fact, from Quintilian. In this respect, too, Erasmus remained within the tradition of Valla and Agricola (see Hofer 1910, *passim*). This is evident not only in his anti-dialectical attitude, which also recurs in

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[22] It should not be forgotten that the passage occurs in the one work by Erasmus which has a rhetorical component; and it is in this book that *grammar* is presented as the basis of all knowledge. Valla had called on the dynamic effect of rhetoric in opening fire on dialectic in the contest for supremacy in the Trivium; Agricola had confirmed the gains made by this rhetorical offensive. Erasmus is able to take advantage of the reduced position of dialectic and to allow grammar, which was more concerned than rhetoric with literary theory, to share the spoils, if not to assign them all to her. Indeed, grammar was better suited than rhetoric to control the conquered territory. In addition, the domain extended beyond the Trivium; it covered the whole of cultural life, all academic disciplines; and what Valla had proclaimed in his *Elegancies* now became established.

other passages—without grammar, in the sense of Quintilian and Erasmus, logical theory and practice are blind; what dialectic achieves, it achieves through speech—but more by means of subsuming all the arts. In this light the beginning of this passage acquires very great importance: the knowledge of correct speaking (*ars emendate loquendi* = grammar) is the basis of all disciplines (*disciplinarum omnium fundamentum*).

The ability to speak grammatically, as a principle to be observed in oratory (*loquentia*), is called eloquence (*eloquentia*). It is acquired through *eruditio*. *Eloquentia* is prescribed as the aim of the civilization and edification of youth, and of mankind as a whole. Erudition is gained only as the result of the study of ancient literature. In *De Ratione Studii* ("On the Method of Study", 1511 [I, 521A-530B]), Erasmus establishes principles of study in which he sets out in detail how this study should be organized. It should begin with both Greek and Latin, using for Greek the grammar of Theodorus Gaza, which Erasmus himself had translated into Latin; for Latin that by the elder Diomedes is the best, with Perotti's *Rudimenta* as the best of the modern ones.

> I have no patience with the stupidity of the average teacher of grammar who wastes precious years in hammering rules into children's heads.
>
> For it is *not by learning rules* that we acquire *the power of speaking a language*, but by daily intercourse with those accustomed to express themselves with exactness and refinement, and by the copious reading of the best authors. Upon this latter point we do well to choose such works as are not only sound models of style but are instructive by reason of their subject-matter. (Woodward 1904: 163f.; cf. I, 521C])[H 23]

After this we are given a summary of the best Greek and Latin authors. Erasmus knows of no work which provides a better guide to the reading of Latin authors than Valla's *Elegancies:*

> But do not merely echo his rules; make headings for yourself as well. Refer also to Donatus and Diomedes for syntax. Rules of prosody and rudiments of rhetoric, such as the method of direct statement, of proof, of ornament, of expansion, of transition, are important both for the intelligent study of authors and for composition. ... If it is claimed that *Logic* should find a place in the course proposed I do not seriously demur; but I refuse to go beyond Aristotle, and I prohibit the verbiage of the schools. Do not let us forget that *Dialectic is an elusive maiden, a Siren, indeed, in quest of whom a man may easily suffer intellectual shipwreck.* Not here is the secret of style to be discovered. That lies in the use of the pen; what-

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[23] *Translator's note:* Woodward's version of this work (1904: 162-178) is rather free, but it was quoted by Verburg on the grounds of ready availability (? and portability).

ever the form, whether prose or verse, or whatever the theme, write, write, and again write. (Woodward, p. 165, cf. I, 522B–C)[I]

Nevertheless, "letters" are placed in the service of the ultimate aim of oratory:

> As regards the methods of the rudiments—that is, of learning to talk and knowing the alphabet—I can add nothing to what Quintilian has laid down. For my own part I advise that when this stage is reached the child should begin to hear and imitate the sounds of Latin *speech*. Why should it be more difficult to acquire Roman words or even Greek, rather than the vernacular? (Woodward, p. 168, cf. I, 522E–532C)[J]

Meanwhile the reader is prompted to ask, "Is this erudition only a matter of linguistic form and style?" The more so, given that the work begins with the statement, "At the outset, understanding seems to be twofold, of things, and of words" (*Principio duplex omnino videtur cognitio rerum ac verborum*). What does Erasmus mean by the understanding of things? And does not this factual knowledge transcend the linguistic basis of his scholarship? Erasmus deals with this point in the second part of his treatise:

> This brings me to treat of the art of instruction generally, though it seems a mere impertinence in me to handle afresh a subject which has been made so conspicuously his own by the great Quintilian.
>
> As regards the choice of *material*, it is essential that from the outset the child be made acquainted only with the best that is available. This implies that the Master is competent to recognise the best in the mass of erudition open to him, which in turn signifies that he read far more widely than the range of authors to be taught by him. This applies even to the tutor of beginners. The Master should, therefore, acquaint himself with authors of every type, with a view to *contents* rather than *style;* and the better to classify what he reads he must adopt the system of classifying his matter by means of note-books, upon the plan suggested by me in *De Copia*. As examples of the authors I refer to I put Pliny first, then Macrobius, Aulus Gellius, and, in Greek, Athenaeus. Indeed to lay in a store of ancient wisdom the studious master must go straight to the Greeks: to Plato, Aristotle, Theophrastus and Plotinus; to Origen, Chrysostom, Basil. Of the Latin Fathers, Ambrosius will be found most fertile in classical allusions. Jerome has the greatest command of Holy Scripture. I cannot, however, enumerate the entire extent of reading which a competent knowledge of antiquity demands. I can only indicate a few directions which study ought to take. (Woodward, 1904: 166f.; cf. I, 522E–523C)[K]

I have given this quotation at length because of the importance of the question it raises. It will be seen that the knowledge of things remains within the circle of language, which is now revealed as a vicious circle. Erasmus does not find factual knowledge in "the book of nature", where the men of the

Renaissance searched for it, but in the books of classical literature, i.e. again in language. Everything Erasmus offered his generation—for example in his *Adagia* ("Maxims"), which he produced from about 1500 onwards, but which he extended, from some 800 to 4000, in his *Verborum ac Rerum Copia* ("Treasury of Words and Things"), and in his *Colloquia Familiaria* ("Household Colloquies")—was aimed at making factual knowledge from antiquity available to scholarship. And since, in Erasmus' view (see below), man is a linguistic animal, scholarship itself found its goal in speech, and this function, in its turn, attained its greatest humanity in eloquence. But Erasmus drew this knowledge of things from the brimming reservoir of ancient literature, and therefore from language. In its origin, and in its goal, this knowledge of things is still language.[24]

The remarkable feature of the attitude towards real objects revealed here is even greater when we consider that humanism had now been joined by the Renaissance. Humanism did, indeed, share the opposition of the Renaissance to formalistic logic. Erasmus rejected, as we saw, the basis of speculative grammar in logic; Vives was to challenge Peter of Spain. In this conflict within the trivium, Erasmus and Vives are of one mind, and share the view of Valla and Agricola before them: rhetoric, that is to say, rhetorical grammar or grammatical rhetoric, subordinates dialectic to itself, and the linguistic nature of the arts of the trivium is continually stressed at the expense of the functioning of dialectical logic in its own right. But it is not this humanistic view of the primacy of language that concerns the man of the Renaissance in his dispute with scholasticism.

The aim of the Renaissance is to go past language back to the objects themselves, away from formal logic to science or to the practicalities of social life, to the physical sciences or to politics. It was not helped, therefore, by the

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[24] Although Hofer (1910) examined paedagogy, he was also struck by the linguistic elements in the sources he was discussing: "This allocation of precedence 'to the word over the thing', to eloquence over erudition, was also a feature of humanism. Erasmus seems at first to adopt a different stance, when we hear from his lips the undoubtedly correct thesis that the knowledge of words is earlier, but the knowledge of things stronger. But this dictum holds only 'if the emphasis is on culture as a whole rather than on the paedagogical study of it, and even within culture as a whole not for the sake of abstract knowledge in its own right but for the sake of practical professional education. All the acquisition of knowledge of things produces is an informed polymathy, the thrust of which is directed neither towards comprehensive philosophical knowledge, nor to exact science, nor to direct application in practical life.'" (The inserted quotation is made by Hofer from Glöckner 1889). It is not, however, true that Erasmus' "knowledge of things" is not directed towards practical application in life. The use of language, speech, verbalization, is practical life—the highest and central function of life in Erasmus' eyes—as will be shown.

palace revolution in humanism, which from the point of view of the Renaissance led them out of the frying-pan into the fire, i.e. merely from formal logic to rhetorical language. For language, no matter how vigorously alive, was in the eyes of Renaissance man no more than language. The Renaissance maintained the status of persuasive oratory in political activities; but the physical scientists in particular, in their thirst for knowledge, rejected language as well as scholastic logic on the grounds of its instability, inexactitude and cognitive impotence. And while this physical undercurrent of the Renaissance was itself initially imaginative rather than methodological, it was soon to be consolidated in a mathematical methodology and win the day. In Erasmus' time this development in Renaissance thinking was in full swing, for example in Copernicus, six years his junior.

There is no trace of any systematic ordering of the sciences in Erasmus,[25] and as a result no trace, either, of a systematic account of his view of the functions of language. While our Dutch compatriot Cornelius Valerius was obviously a humanist of encyclopaedic scope, even his polymathic humanism was for the most part still encompassed by the traditional programme of the Trivium and Quadrivium. It is only Bacon who strikes a new path, but, after all, Bacon is a man of the Renaissance. (Valerius and Bacon will be discussed later.) "To have had a taste of arithmetic, music and astrology is sufficient" (*Arithmeticen, Musicam et Astrologiam degustasse sat erit*), says Erasmus in *De Pronuntiatione* (I, 923A). For all his subtle erudition, Erasmus the man of letters is not a match for the harsh reality of the primitive zealotry of his time, and cannot come to terms with its passionate existential and religious arguments, whether friendly (More, for example) or hostile (Luther);[26] and in just the same way

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[25] Woodward (1904: 138f.) devotes a comprehensive paragraph to Erasmus' conception of practical knowledge: "The study of facts is by Erasmus not differentiated into systematic branches of knowledge. Natural science, descriptions, travellers' tales, traditional lore, mathematics, astrology, geography, medical rules, tend to merge into one another, and are classed under the common term 'res'. Their understanding is wholly dependent upon thorough training in *language—for without vocabulary neither names nor epithets can be appropriately given: without arts of exposition and description neither due appreciation nor record of facts is possible.* Hence *language* study must precede any attempt at 'eruditio'. For lack of Letters knowledge has wholly decayed: without a highly developed language the enquirer is deprived of the only means of (a) acquisition, (b) expression, (c) analysis, (d) exposition, of learning." (Emphasis supplied). For Erasmus' own thoughts on the subject, see I, 389C/D (*De Conscribendis Literis; De Varietate et Ordine Exemplorum*).

[26] Cf. Huizinga's remarks (1925: 222f.) on Erasmus' *De Libero Arbitrio* and Luther's *De Servo Arbitrio:* "But ... it was Luther who stood on the firm ground of total mystical absorption in the Eternal before whom all lower concepts burnt like dry straw in the fire of the majesty of God, before whom any active human part in salvation was a violation of the glory of God. The mind of Erasmus did not ultimately live in the concepts which come under discussion here, of sin and

he failed to comprehend the subversive pagan efforts of the Renaissance against all authority—of Church, Holy Writ, or profane letters alike—and the seriousness with which this movement searched the universe for non-verbal, inherently objective cosmological certainties. Only where "his upright ethical feeling made him shudder" did he see "paganism" and explicitly attack it (see Huizinga 1925: 232ff.). But he did not realize the extent of the transformation in the sciences then coming into fruition, or the view of human sovereignty which looked to this development for support. He was satisfied to quench his thirst for knowledge completely from the words of classical antiquity. Indeed, the knowledge he was seeking is not certainty, but erudition. And this is what has to serve him as material for his eloquence.

The humanistic view of language as a factor affecting the knowledge of things underlies the whole of *De Utraque Verborum ac Rerum Copia Libri II, ad Sermonem et Stylum Formandum Utilissimi* ("Two Books on the Abundance of Words and Things alike, most Useful for the Development of Speech and Style", 1512).[27] With this treasury of words and ideas Erasmus sets out to provide a service to oratory, but at the same time he warns against the danger of loquacity and ostentation:

> Just as there is nothing more admirable or more magnificent than oratory overflowing with a wealth of constructions and copiousness of words like a river of gold, so it is truly important that it should not be exposed to a not insubstantial danger. (I, 3A)[L]

Abundance has two forms:

> Of which the one consists in synonymy, in substitution or alternation of words, in metaphors, in exchange of figures, in balance and all the other methods of giving variety. The second lies in drawing up and amplifying arguments by means of examples, comparisons, similarities, differences, contraries, and other methods of this nature of which we will give a more detailed account in the proper place. (I, 5F)[M]

Erasmus promises considerable utility for his work:

> This practice will make no small contribution to facility in extempore speaking or writing, and it will safeguard us from being struck dumb and repeatedly breaking down, or shamefully losing the thread. And it would not be difficult to turn a hurriedly started speech to the theme we wish to address, having so

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grace, of redemption and the glory of God, who is the reason for everything."

[27] Already in circulation in 1511; but the edition of 1512 is the first authorized one. Of the work, Woodward says (1904: 20): "This is a very remarkable storehouse".

many formulae prepared and in readiness. In addition it will benefit us not a little in expounding authors, in translating books from other languages, in writing a poem. And if we are not informed in these methods, we shall frequently be at a loss for words, or obscure, or finally reduced to silence. (I, 6D)[N]

How does Erasmus develop this position? The first book of the work contains the so-called *variationes*. Erasmus understands by this the ability to vary a given content endlessly, and to say the same thing repeatedly in different ways. He describes countless means of variation, by synonymy, enallage (change of grammatical form), antonomasia (use of description for name), periphrasis, by metaphor, allegory, catachresis (anomalous usage), by onomatopoeia, metalepsis (use of a word of related meaning), metonymy, ... by composition (word-formation), syntax, etc. Indeed, he devotes a whole chapter of some eight columns to variations on the sentences, "Your letter has given me great pleasure" (*Tuae litterae me magnopere delectarent*, I, 23C–26A) and "I shall remember you as long as I live" (*Semper dum vivam tui meminero*, I, 26A–29F). It is not so easy to bring the examples of the second book under a common head; basically it sets out to present an endless series of stylistic possibilities with many illustrations.

"Abundance" (*Copia*) is extremely characteristic of Erasmus' own yearning for a function, and characteristic, also, of what he wished to promote in his pupils and readers. There are no rules of strict and accurate definitions and propositions which give the speaker the impression that there is only one correct definition or predication, and that there is no compromise solution; on the contrary, this is a view of language which fears only the possibility that the speaker can say things in only one way, and not be able to dilate his utterance by various devices. For all that, this form of linguistic usage is fundamentally no more than a search for psychological effect, with no other criterion than that of the very copiousness of language expressed at this point. Here, even the rhetorical criterion of the effect words have on the listener's mind is given a subordinate role. The very use of language, potentially superabundant and multifarious, is here only weakly controlled by the aesthetic requirements of style, and as a result of its self-sufficiency, comes close to a normalizing nullity. Linguistic usage has here withdrawn from the use of special terms dictated by logical, i.e. by other than linguistic considerations, a practice akin to that to which, for example, the terminists' choice of suppositions was subject; but now, in contrast, linguistic usage, as function pure and simple, threatens to lose fitness for its purpose, and with it its sense and legitimacy. However, language is now for once not blind expansion and expressivity, but purposeful action.

Thirteen years later Erasmus wrote a book in which he had overcome the negative aspect of linguistic luxuriance as advocated in the *Copia*.[28] This, at least, is my view of *De Linguae Usu atque Abusu* ("On the Use and Misuse of Language", 1525), a work as remarkable for its content as for its title. Some years later (in 1528), Erasmus published his *Dialogus Ciceronianus* ("Ciceronian Dialogue"), and in the same period, but a little earlier (1522), *De Conscribendis Epistulis* ("On Composing Letters").

If we reflect that Erasmus had to derive the erudition necessary for his language receptively from reading ancient literature, both for its factual content (his view, as we saw, of the perception of things [*cognitio rerum*]) and for its words, and when we recall that, on the other hand, he productively raised speech or elocution (*locutio, oratio*) to the status of eloquence (a concept of general cultural implication, as has already been noted), we may consider *De Linguae Usu et Abusu* ("*Lingua*") and the *Dialogus Ciceronianus* as correctives to a humanism which was threatening to degenerate into a non-normative functional system of language. That is to say, the *Ciceronianus*, on the one hand, may be seen as a corrective against uncritical reception, i.e. so-called *imitatio*, and *Lingua* on the other hand as a corrective against a view of the production of language which ultimately does little more than give prominence, equally uncritically, to its function as expression, and which was supposed to take place, so to speak, in a vacuum (see the *Copia*). Erasmus' linguistic awareness of the 'whence' and the 'whither' begins to make itself heard, as it were, in these works.

Lingua, to deal first with this work, may be said to fill an empty space in teleology, one which could not escape Erasmus' sensitive ethical and critical sense. In the pioneering Italian days of Petrarch and Boccaccio the new spirit of conformity to language had acquired legitimacy as free linguistic expression, and even Valla was so self-confident of his own critical mastery of authentic classical texts that he set about asserting his power in other disciplines and arts; in his encomium of the Latin language in the preface of his *Elegancies* he had made public proclamation of the dominance of Latinity. Erasmus belongs to the middle phase of humanism. As a man of peace he did not take critical and polemical issue with other disciplines as Valla had done;

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[28]   This is not an attempt at an exposition of the historical development of Erasmus' views of language; but it cannot, on the other hand, be claimed that there is no such development. To establish a history of the development of his ideas would require a further and closer general study, the investigation of more texts and a more extensive knowledge of the course and conditions of Erasmus' life than can be given in this account.

in addition, he naturally lacked the patriotic motives which had informed the latter's historical theory of the linguistic domination of culture. The boastful exuberant aestheticism of Italian humanism, and its amoral lasciviousness, must have appeared questionable to Erasmus' withdrawn and non-poetic spirit; and, practised in such a manner, linguistic activities, above all, would have seemed ethically unjustified from his teleological standpoint. This is the vacuum Erasmus fills in *Lingua*.

Note may be taken of a remarkable, and in this context significant, criticism by Erasmus of his mentor, Quintilian. This criticism is remarkable as the one occasion when Erasmus deserts Quintilian,[29] and is significant for its content. Erasmus writes in one of his letters that he is "at this point not a little in disagreement with Quintilian, who says that that which does not receive admiration cannot be called eloquence".[o] This refers to the place where Quintilian says (*De Institutione Oratoriae*, VIII, 3.6): "Cicero is correct when he writes somewhere in a letter to Brutus as follows: 'for I do not value eloquence which does not command admiration; and Aristotle also thought it should be pursued intently' ".[p]

Erasmus' criticism of Quintilian is, in my opinion, not only practical, but also conforms to that of those Christians who were to see wickedness in the search for admiration.[30] Criticism of this kind may frequently be found directed by Erasmus against his fellow-humanists, for whom rhetorical vanity was the only motive force, and the sole aim of linguistic effort to be admired. As his ethical principles could not accept this aim of linguistic function, he was bound to reject it; and by accepting undirected expressivity in his *Copia*, Erasmus himself came close to denying language a purpose. He makes good the deficit by prescribing ethical objectives. This he does in the *Lingua*.

Before discussing this work, it is worth while noticing that it is the first monograph in the history of Western culture to deal with the use of language as such. A work of this kind might be expected from the humanist approach to function, but it is useful on the occasion of its appearance to note that it is an innovation. But if we are expecting to find an analysis of the characteristic utility and purposes of speech (*locutio*) in linguistic terms, we

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[29]   Cf. Hofer (1910: 19): "Among the many passages where Erasmus quotes the Roman, there is only one where he consciously and deliberately opposes him, and even there he does so cautiously." The passage in question is to be found at III, 175D in a letter (no. 200, cols. 172A-181F) addressed to Budé and dated "Antwerp, 15 February 1516".

[30]   Quintilian's basic tenet, "No one is an orator unless he is a good man" was naturally close to Erasmus' heart. Erasmus praises Quintilian in addition because his works are free from obscenity. See Hofer 1910: 17-19.

shall be disappointed. That had to wait for behaviourism (or rather, for Reichling). Erasmus wrote an entertaining book, containing countless incidents and anecdotes taken from scriptural and profane sources, in the form of a elegant discourse on a theme after the Epistle of James: "The tongue is an evil; the tongue is a good".[31] Silence, garrulity, encomium and slander, truthfulness and perjury, etc., etc., come under discussion, totally unsystematically, though always interestingly; but the work never amounts to a serious linguistic analysis. Indeed, what Erasmus presents here—even if it is more of a literary essay than a technical textbook—is not so much a disquisition on language and the ethical factors implicit in it as a discourse on ethics in the light of its implications for language. Adultery is seen to have no less to do with language than has bearing false witness. Let us look a little more closely at Erasmus' treatment of lying (IV, 698-699), as some confrontation may be expected here with the view of truth and falsehood expressed in traditional logical views of language. The passage begins with a reminiscence of Socrates:

> And in us, speech is the mirror of the mind, which is why this remark of Socrates is famed: "Speak that I may see you". ... Just as a lying tongue is infected with Satanic venom and destruction comes of this, so does salvation come of truth. ... Further, the practice of lying leads you frequently to lie without shame, at great peril to yourself. ... Now there is no more wicked a lie than to deny God, as the Stoics assert, without any great dissent from the Peripatetics, yet it is more wicked to confess the existence of God but deny his concern for the affairs of men, and assert that he looks with favour on human sin. The true Shepherd was Christ, and the true imitator of Christ was Paul ... : "Follow my example, as I follow Jesus Christ's".[32] Therefore it is not possible for God ... not to hate false apostles. ... For truth holds the pedantry of philosophers and Pharisees alike as an object of pity. Where there are lies, there is hypocrisy ... however much human arts may abound there, yet there is no knowledge of God. (IV, 698C-699B)^Q

And so he goes on; but this is probably sufficient to give an idea of Erasmus' procedure.

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[31] *Translator's note:* Cf. James 3, 6: the tongue is a fire, a world of iniquity ... 3, 8: But the tongue can no man tame; it is an unruly evil, full of deadly poison. ... 3, 10: Out of the same mouth proceedeth blessing and cursing.

[32] *Translator's note:* I Cor. 11, 1, in the wording of the New English Bible; Authorized Version: "Be ye followers of me, even as I am of Christ". Cf. also Heb. 6, 12 (Authorized Version): "That ye be not slothful, but followers of them who through faith and patience inherit the promises ...", where for "followers", the Revised Version reads "imitators".

Erasmus' "Biblical Humanism" did not bring him to the story of Pharaoh and the midwives (Ex. 1, 15-22), and his Christian philosophy (*philosophia Christi*) did not recall to him the gentle deception of Jesus on the road to Emmaus (Luke 42, 28), when he made as though he would have gone further. If Erasmus had considered his view of lying to be problematic and had expounded it from the Bible, his view of language would only have benefited. But as it is, he has given us a charming essay that provides evidence of the breadth of his reading, but which goes no further in his attempt to account for linguistic regularity than to review many instances in which, in his view, linguistic usage is governed, or should be governed, by higher, extra-linguistic laws.

A much more open view than in Erasmus' *Lingua* of internal factors and considerations affecting language is revealed in a book written in the same decade as *Lingua* and *Ciceronianus*, his *De Conscribendis Epistulis* ("On the Composition of Letters") of 1522 (I, 345-383). This introduction to letter-writing is by no means specially aimed at the writing of so-called "humanist letters"; it is much rather a textbook which aims to be of service in correspondence between kinsmen and friends, etc., although advice is also given about writing to magistrates and princes. Clarity, construction and elegance (*perspicuitas, constructio, elegantia*) are the three principal qualities which a letter must satisfy. In this the humanist Erasmus is surprisingly correct in his successive prescriptions, first of clarity as the greatest quality, then of construction, the structure in which in fact all linguistic usage from the smallest to the most comprehensive elements is founded; and finally, in the place of honour, of elegance, which is, after all, the heritage of humanism. The rich insight of this greatest of humanists into the faculties is implicitly comprehended in the epistolary genres for which Erasmus gives good advice: encouraging, persuading and dissuading, beseeching, warning, amorous, explanatory, judicial, hostile, defensive, authorizing, encomiastic, consoling, congratulating, amusing, conciliating, official, disputing, etc.[R]

Erasmus' book on letter-writing is ultimately to a much higher degree an account of the purposes of the use of language than is *Lingua*. The primary aim of perspicuity, and many secondary aims of linguistic use, may be recognized here, despite their literary disguise, as forms of the written language applicable to the writing of letters.

Let us turn now to the *Dialogus Ciceronianus sive de Optimo Genere Dicendi* ("Ciceronian Dialogue, or on the Best Way of Speaking" [1528]; I, 973-1026). The second part of the title is somewhat misleading, for the object here is *the way* to draw from the well of all erudition, *how* the required treasure, the

cognitio rerum (knowledge of things), is to be extracted from the goldmine of antiquity. Certainly the subtitle *De Optime Generi Dicendi* expresses the sense and purpose with which Erasmus invariably investigates antiquity. This investigation is never for him an end in itself, as it was for the classical philology which was establishing itself in his day, and against some of whose representatives he argues. Erasmus' concern with the classics was always directed at giving sustenance—abundance of words and elegance of speech—to the eloquence of his day. This is clear from the content.

There are three participants in the dialogue: Nosoponus, the pedant, Bulephorus, the Socrates figure, and Hypologus, the arbiter; of these, Nosoponus is an inveterate imitator. He presents long lists of Ciceronian words and phrases, and will not stray outside them. Bulephorus, for all his smooth manner, wrings from Nosoponus an admission that in some respects other authors are better than Cicero:

> Thus the example of Zexus seems good to me; for Quintilian, who followed him, teaches the imitator to read not one author, nor all authors, nor a random selection of authors, but rather to choose a few from among the best, granting Cicero the first place among these, but not an exclusive place. He considers him to be the greatest of the eminent, but not to be unique, to the exclusion of all others. (I, 981F–982A)[S]

"Zexus" (sc. Zeuxis) had not chosen one model for his most beautiful portrait of a woman, but had combined in his work beautiful features observed in many women. There then follows a line of argument, the most important in the present context, which claims that it is impossible for us now to discuss the affairs of our own day while remaining within Cicero's vocabulary:

> Cicero did not deal with every subject. So *if the occasion should perhaps arise to speak of matters he did not touch on, where should we look to furnish our speech-making?* Should we perhaps make our way to the Elysian Fields to ask him with what words he would express such matters? (I, 982B)[T]

The "apes" of Cicero (*simiae Ciceronis;* I, 996B) would, to be consistent, then have to speak of God as 'Jupiter', Christ as 'Apollo', the Blessed Virgin as 'Diana', etc. (cf. col. 995). What has such an imitator in mind? "Does he begin by restoring to us the Rome that once was, the Senate and the Senate-house, the senators, the knightly order, the people divided into tribes and centuries?"[U] Bulephorus finally comes down in favour of the point of view that, because conditions in our own day in religion, politics, law, morals, customs, occupations and opinions are vastly different from those of Cicero and his time, it is absurd to attempt to lace the language of the present into

the corset of the language of the past. Finally the great humanists are passed in review to see what their attitudes to this matter were.

The standpoint of Erasmus in this entire controversy[33] is indicated by the aim (the "whither") of his study of the classics: this is that the classics serve as "furniture" for the realization of a living eloquence at the present day. This tendency towards a practical function comes out on almost every page of the work. Erasmus also observes that Cicero himself had no desire to imitate others; would he then wish others to imitate him? When Cicero imitated, it was no more than the independent and appropriate adaptation of received material to his own time and circumstances, and it is just this example of Cicero that Erasmus and his peers will follow.

Erasmus saw clearly the consequences of giving primacy to Latin—a policy which incidentally he shared—when the strict imitation of the authors of antiquity is set up as the criterion of current practice. Language is in flux, and *must* continually renew and enrich itself; and that is the mission of Latin at the present day. Although Erasmus does not understand the lyrical undertone of Italian humanism and his passion for language is in that sense cooler, he does not allow his Latin to be "philologized" to a rigid and remote model at the hands of scholars like Bembo. He has harsh words for the fanatical adherents of imitation and their dangerously servile dependence on authorities. He held the regeneration of Latin to be an aim of unique value, and he found no room for the valuation of the vernaculars which will be seen in Vives. But this rejuvenated Latin is an activity based fully on the use of language, a completely human functional activity, even though its powers are concentrated in the framework of this one language. He is concerned for the spirit, not for the letter of this language.

This may serve as a survey of the views of the function of language revealed by Erasmus in his works. It will have been seen that he derives erudition from the reading of the classics. Once acquired, however, this erudition is not an arid possession of knowledge for its own sake, but has to contribute to the

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[33] Even before 1500 Cortesius and Poliziano had been in dispute about imitation. The celebrated taunt of "apes of Cicero" comes from Poliziano, of whom Sandys (1908: 85) remarks: "Someone will say: 'You do not express Cicero'. I answer: 'I am not Cicero; what I really express is myself!'" In 1512 Bembo and Gianfrancesco Pico are at odds about imitation. Then Erasmus speaks out on the side of Poliziano and Pico, and with great effect. As a result of the partisanship of J. C. Scaliger and Doletus against him, the dispute begins to look like one of the South against the North. Finally, some thirty years later, the authority of Muretus settled the issue in favour of Erasmus.

realization of the ideal of eloquence. That this eloquence embraces all Christian and social virtues does not detract from the way Erasmus classifies man's entire cultural development in the light of the functional use he makes of language; indeed it underlines it. In this domination of language over the whole of intellectual life, Erasmus is of the same opinion as Valla. Agricola had vindicated this primacy within the trivium by subordinating dialectical logic to rhetorical grammar. Erasmus' view of language soars even higher, and it also strikes deeper roots. Although he was not a theoretical philosopher, Erasmus drew more far-reaching conclusions from his reliance on language than any of his humanistic predecessors. And the paedagogical urge to propagate his gospel of eloquence is more powerful than that of any of the humanistic Italian schoolmen and paedagogues of the fifteenth century.[34] It is the *Institutio Oratoria* ("Foundation of Oratory") of Quintilian which is always in the background. Erasmus, as we have seen, is also dependent on Quintilian in giving his views of the functions of language as it were anthropological formulations; and now we have clearly identified this same fundamental viewpoint in his works, it is hard to overestimate it. This merits further investigation.

Quintilian, in his day, noted (*Institutio Oratoriae*, II, 16.2) that "God, as ruler ... divided man from the rest of animals, which, after all, are mortal, by nothing more than by the faculty of speech", and speaks (I, 10.7) of ... "language, than which providence gave no greater benefit to man ..."[V] Erasmus adopts this attitude wholeheartedly, but he gives it an even more emphatic direction by attributing to eloquence the faculty of speaking, as a cultural ideal of the whole personality, of the whole man, of humanity.[35] Through eloquence, as we saw, all knowledge of things is acquired (I, 389 C/D), and through it they all come into their own, "for since objects are known only by their characteristic sounds, any one who does not appreciate the power of speech will necessarily be blind in his judgment of things, will be deceived, will rave" (I, 521A).[W] To speak is to know; anyone versed in the *vis sermonis* (power of speech) is in command of knowledge. The primacy of language might still be held to prevail only in the Trivium, but Erasmus goes further.[36] The ideal of eloquence acquires a conscious anthropological found-

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[34] For a summary account of some of these (Vittorino da Feltre, Guarino da Verona, Vegius and Piccolomini) see Waterink 1936, II: 467ff.

[35] "He [Quintilian], of course, dilates upon the way eloquence is gained, but only deals with character-forming by the way." Hofer (1910: 26); see also the whole of his chapter on "The Ideal of Education" (pp. 26ff.).

[36] He was anticipated here, too, by Quintilian, who wrote (*Institutiones Oratoriae*, II, 16.15): "But

ation where he says: "Galen taught me that man is distinguished from all other living creatures, which we call dumb, not for lack of reason, but for lack of speech" (I, 930 C).[X] Here the equation "man = rational animal" is replaced by "man = speaking animal"; for Erasmus the characteristic quality of mankind, humanity, resides in oratory, speech, utterance (*oratio, locutio, sermo*); i.e. in the function of language.

With this declaration Erasmus sets the tone for his whole way of life and view of the world: *man is not characterized as a reasonable being, not ultimately as an ethical or moral being, but—as a language-user!* This is the way Erasmus sums up, in what amounts to a key formula, his universalistic and functional view and appraisal of language. The splendour of language in its functioning, the *majestas dicendi*, was probably never proclaimed by a greater mind. Erasmus may not be a systematic thinker, but he is certainly consistent in his persuasion; and in him humanism as a whole attains the summit of its self-awareness. Only where a conjecture on the Trinity (in his *Ecclesiastes;* V, 772E-F) will not permit him to regard the Second Person in the Divine Being as supreme, does he waver at all in his conclusions:

> Man's words are not uttered without spirit. ... Further, the manner of our speech is the manner of our spirit. Nothing can be thought which surpasses the sublimity of the divine mind, and so, if human thought can in any way comprehend the divine mind, so likewise there is nothing in man more distinctive than the human mind, by virtue of which we are vastly removed from the nature of the beasts, and reflect something of an image of the divine mind ..., yet they were right to perceive that man in no other respect approaches more closely to the nature of the eternal Spirit than in thought and speech, which the Greeks called νοῦς καὶ λόγος. The mind is the fountain-head, and the word is the image running forth from the fountain-head. And just as the unique Word of God is the image of the Father ... , so speech, than which man has nothing more marvellous or more powerful, is in some measure the image of the human mind.[Y]

All culture proceeds from language and leads to language; this typifies the whole life and effort of Erasmus. When an overestimation of the human function of speech leads to other branches of intellectual life being seen one-

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this reason would not help us, nor would it be manifested in us, unless we could produce in speech what we have thought in our minds, which we regard as being even more deficient in animals than mind and a modicum of thought", and (XII, 11.30): "The immortal gods gave nothing better to man than the majesty of speech, and when it is removed all things are mute, lack knowledge of the present, and are not remembered by their posterity. Let us therefore search for it with all our heart, and strive for all good things, in doing which we rise to the heights, and will assuredly see many beneath us."

sidedly from the point of view of language, we may speak of 'lingualism'. But while this term would meet the earlier case of Valla, it no longer describes Erasmus' position. Here other manifestations of human life are simply not acknowledged; the only real thing is language; that is the only thing which is realized in form. As Erasmus was a much greater scholar than Valla, what we see in him, much more in him than in the Italian, is a reduction of everything to language, which imbues his personality to the roots. Erasmus places the whole of intellectual and cultural life—and himself—under the rule of language.

Language and knowledge, the use of language and the application of knowledge, are one and the same thing for him. It is not surprising that Erasmus also accepts the Platonic system of sound symbolism; for Erasmus a direct identifying relationship with the object is inherent in the word. Using ancient authors as a base, he constructs his eloquence by way of the erudition they provide through their knowledge of things. Proficiency in Latin is the primary requirement for obtaining these treasures; next come Greek and Hebrew; Greek to understand the ancient Greeks and the Greek Fathers, as well as the New Testament, and Hebrew to understand the Old Testament.[37] But only Latin can serve the establishment of present-day culture on a cosmopolitan and universal basis.[38] It is *par excellence* the language suited to this purpose. For this reason Erasmus turned against Bembo, who wanted to write

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[37] We may recall the part played by Erasmus in the foundation, establishment and direction of the *Collegium Trilingue* at Louvain. (See Watson 1914: 765ff.).

[38] The unique cultural mission which Erasmus assigned to Latin does not mean that he had no room for the vernaculars. Cf. Kooiman (1922: 166-167), who writes (in a Dutch translation from the *Pronunciatio*): "In ancient times a large part of Europe and Africa, together with Asia Minor, spoke Latin and Greek. How many languages have not the common people derived from Latin? How many dialects are there not in Italy? How many in France? in Spain? It is better that those languages to which scholarship and art are for the most part entrusted should be maintained only by developed nations; true art and scholarship cannot, at all events, be found among the common people, the worst conservers of good things, but from the books of eloquent authors." (Erasmus' reproach of duplication and wastefulness is the same argument as that made by Valla against Greek.) Kooiman continues: "The Romance languages are bastard languages, Dutch is a sister language. This is his intention when he says that our language—and other Germanic languages, we may well suppose—is mixed with Greek and Latin. ... Spieghel and his followers understood this attitude of Erasmus very well when they called French a contaminated language and Dutch a pure language." Those are Kooiman's views. Erasmus is confident of the sublime suitability of Latin for the propagation of civilization which governs his senses and his efforts. But his main principle is simply that language *per se*, eloquent speech, plays a leading part in it. No other language occupied a place which could be compared with that of Latin; for that reason it is self-evident to him that Latin will be the sublime instrument for bringing about human civilization, and for giving a firm basis for true humanity.

Latin off as a dead language, the mastery of which could in these days be no more than an abstract philosophical exercise where impeccable imitation of course demonstrated linguistic aptitude. It was also entirely consistent of Bembo to turn to Italian for the natural linguistic expression of his own day in his *Della volgar lingua* ("On the Vulgar Tongue" [1525]).

My initial question was whether Erasmus' humanism could be classed as a rejuvenation or a retrogression. It is neither. It is not a return to the poetic and lyrical humanism of Petrarch and Boccaccio, it is not a textual study in the manner of Poliziano or Budaeus. A functional view of language reached a peak in Erasmus, both in theory and in practice. The greatness and authority of Erasmus, which his contemporaries, friend and foe alike, always had to reckon with seriously—whether in amity or in hostility—even if they are frequently seen in the light of analytical historical criticism to be fragmented into pettiness and timidity, have been shown in this study to be real. In an age like ours, which has begun to consider how language functions, the way has perhaps been opened for a certain rehabilitation of Erasmus in this respect.

In considering the question of Erasmus' influence, the only point at issue is the influence of his views on linguistic function, not the influence of his typical religious views, his literary studies, his paedagogy, his political eirenism or any other activity whatever of his many-sided mind, but purely and simply the influence of his fundamental linguistic views.

I have shown how Erasmus aims at a rule of appropriateness for his dynamic view of language. There could be no question for him of elevating the imitation of authentic Latinity to a principle; that would have meant for him the end of any function of language. To adopt a subjective aesthetic canon of language, as Valla had done, was not in keeping with his ethos. If his evaluation of language as a cultural factor was not to remain in the air, there would have to be rules applicable to the functioning of language. Erasmus provided a specimen of linguistic normalization in his *Lingua;* but from a linguistic point of view it was unsuccessful.

The attempt, however, came from the heart of his view of language. Classical philology after his time lost, if it had ever possessed, the impetus which propelled Erasmus' enquiries. Reuchlin initiated the study of Hebrew, and Budaeus was an even greater Greek scholar than Erasmus; Wympfeling pleaded for education in the vernaculars, and national literatures began to be encouraged. But these specialized branches of knowledge are by no means products of the general thrust of Erasmus' mission of linguistic culture. These

literary studies are ends in themselves, as is classical philology. For Erasmus, on the other hand, classical philology had been the means; the means, as we have seen, to erudition and to eloquence in the broadest possible cultural sense.

Heinrich Knaust (Knaustinus)

Erasmus' normalizing linguistic theory had a continuation, if only a weak and inconsiderable one. In view of its characteristic qualities, it deserves as much attention as the continuation of linguistic realism in the absurdities of Lull discussed above; but while Lull still had followers, even this cannot be said of the scholar to be discussed now.

This is Heinrich Knaust[39] (Knaustinus, 1524 - c. 1590) the author of *Lingua; Ars loquendi et tacendi, multa complectens ethica et moralia praecepta* ("Language; the Art of Speech and Silence, comprising many Ethical and Moral Precepts", 1566).[40]

Knaustinus' Latin is clumsy, and he is aware of the fact. While Erasmus had retained the aestheticism imported from Italy alongside the new ethical stance he had himself adopted in language, for Knaustinus it is the ethical content alone which is the criterion of language. In this respect he abandoned (as, strictly speaking, also did Erasmus) Valla's view that language functioned in its own right. This abandonment of the fundamental theme of the autonomy of language, and also of the theme of elegance, in fact, heralds the disintegration of humanism as such. It develops by way of this ethical concern

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[39] See *Allgemeine Deutsche Biographie*, s.v. 'Knaust'. He studied at Wittenberg under Melanchthon and Luther; at an early age he became headmaster of the *Gymnasium* (grammar school) of Cölln (Berlin), turned later to jurisprudence, was the author of many works on theology, moral philosophy and law, all of them with a popularizing tendency. He wrote lyric and dramatic poetry, *inter alia* so-called 'School dramas', often with a biblical content, in German and Latin. It was fatal for his reputation as a humanist that the only work of his to achieve fame was his so-called "beer book", *Fünff Bücher von der göttlichen und edlen Gabe, der philosophischen, hochtheuern Kunst ... Bier zu brauen* ("Five Books on that Divine and Noble Gift, the Philosophical and Invaluable Art of Brewing Beer", Erfurt 1575). It is, incidentally, noticeable that his Lutheranism never prevented him from holding Erasmus in high esteem and proclaiming this openly (see Michel 1903: 149, and the next note below).

[40] H. J. Pos called attention to this remarkable continuation of Erasmus' *Lingua* in his lectures on general linguistics at the Free University of Amsterdam in 1926-27. He had seen a copy, but my own enquiries of the Dutch libraries were answered by "not held". Apart from what Pos provides in his lecture notes, it was also possible to draw on Michel's extensive monograph of 1903. Although it was necessary to rely on secondary sources, there was good reason not to omit reference to Knaustinus. There are copies of his work in the libraries of Breslau, Dresden, Erfurt, Munich, and elsewhere (see Michel 1903: 299).

into the humanism of the reformers, where the most important figure is Melanchthon; but however important Melanchthon may be as the teacher of Germany (*praeceptor Germaniae*), he has nothing original to contribute to the present investigation. The other factor in the subversion or rather the withering of the humanistic view of linguistic autonomy is the product of the development of scientific method in the investigation of language. Pursuing this line of development, humanism eventually merges into a rationalistic philology. This further development will be discussed later.

Even the title of Knaustinus' work is characteristic. In his 'art of silence' he does not, for example, offer a theory of significant and meaningful pauses in the stream of speech, but a theory of ethical and decorous speaking, or perhaps of not speaking. At the head of his argument Knaustinus sets the sum total of all purpose in life, the glory of God. Correctness of speech requires a sixfold deliberation: *Quis dicas?* (who should you be who speaks?), for which Knaustinus' prescription is "Know yourself"; *quid dicas* (what should you say?) —"Avoid lies", says Knaustinus; *cui dicendum sit* (whom should you address?)—look at the person you are addressing and speak to a good friend otherwise than against a foolish slanderer, etc.; *cur loquendum sit* (why should you speak?)—the benefit of church and state, fatherland and kind are good reasons; *quomodo?* (how?)—moderately, both in delivery and in quantity, with a certain eloquence and, in the words of the apostles, slow to speak but ready to listen; *quando?* (when?)—keep your peace until the time comes, as Seneca demands. This is Knaustinus' advice.[41]

We may begin our analysis with a general observation: it is generally realized that a so-called normative view of language like the one proclaimed here has been regarded on principle as reprehensible, particularly by the positivistic linguists of the nineteenth century, who were always concerned in their investigations with the description and analysis of the facts of language and recurrent factors in language, and also of the exceptions to these "laws". The model for this was, of course, the laws of nature and their effects. Even though the user of language quite obviously must refer to something objec-

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[41]   Michel (1903: 148) describes the work as occupying the middle ground between rhetoric and ethics, but it is the latter which takes up the greater space. The examples from the Bible and classical antiquity with which Knaustinus decorates his work ("the moral precepts [*Vorschriften*], the correctness of which is not, however, demonstrated by rational proof, but is merely illustrated by numerous examples ... ", p. 149) are for the most part derived from Erasmus' *Lingua*. Knaustinus makes no secret of this model: "For my dialogue, even if it is in imitation of that other one [i.e. Erasmus' *Lingua*], is nevertheless composed in such a way that it hardly follows the shadow of that work." (ibid.)

tive, whatever that may be, if he is not to lapse into incoherence; and if gibberish or any other abnormality is nevertheless a recognized fact of language, yet can be examined—even theoretically examined—only if language is to be regarded in some way as a phenomenon subject to norms, be this as it may, the normative study of language was totally rejected by the nineteenth century.

Writings such as that by Knaustinus could well have provoked such criticism, for he is no longer concerned with investigating language, he makes no attempt to discover the sense and norms of language by analysis and reflection, but follows the path of a legislator instead of a linguist; and the law that he then prescribes for language is, in addition, still not the immanent law of language itself, but a set of ethical norms, non-linguistic rules applied to the use of language. He is at fault not because he regards language as subject to norms, but because, while clearly claiming to examine linguistic use,[42] he in fact develops into an ethicist who is concerned with language.

This does not, however, imply that I reject the notion that the relationship which language has with ethical matters, etc. is something which may be found in language and examined in its linguistic aspect. The reverse is in fact the case, for attitudes for one's fellow-men are an objective feature of linguistic usage in all kinds of manifestations of magic and taboo, and it is possible to show love or hate by the use of special intonation patterns, of diminutives or euphemisms. But Knaustinus does not look into these manifestations of language.

Mediaeval grammar had also been to a certain extent normative—it had regarded grammar as a corpus of rules for speaking and writing Latin correctly—but this form of linguistics had never entirely been separated from the study of language, no matter how closely it had followed the intellectual trad-

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[42] This work is set out in dialogue form, and begins with the teacher's asking: "Tell me, which is the verse in which, as I taught you, the whole art and method of speech and silence was succinctly expounded by the ancients." The pupil replies: "I know—who, what, to whom [you may speak], why, how, when." Michel notes (1903: 149): "This division also underlies older mediaeval expositions of the 'art of speech and silence', for example the often-printed treatise of Albertanus of Brescia, of which Knaustinus was certainly aware. It follows that the only part of a rhetorical nature is Chapter 6, 'How to speak'." Moreover, Knaustinus gives his work the same title as the work of Erasmus he took as a model, i.e. *Lingua*. Finally, the subtitle, the "Art of Speech and Silence, which includes *many ethical precepts*", makes his position clear. And although he says, with reference to Erasmus' *Lingua* (see previous note), "it scarcely follows the shadow of that work", his own *Lingua* clearly sets out to provide what was missing from Erasmus' dialogue, i.e. system. All this lends credence to the supposition that Knaustinus had pretentions to linguistic theory, however poorly they may have been realized.

ition. The preconceptions based on logic which it contained were no hind-
rance, since thinking is, after all, a precondition of language, or in other
words, language in fact is dependent on thought. However, it is not depen-
dent on ethics, and Knaustinus' acceptance of heteronomy thus gives him no
ground to stand on as a linguistic scholar. Knaustinus no longer analyses the
norm of language, or even any traces found in language of conformity to a
norm of perhaps non-linguistic origin—as scholastic grammar had done—but
imposes a norm on language from without. The only remaining commendable
point is that he sets out to deal with the *use* of language, and obviously sees
language for what it in fact is, i.e. a human function which is subject to a rule
of appropriateness. But this rule is in fact its own rule, not the ethical rule of
Knaustinus or any other ethicist.

Since Knaustinus does not underpin his humanistic theory of language
more firmly by independent investigation, the direction in which he is moving
amounts in fact to a symptom of the disintegration of the humanistic view of
linguistic function. This disintegration may be seen as a consequence of the
very achievements of humanism, in so far as it had given back to language
a functional meaning for the whole of human life. That humanism, at least
as expounded by Knaustinus, associates language with extralinguistic matters
and derives a norm for language from them, is a false move, and it leads to
the debilitation of the typical humanistic view of the autonomy of language.

Juan Luis Vives

Juan Luis Vives (1492-1540) was Spanish by birth, but despite his Mediterra-
nean origins settled by the North Sea coast, and died at Bruges. He was a
contemporary, friend and admirer of Erasmus, a lecturer at Oxford and
Louvain, a much-travelled man skilled in languages, a humanist in whom we
see much the same influences at work as in Valla and Erasmus, but to greater
effect. He was just as firmly opposed as they were to scholasticism and
intellectualism, just as paedagogical, or even more paedagogical, and just as
much, or—in this perhaps reflecting to a smaller degree the example of
Antiquity—just as little, imbued with the pagan attitudes of the Renaissance
and just as much inspired by a religious ethic as his teacher Erasmus. Vives
led the humanists' preoccupation with language in the direction of further
developments which were to produce a valuable extension of linguistic theory
and investigation; in addition he elaborated the cultural tendencies of human-
ism into a pioneering theory of education and psychology. Both these aspects
of his thought were fostered by an urge to free himself from scholastic specul-

ation and to look for support in direct experience. It is here that his relationship with the men of the Renaissance may be seen. In combining this desire for experience with constant consultation of ancient authors, he shows himself nevertheless to be a whole-hearted humanist.

In principle, however, the remarkable new direction Vives gives linguistic studies moves away from the standard humanistic preference for classical models. He is, after all, the first humanist to take account of the relation between language as a general human activity and its manifestations in individual languages; and when he deals with Latin, he is no longer inclined to accept a value-judgment exclusively in its favour, looking instead in a spirit of objective enquiry into the principles shared by all languages; or, as we might say in more modern terms, looking into the nature of language rather than its practice in the vernacular tongues (into *langage* rather than *langue*). His experience of languages, and a career which began in Valencia and ended in Bruges, were probably critical factors in this development.

In his *In Pseudo-Dialecticos* ("Against Pseudo-logicians", 1519) concern for the teaching of languages, which for the humanists who preceded him had had a dual purpose, began to separate into two strands; i.e. the paedagogical ideal begins to develop independently of the restoration of language. Scholastic dialectic is criticized precisely because it does not "school", i.e. because it does not provide a basis for cultural education. Vives' demand for linguistic purity is fully maintained in this criticism. Dialectic ought, as its name implies, says Vives, to be a science derived from speech (*scientia de sermone*). But from what language does it originate? From French, Spanish, "Gothic", "Vandalic"? From Latin, perhaps? But Cicero, surely, would not understand that dialectical jargon; scholastic barbarisms are lapses in logic just as much as they are in grammar and rhetoric. For all three must conform to the living language. It is language which determines the laws for these arts.

> For can anybody fail to realize that dialectic is an art of language? For the Greek use of the noun 'dialectic' or 'logic' is just the same as that of 'rhetoric' or 'grammar'; so what language does your dialectic come from, I ask? Not surely from French, or Spanish, or Gothic, or Vandalic? It is certainly not from Latin, for the logician must use such words, such propositions as nobody can fail to understand if he knows the language which the speaker is using, i.e. Latin, if the logician sets out to discourse in Latin, Greek, if [the discourse is] in Greek; I will not say that these men will not be understood by those most versed in Latin when they claim to speak in Latin, but occasionally not even by men of the same language (*farina* = 'grain'), or rather of the same local idiom (*furfur* = 'chaff'). ([1519] 1782: I, 40)[Z]

Even Aristotle accommodated his dialectic to the common language of the people he belonged to: "Does anybody imagine that Aristotle accommodated his dialectic to a language which he had constructed for himself, and not rather to the vulgar Greek that the whole populace spoke?" (p. 41).[AA] Thus language (*sermo,* 'speech') always has priority over dialectic, let alone over rhetoric and grammar. But if it should be thought that Vives' sole aim was accommodation with the vernacular in order to avoid being incomprehensible, it is clear from his further argument (ibid.) that he treats the arts of language (*artes sermocinales*), i.e. logic or dialectic, as essentially independent of speech (*sermo*).

After pouring scorn on trends in mediaeval dialectic ("If Cicero were to return to life, he would not understand it"—*si nunc resurgeret, non intelligeret*), he emphasizes that dialectic, grammar and rhetoric are derived from the living use of language: "for these are three arts of the language they receive from the people; it is not the arts which supply [the language]" (*sunt enim hae tres artes de sermone, quem a populo accipiunt, non ipsae tradunt*). Dialectical, rhetorical and grammatical "formulae", too, derive from language, and are perceived in language, not *vice versa:* "speech is not distorted to their shape, but they have followed language" (*nec ad illas detortus est sermo, sed illae sermonem sunt secutae*). If the origin of grammar from speech is clear at the outset, "the same thing applies in rhetoric and *dialectic* alike, for dialectic discovers *what is true, or false, or probable, in the vulgar tongue* which is in the *mouth* of all, and rhetoric [provides] the splendour of ornament and grace ... "[BB] These arts may therefore not prescribe (*iubere* or *praecipere*) the law, but only discover and teach (*invenire, docere*) what they find in the living language. This task of "finding" is naturally more readily tenable for Vives in rhetoric and grammar than it is in dialectic. Nevertheless, Vives says of dialectic not that it prescribes whether a pronouncement is true or false, but "because the consensus of the *speakers* of Latin or Greek approves, they are *therefore* principles of dialectic" (*quoniam loquentium sive Latine sive Graece consensus approbat, quapropter praecepta dialectices.*), just as the other two arts are to be made applicable to usage in speaking the common language (p. 42). Thus speech (*sermo*) and its use is normative even for logic; speech comes first and has the greatest weight. It then demands clarity from all its offshoots:

> Indeed, those who are called sophists because they lack the intelligence and learning by which they can prove any matter to the listener and disprove an opponent in vernacular terms and words and declamations such as everybody is accustomed to use—*in the manner of common currency, this being the true coin of the*

dialectician[43]—have constructed for themselves unaccountable meanings for words, contrary to all practice and usage, so that they seem to win their argument when they are not understood. (p. 42)[CC]

Vives is consistent in going back to a real language: the words, to be sure, are conventional, but "Roman names do not take their meaning at the behest of the Parthians or Indians". Dialectic must therefore build on the general (*communis*) and current (*usu*) meanings of words; if a Latin logic (*dialectica*) is required, it is necessary to conform to the original spoken Latin. "Each language has its own proper expression, which the Greeks call idiom" (p. 47).[DD]

Vives mounts a bitter attack on Peter of Spain, whose suppositions, amplifications, limitations, appellations and explicanda (*suppositiones, ampliationes, limitationes, appellationes, exponibilia*), like a Trojan horse, brought fire and destruction upon the fair arts (*bonae artes*). "Oh Cicero! Oh Quintilian! Peter of Spain thinks he knows the power (*vis*) or rigour of the Latin language better than you!" (p. 49). No; Peter of Spain does not know the language he is working with; he cannot measure the force of the meanings and therefore loses authority: "Who, I ask, gave authority to Peter of Spain to bring new laws, which nobody recognizes, to bear upon language?" (p. 52).[EE] It is a case of "shoemaker, stick to your last" (*ne sutor ultra crepidam*). Aristotle himself is blameless in this respect: "Aristotle did not set out in the whole of his dialectic even the smallest law which did not conform to the sense of Greek speech". But Peter of Spain "prescribed senses for utterances against all principles of the Latin language" (ibid.)[FF]

Vives' objection to the imposition by Peter of Spain of new laws on language implies that he himself was aware that language has its own laws. The criticism that Peter of Spain, in spite of understanding Cicero and Quintilian, did not understand the power or the rigour[44] of Latin speech, implies that Vives is himself inclined towards a dynamic view of language. In the preceding argument Vives gives more and more positive indications of his vision of the autonomous laws and sense of language.

When we proclaim (*profitemur*) the dialectical system of Vives, Dullaert or

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[43]   To the best of my knowledge, this is the only use by Vives of the image of the coin: Hobbes uses it, as will be seen. Vives was not, however, the first to use it; see Beth 1944: 44.

[44]   The "rigour" of a language is a term which Vives takes over *ad hoc*, so to speak, from the terminists, who used it for the logical rigour of language. The domination of language by logic is implicit in the term "rigour", which degraded words and sentences to logical terms and propositions (see the discussion of the terminism of Peter of Spain above, pp. 76-82). Vives' criticism is thus a frontal attack on the terminists. Vives himself, incidentally, prefers the expression "power of language" (*vis sermonis*) for the validity of language functioning in its own right.

anybody else, says Vives (p. 47-48), the words may take on any signification we choose to give them. But if we wish to set up a general dialectic, for example in Latin, our words must bear significations according to the established custom of the Romans. Or, if one is aiming at a French or Spanish dialectic, which is equally possible, would the speakers really constitute the rules according to their own judgment, rather than according to the practice of the language itself (*num regulas suo ipsorum arbitratu et non potius ex ipsius sermonis ratione formarent*)? Or do we on occasions look in Spanish, French or Greek for the Latin phenomenon of two negatives making a positive, although in these languages

> a double negative has greater power of negation than a single one? For if they are not prepared to accept the rules of the language actually being used when dialectic is translated into other languages, why do they desire to impose on the language of the supremely free Roman people the tyranny of compelling it to accept rules from such inexperienced and barbarian people as themselves? [GG]

This question has to do with the expression "rigour" which these men are always talking about, says Vives. But may I die, he fumes, if a single one of those people knows what this rigour is, or where it resides. Vives sets out to give them instruction, so that they may understand what they as yet have no notion of. He makes his point with an example from Cicero's *De Fato*, which had observed *inter alia* that when we speak of "an empty vessel" we do not speak as physical scientists, who hold the view that nothing is empty. The rigour of the dialecticians is a precise and unvarying norm of speech (*exacta et inflexa loquendi norma*). But who prescribes the norm? Not Cicero, not Quintilian! It is Peter of Spain, who

> understands the power of the Latin language better than any of them. What, I ask, is this rigour, by which the statement 'You are not a man' is true, while 'every man is an animal' is false ... ? And also disdains to speak of 'commencing' and 'ceasing' ... ! In what language are these distinctions thought out? Greek, Latin, Spanish, French? Did anybody ever deny that a boy had 'commenced' to learn an hour after he was brought to school? But these men deny it. ... They have contracted the meanings of those two words 'commencing' and 'ceasing' so much that they cannot be used; and I shall believe that it will be impossible to make any pronouncement in accordance with their law about any object which either 'commences' or 'ceases' to be something or to perform something ... (p. 49). And while they may ever and again protest "Let us speak rigorously", they should rather say "Let us speak frigidly ('frigorously')". ... As if either they themselves knew what rigour is; or even supposing they did know what rigour is, it would lie within the power of that language—of which they are totally ignorant—to define a rigour which would be both true

and apposite. Let all these men, who with their iron and deep-frozen rigour set out to prescribe the laws of speaking to men of Rome, let them, I suggest, comprehend a single page of, say, Cicero or Quintilian ...[HH]

And so on. The burden is: "must we, perhaps, let Peter of Spain tell us what *vis sermonis* (the power of language) is? We will stick to Cicero and Quintilian."

Vives has thus little positive to offer, and he does not himself overcome the inability to define rigour which he criticizes in Peter of Spain and his like, by giving a clear definition of what the power of a language is. But if he had done so, he would have been centuries ahead of his time. After once again denying the competence of Peter of Spain, in his ignorance of Latin, to apply new laws to the language (*novas leges ferre in linguam*), Vives brings a parting shot to bear: Peter of Spain (and the others) did not *personally* speak in conformity with the norms he proclaimed. There was not one of them who could speak with such decorum that he did not infringe his own utterly futile laws and forms (*qui ita in suas vanissimas leges formasque passim non peccet*, p. 53). Vives ventures this far in his *In Pseudo-Dialecticos*.

It is worth while spending a little time at this point to make a comparison with Occam, who had applied the concept of the sign to thought. For Occam the concept is a subjectively formed sign, not a datum of the real world with objective validity. He might just as well have said, "Thought, you are nothing but language!" This is not the tenor of Vives' remarks. He addresses the terministic logic which he opposes as follows: "You ought to be a theory of language, but instead you are a pedantic critique of language. You have a role only as the handmaid of the general activity of perception which understands objects and reality, that is to say of living language, of *sermo*." The difference is diametrical: Occam's complaint is that the linguistic component of thought is too powerful, even if unavoidably so; Vives' view is that scholastic logic is too little composed of language, of living language. For the manifestation of the human mind is language. That is its humanistic glory. In his *De Disciplinis* ("On the Academic Disciplines") he criticizes Aristotle for deriving his categories from metaphysics. Vives is averse to theoretical analysis and the articulation of theoretical knowledge. If such an articulation should nevertheless be made, it should be subservient to the actual practical activity of the mind in coming to terms directly with reality, i.e. to language, or rather to languages.

In *De Disciplinis*, Vives shows that scholasticism is at fault in claiming that its system of rules of thought necessarily underlies all branches of knowledge and is based on sound commonsense available to all men, for this is variable and

relative, and each individual and each age has different basic assumptions.[45] A train of thought like this accords with the fact that Vives keeps an eye open for the variety in what he himself acknowledges as the basis of universal human culture and knowledge, man's innate possession of language. Indeed, he comes upon the problem that while there are many languages, they have common reference, i.e. he has come in principle and essence to the comparison of languages. He even undertook to write an original book on this theme. He did not manage to do so himself, but when Bibliander later wrote about it (see below, pp. 172-174), it was as a work in memory of Vives.

Vives' *De Anima et Vita* ("On the Mind and Life", 1538) marks him out as a forerunner of so-called empirical psychology, but he perhaps enjoys greater fame as the first systematic paedagogical author, a capacity which he reveals most clearly in *De Disciplinis*. Here, too, his practical nature is confirmed; nothing which is unconducive to a life of faith and virtue has any paedagogical value. It is at this point that we encounter for the first time his high regard for the mother tongue; an astonishingly modern point of view in a humanist, but entirely consistent with the new direction which his view of language had already taken in *In Pseudo-dialecticos*. While the earlier humanists thought of Latin as the language *par excellence*—Erasmus looked upon Latin as his mother tongue (see Burger 1914: 59)—Vives' conception of linguistic functions, being, as shown, more deeply thought out, revealed the valid, indeed, the superior right of every living language, and also set out the principle of language as a universal. This is a step forward. The literary and historical view of language develops—for it will be seen that Vives was not alone in this—no longer in the study of literature alone, but also in a more generally linguistic direction. Comparison of languages becomes a prospect. Latin remains for Vives, to be sure, the language *par excellence* of general education, but he initiated the appreciation of the mother tongue, a theme which has never been lost since his time.

In Vives' opinion, the natural development of the human mind has its beginning and its centre in language, while initial and direct experience becomes manifest in language, and may be converted into language. His advocacy in this work of the study of nature itself instead of books, as the basis of scientific investigation, marks the beginning of a new direction in thought, one which will recur, expressed with equal vigour, and given a more central position, in the

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[45] The full title of the work is: *De Tradendis Disciplinis, sive de Doctrina Christiana, Libri Quinque* ("Five Books on Imparting Academic Subjects, or, on Christian Teaching"), but it occurs under the short title, together with *De Corruptis Artibus Libri Septem* ("Seven Books on the Corrupted Arts") in J. L. Vivis *De Disciplinis Libri XII* ("Twelve Books on Academic Disciplines"), 1736.

Renaissance: the investigation of nature which later, among the philosophers, was to flow into rationalism. For Valla and still more for Erasmus, language had been a missionary, an apostle with a cultural task of awakening and transmitting humanity, the highest quality known to man. For Vives, language is the central direct means of acquiring and assuring the knowledge which man has when he takes account of natural phenomena and of practical living among these phenomena. For Valla and Erasmus language was an inspiration, a manifestation calling forth the highest quality in man; but for Vives it was a human activity and debate, based on *a priori* principles, within and about real objects.

Discussion of this work may be concluded with a few quotations illustrating what has just been said. In the exordium of Book III we read:

> The first skill in man is that of speech, which *pours forth immediately from reason* and the mind as from a fountain. This is why animals are *as much* bereft of language *as of* thought. For speech is the instrument of human society. ... And just as we have a mind by the gift of God, so *speech is natural* to us, and we possess *one language or another by the gift of art*. And *thus* parents in the home, and teachers in the school, should take pains to see that boys pronounce their *native tongue* well, and are as eloquent as their age permits. (Vives 1736: 469–470)[II]

Vives proclaims a little further on, "The language of scholarship is a holy treasury" (*Sacrarium est eruditionis lingua*). Here we may think of a debt to Erasmus, who derived knowledge of objects from classical literature. Vives points to languages, or rather a language, as the source. He continues (p. 470): "And given that language is a storehouse of learning, and an instrument of human society, it would be natural that all mankind should have one language, which all nations would use in common".[JJ] The language best adapted to this purpose, in Vives' view, is still Latin. Latin has the required polish, learning and fluency (*suavitas, doctrina, facundia*), but the overriding factor is that Latin is already so widely distributed, "it is spread among many nations, and it would be wrong that it should not be cultivated and preserved" (*diffusa est per complures nationes..., nefas esset non coli eam et conservari*, p. 471). We may note here the great difference between the primacy of Latin as advocated by the Italian humanists and Erasmus on the one hand, and its well-considered utility as a language of general culture, as seen here by Vives on the other. By comparison with Latin, Greek represents for Vives the fullest perfection, for "Latin flows out of the Greek language, and the Italian, Spanish and French from the Latin" (*ex sermone enim Graeco Latinus, ex Latino Italus, Hispanus, Gallus manarunt*, p. 473). And a knowledge of Hebrew is desirable for the sake of the Old Testament.

As already noted, these quotations are drawn from the second book of

Part II, which contains a practically complete school syllabus, mainly for the study of language. At the beginning of the fourth book there are a few more remarks which establish the importance of mastering languages, and of "the" language among them, as a basic and preliminary study (*propaedeusis*). Languages are the gateway to all fields of scholarship and all arts (*fores disciplinarum omnium, atque artium*). However, one must not remain in this gateway with the idea that "there is no more to knowing Latin and Greek than to knowing French and Spanish—apart from the utility which may accrue from the learned languages".[KK] One must also make one's way into the content of languages, their treasury, so to speak (*velut thesauri*). The extent to which the preliminary study of languages has taken the place of schooling in traditional formal logic is also clear when Vives says that it is only after this linguistic foundation has been laid that the pupil is competent in the methods of analysing (*ratio examinandi*), of judging truth and falsehood (*censura veri et falsi*); after logic come the natural sciences and the first philosophy, rhetoric, mathematics.

In the earlier work in the volume, the seven books *De Corruptis Artibus* ("On the Corrupted Arts"), Books II to VII deal in turn with Grammar, Dialectic, Rhetoric, Medicine, Morals and Civil Law and their degeneration. Books II–IV, above all, could offer some indications of Vives' views, but his purpose here is rather to demonstrate, on the basis of enormously extensive reading, how these disciplines should be organized, rather than elaborating the principles on which he is operating.

The importance of Vives as a paedagogue has long been known, but his status as a theorist of language is less secure. Since he is in any case less well known than Erasmus, who overshadows him—as is only to be expected, in view of his short life—and although what he achieved compels admiration in the light, *inter alia*, of the impoverished conditions in which he lived, his contribution to linguistic theory is perhaps for these reasons less appreciated than that of Erasmus. Among those who have studied him, it is only Cassirer —probably the one with the greatest expertise in linguistic theory—who shows that he completely understood Vives' remarkable view of the spoken language. But even Cassirer cannot display great enthusiasm for Vives' opinions. (I hope to reveal a little enthusiasm, in spite of some reservations.) Although Vives put paid to terministic dialectic, Cassirer, as a neo-Kantian philosopher, felt this act to be an affront to something closely related to the epistemological principles he cherished. Of Vives' simplification of logic (a term which Vives uses in free variation with 'dialectic'), Cassirer remarks (1906: I, 126): "Vives, then, like Valla before him, tries to find a corrective

to the barren subtleties of scholasticism in a return to man's natural psycho-logical thinking, which in his view coincides with the natural use of language." [46] Indeed, as already noted, Vives saw dialectic as being concerned with words, not with things (*de verbis, non de rebus*), as he remarks in *In Pseudo-Dialecticos* (1782: I, 40; 45). If the dialecticians would only realise this—and Valla and Agricola had already bidden them do so—dialectic could recover its old values. For it is in and through language that the community,[47] rather than merely the individual, acquires knowledge:

> For if each individual were to apply to words the rule that they should have the meanings he determined, what would be the point of learning, I will not say the Latin language, but any other language whatsoever? For then it would be easier for words to have any meaning which an individual user saw fit to apply, and to have as many different meanings as there were people having ideas in their minds, so that nobody would understand any other person, for each individual would use words in his own way, not in that of the group. (1782: I, 45)[LL]

Logic thus depends on language, and, indeed, is language; however, it plays its own part within this area:

> The various parts of dialectic consist of showing what arguments are true, what false, what things are probable and in what circumstances, what are contra-dictory, what are consequential, by what rule the arguments are to be dis-covered, and by what rule those which are discovered are to be assessed. (cf. *De Initiis, Sectis et Laudibus Philosophiae*, 1782: III, 14)[MM]

In Vives' view dialectic is a linguistic instrument; it serves only as an ap-proach to the sciences, and for this reason it can apply no law or norm, especially to language—on the contrary, it is itself subordinate to language. Therefore logic has no goal of its own, but it must mesh in with the living use of language; it is only a part of human linguistic effort, which cannot be brought into play without individual mastery and use of language. What would the world think of a painter who spent his life putting his brushes and

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[46] The term "natural psychological thinking" is, of course, used in the light of Cassirer's neo-idealism. The reader will understand what he meant, and why he expressed himself in this way.

[47] Strictly speaking, language communities. If the various languages of the many language communities are to be the basis of knowledge, Vives' epistemology will inevitably become hope-lessly embroiled in relativism. There are, indeed, hints that this is the case. In Book III of *De Corruptis Artibus* (on Dialectic), he says, speaking of *demonstratio* (proof): "What does your long and meticulous dissertation on demonstration tell me? We are men, with weak minds in thrall to error. ... In the cause of demonstration, therefore, all tradition is vain and useless. For if you teach men, it will not be a single enduring demonstration; for some of your hearers, you will find, one set of facts is immediate and most important, others will be taken by the probable, others again only by the most obvious ... ", etc.

paints in order, and never came to practise his art?

The "logic" which Vives himself writes, i.e. his *De Censura Veri* ("On Judging the Truth") in two books, *In Enuntiatione* ("On Delivery") and *In Argumentatione* ("On Argument", 1782: III, 142-184), tries to operate within the framework of language, and in doing so has the qualities of a theory of meaning rather than a logic. His introduction is devoted to the principles of signification in general:

> The nature of signifying is to make a sign, to indicate something to somebody, as a man may indicate something to another man by letters, by a movement of the head or a gesture, and these signs signify something by which an object may be made clear or demonstrated, like the gesticulating, or pointing, or nodding of a trader on the high road, or the signboards set up before hostelries and taverns and workshops of all kinds, by which people are given to understand that visitors are to be received, that this or that article is being produced or sold. From this kind [of communication] words and writings are derived. ... Apart from interjections, all other kinds of words have meaning. (p. 142)[NN]

Vives' attitude to metaphor is characteristic of his attempt to avoid any logical criterion as consistently as possible; this brings him into confrontation with his admired Quintilian:

> Nor indeed does it disturb us that Quintilian distinguishes a natural meaning from a metaphor, as in "to fly is by its nature the property of birds, by metaphor of minds", he is speaking in a different sense from us, as we have shown in our work *On the Art of Speaking*. (p. 143)[OO]

The only rule he seeks to apply is that what is unambiguous in the proposition should not be understood ambiguously (p. 148). Since language is not ambiguous, we should spare it from criticism in terms of logic. No praise of language in its own right is too high for Vives.

Vives' rhetoric is contained in his *De Ratione Dicendi Libri Tres* ("Three Books on the Art of Speaking"). This work offers no awareness of linguistic functions apart from what we know already from his fellow-humanists. We do, however, find more psychological insights included in this art of persuading (*ars movendi*) than in those of his predecessors.

It is time now to draw some conclusions about Vives.

While it has been noted above that Erasmus sought knowledge more for the sake of erudition than for certainty, the emphasis changes completely in Vives: he surveys, locates and evaluates the whence, the what and the whither, in other words the origin, the result and the aim of the cultivation of the mind differently from Erasmus. However, the ideology of language as such is given an unabridged treatment.

The sources of learning do not lie so one-sidedly in ancient literature, whether pagan or Christian, as they do in Erasmus; instead, Vives comes to realize that common speech (*sermo vulgaris*), the current spoken vernacular, is the basis of knowledge in a universal sense. Here, too, there is a difference from Erasmus: Vives teaches that the vernacular is the basis of the Trivium, the arts of language (*artes sermocinales*); and in this light language, in its role as the fundamental instrument (*organon*), is also the foundation of all branches of knowledge. Language determines the true and the false, and even dialectic receives its rules from language. The difference from Erasmus is, however, greater than might be supposed from their frequently similar expressions. For Erasmus, the functional element lay primarily in the area of production, of application, in the aims of the cultural mission, and then in the area of the acquisition of learning. For him the static data of classical texts are a quarry, the exploitation of which consists in the absorption of concrete pieces of information enshrined in ancient literature. Only on the productive side of language was the ideal of eloquence given a completely dynamic function. In Vives a more genetic view of function appears alongside Erasmus' learned acquisition of literary data ("abundance of words and things", *copia verborum et rerum*). Vives is concerned to answer an enquiry into the means and nature of gaining knowledge rather than the source and content of knowledge itself; and he concludes that knowing comes from *speaking* Latin, Greek, French, Spanish, German, from the *function of language* in its objective use as a vernacular. Speech (*sermo*) is also the basic category which underlies the clover-leaf of the Trivium from which prescriptive rules and the norm derive. In Vives' explanation of the origin of scholarship and his identification of functioning speech as its basis we have a first hint of a move from humanism to the problem of certainty, the ultimate question of the Renaissance, to which mathematical rationalism will claim to be able to give an answer.

Vives is also more critical than Erasmus on the question of where learning leads. His cultural mission scaled down the universal role Erasmus assigned to eloquence; in other words, Vives carried less hay on his linguistic fork than Erasmus. The ideal of culture was no longer merely eloquence, and other paedagogical aims emerged from eloquence and broke away from it. This entailed the abandonment of both Erasmus and Quintilian, each of whom had posited eloquence as enshrining all culture, and embracing all human righteousness and virtue. Vives directs education towards the arts and sciences, which he no longer subsumes under the mastery of language or,

more specifically, of eloquence.[48] As a result of these new aims, the theory of education itself also ceases to envisage only the inculcation of linguistic culture, and attains independence. Vives' importance in paedagogy, however, naturally lies outside the scope of the present study.

The other component of Vives' concept of culture, in comparison with Erasmus, is also given by this consideration. Mastery of the arts and sciences, or at least the possession of some practical knowledge useful for the individual and for life in society, is what Vives puts into his ideal of culture and humanity.

To sum up, then: Besides the acquisition of culture, Vives' humanism depends on linguistic functions in a way which was unknown to Erasmus. In the area of missionary activities he brings language back to being a means of gaining understanding and of education. He regards the practical use of the vernaculars as a functional means of acquiring knowledge; and dialectic, alongside the other two arts of the Trivium, has its basis in these languages.

With Vives, humanism abandons the basis Erasmus had given it in the resources of Latin, and turns to the living languages. Erasmus' over-emphatic valuation of linguistic universality gives way in Vives to another view of language—also functional, incidentally, even if in a different way—a view which makes way in its fundamental theories for national languages and literatures and the study of them.[49]

Vives' notions of the power (*vis*) and rigour of speech, and of the laws and standard of language shown in his criticism of Peter of Spain's terministic logic, deserve in their own right a deeper and more thorough investigation than the one given here; this should provide fruitful conclusions. His surprising hints of a view of language functioning autonomously in its own right seem to have been far in advance of his time, and he has still not been given credit for this.

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[48] "He was the first to construct a paedagogical system in deliberate independence from Quintilian" (Hofer 1910: 219).

[49] That such a leading light of humanism as Vives should so explicitly and emphatically, so deliberately and so vigorously, have given the vernacular such priority in the process of acquiring knowledge must have made an impression on his contemporaries and successors. It is therefore very surprising that there is no mention of him in such histories of Dutch literature as ten Brink (1897), Kalff (1907), te Winkel (1922), Prinsen (1928) and Walch (1943). Indeed, the collective history of Dutch literature edited by Baur does not deal with him, but it does mention him in connection with his work *De Subventione Pauperum* ("On Helping the Poor"), which reveals his sense of reality in respect of the social tensions of his day. Kalff also mentions him in connection with his scorn of popular tales.

It was Vives who first observed the problematic nature of the relationship between plurality and unity in language, even though he did not develop the notion fully. When we consider the way Vives' psychology breaks away in *De Anima et Vita* ("On the Mind and Life") from a mediaeval metaphysical enquiry into the nature of the mind, and enquires merely into its functions, the way he points to the motive of self-preservation, regarding the emotions as a system of stimuli moving man to act to his own advantage and avoid the disadvantageous; when we reflect that the theory of the temperaments was a favourite topic at the time, that *physiognomy* celebrated triumphs in tracing the individual character of persons and peoples,[50] then Vives' thought, and his view of language as part of his thought, must have been a significant factor in the intellectual development of his time, or at the very least a valuable exponent of it. A broader historical investigation is needed to establish how far it was more of the one and less of the other. In the case of Vives, even more than of Erasmus, the influence he exerted on the study of language in general is a question which has not been answered for certain.

Later Stages of Humanism

Let us turn now to some continuators of humanism; for while humanism disappeared, it naturally did not do so suddenly or without trace. Here, alas, there are significant unanswered questions and many gaps in our knowledge. Our ignorance is compounded by the fact that the special topic of attitudes to language under investigation here has never been subjected to independent historical enquiry; not in Vives, not in Erasmus, in fact not at all.

There appear to be three identifiable offshoots of humanism, two academic, and one broadly cultural. A revival of the study of classical literature and a rudimentary form of comparative linguistics constitute the academic factors, and the cultural striving of the bourgeoisie for literacy and eloquence is the non-academic offshoot.

I have already described the weakness of the echo of Erasmus' ethical rules for the use of language which had sounded in Knaustinus. Erasmus' attitude to function had been the strongest component in the cultural mission which he had allotted to Latin, and, moreover, the norms he prescribed for linguistic behaviour in his views of language were anything but peripheral. However, these ideas attracted no school of followers; and this aspect of

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[50] Dilthey (1914: 423) calls Vives the first great systematic writer in the field of anthropology; and this characterization seems to be entirely plausible, in so far as Vives always projects his views of language on to the living and moving complex of human life as it is lived.

Erasmus' attitude to linguistic function was therefore unsuccessful.

On the other hand, his influence was much more effective when he used (classical) literature as the source of knowledge about things (*cognitio rerum*) and thus for learning (*eruditio*); and he exploited formidable knowledge of literature and language to the full in this area. But the functional element in his attitude towards the classics, that is his antipathy to slavish imitation, was practically cut off at source. Bembo regarded Latin as a dead language, and although Muretus later proved Erasmus to be in the right, classical scholarship had already adopted a course which had rendered obsolete the dilemma whether or not to imitate. No longer was a thirst for culture quenched at the springs of the classics, no longer did a form of linguistic usage which had luxuriated into a desire for a fully humane life-style (*humanitas*) attempt to model itself on the classics. As a result, the problem of imitation was no longer relevant. In Italy, where humanism first blossomed, and also first withered, the humanists' cult of eloquence had changed even in Erasmus' time into the literary scholarship of men like Poliziano. And a similar sort of scholarship also developed north of the Alps. It is this scholarship which, in the hands of an Italian who had moved to France, took up a stand against the influence of the great interpreter Erasmus, and allowed him, so to speak, to exert his influence only after the functional component had been filtered out. This scholar was Julius Caesar Scaliger, the mouthpiece of this form of scholarship. He fiercely attacked the *Ciceronianus* and the non-imitative principle which sought to construct an individual style from the classics. But it is not imitation, which Erasmus had in the end judged negatively, that Scaliger justifies. The grammarian in the scholar Scaliger speaks out against making any demands on the classics in order to fulfil a cultural function; his aim is in the end merely to record, investigate and arrange linguistic data. Scaliger sets out to do this above all in his pre-eminent language, Latin. Any exploitation of the profits of linguistic function is averse to him, but the cooling of attitude towards the humanism of Erasmus' school had still more reasons.

After all, although classical studies, and more particularly the study of Latin grammar and literature, had received the first impulse towards their revival from Italian humanism in its first patriotic monoglot latinizing stage, a certain estrangement between parent and child came about when humanism moved northwards and began to take an interest in scores of languages besides Greek and Hebrew (as in Vives). Seventeenth-century classical studies are characterized by a marked tendency to retreat into Latin, and, like the schoolmen, to base their principles on such authorities as Aristotle, who had

originally been rejected by the humanists; Quintilian goes overboard. This may have something to do with growing reservations about too close an approach to the anti-realistic thought of the Renaissance.

Julius Caesar Scaliger

Julius Caesar Scaliger (1484–1558), a contemporary of Vives and Erasmus, exemplifies this tendency. In his *De Causis linguae latinae* ("Principles of the Latin Language", 1540) he associates himself very closely with Aristotle, "by the light of whose wisdom the obscurities of the grammarians are rent asunder" (*cuius sapientiae luce grammaticorum tenebrae discutiantur*). He restores Aristotle's categories to their full glory; the well-known concepts of substance, accident, form, etc. (*substantia, accidentia, forma*) are applied to language in a way which had not been seen since speculative grammar. The book was seen as an anachronism and astonished his contemporaries; and because of the polemical ferocity with which it attacked the errors of more recent grammarians it also aroused an equally ferocious resistance. While Erasmus was in the first place an interpreter, and also tended to subject language to aesthetic or ethical rules (compare the development of the ethical tendency in Knaustinus), Scaliger proclaims speaking correctly (*recte loqui*), i.e. in accordance with the rules, to be the sole aim of the grammarian (*unus finis grammatici*). His rules are standards immanent in language. Interpretation is an art which the individual may acquire (*pro cuiusque captu*), not a science.

In this there is both a gain and a loss. The loss is that contact with extra-linguistic phenomena is broken, and as a result the place of language in life as a whole is neglected. The reduction to one language, i.e. to Latin, emphasizes this isolation. "It is in Scaliger that the isolation of Latin grammar and of classical grammar in general begins, and it was not overcome until the second half of the nineteenth century" (Crusius). The gain is that Latin is now subjected to objective, scientific investigation. However, this investigation is entirely preoccupied with the collection and arrangement of data, and lacks any consciousness of its own preconceptions; it operates uncritically with mixed concepts of logic and language derived primarily from Aristotle—the return to whom may be credited to Scaliger.

But a gratuitous return by Scaliger to speculative grammar was frustrated in one respect. It was no longer possible in his day to ignore the fact of the plurality of languages and to deal exclusively with Latin, as had been done in Thomas of Erfurt's time. The strict correlation of object, concept and word, and the virtual coalescence of concept and word, also present in medi-

aeval thought, could be maintained as a congruence of concept and object; and Scaliger, indeed, does this. All men, he maintains, have identical thoughts about real objects. This congruence, however, is rebutted by the fact that a single concept appears to be interpreted by many different words belonging to as many different languages. Scaliger here introduces Aristotle's principle of discovery (*inventio*), as opposed to the natural relationship accepted by Plato; and in this way he retains, if not the congruence of concept and word, at least rational grounds for the relationship between them. As a result the mediaeval unity of word and concept is broken apart, and the way opened up for a view which, although born of a reawakened realism, nevertheless has a different basic principle. The realistic grammar of the Middle Ages may be represented as $O \sim (C + W)$, i.e. a relationship between Object on the one hand, and Concept and Word together on the other, while Scaliger ends up with the relationship $(O + C) \sim W$. It is clear that it is only one further step for Scaliger to make the concept the definitive representation of the object, for he proclaims that the concept, or thought, is a mirror, an adequate reflection of objective reality. Once this view is accepted, the object (or reality) becomes superfluous. However, Scaliger does not take this step.

Even in the apparently more readily defensible congruence between Object and Concept, the *modistae* themselves had already discovered inconsistencies. Fictive and absent or negative objects (so-called 'privations'), as they themselves note in their objections (*Grammatica speculativa*, pp. 12-13), are defined in words, but nevertheless are non-objects. Thomas of Erfurt finally saves the situation with the remark that in such cases:

> although negations may not be positive entities outside the mind, they are however positive entities in the mind, ... and are entities according to the mind. And because their conceptualisation constitues their existence, therefore their modes of understanding will be their modes of being. (Bursill-Hall 1972: 141)[pp]

Scaliger's solution runs somewhat differently. Non-real objects (*non vera*) are, so to speak, empty (*vacua*), but nevertheless they are understood as full (*plena*), he declares. As a result the correspondence of Object to Concept is preserved by a justification similar to that of the *modistae*.

It is clear that Scaliger repudiated the interpretative literary scholarship of the humanists because its principles did not give him the control he needed in his project of scientific investigation. It is probably this appeal to the concrete which leads him to prefer to start with the simplest components (*partes indivisibiles*) and to build up larger structures from them. For him these compo-

nents are letters.[51] Our current pronunciation, says Scaliger, is now so corrupted that its true values have practically gone by the board. He names the French as a nation which has mutilated original words by slovenly pronunciation. This is evidence of a perfectionism which explains and justifies the existing state of language by introducing the concept of 'corruption' or 'degeneration', a view which, as will be seen, is taken up later in the linguistic theory of the rationalists. The notion of perfection, incidentally, goes back no further than classical Latin. Once this is produced, it is correct, fully usable, rational and raised above any criticism. In this respect Scaliger is a humanist of the old school. We may also see a further humanistic and practical trait in the way he makes the imperative of the verb his starting-point.

Scaliger's deviation from the line of humanistic development adopted by Erasmus and Vives may in part be seen as a return to early Italian humanism; Scaliger himself was Italian. His preference for Latin is also explained by this. His *Poëtica* is permeated with the same spirit: Virgil stands above Homer. It will be seen later that he prepared the way for rationalist linguistic theory by his revival of Latin.

Another southerner, this time a Spaniard, Franciscus Sanctius (1523–1600/1), is reckoned, on the strength of his *Minerva seu de Causis Linguae Latinae* ("Minerva, or the Principles of the Latin Language") to be diametrically opposed to Scaliger. However, the differences of principle are slight; it is a family quarrel, not a fundamental controversy. Sanctius is less philosophical than Scaliger, to whom he cannot hold a candle in this respect. Besides, since Sanctius' book expressly aims to be a school textbook, and in fact is one, he does no more, in the end, than further the decline in fundamental theorizing about language and its independence and autonomy which had set in with Scaliger. Sanctius is the father of the so-called theory of ellipsis, which stands or falls with a logic-based and perfectionist view of language that sets out from a definite, complete form of thought as a model of linguistic usage. His work was widely distributed, and repeatedly revised, especially by Scioppius and the Dutchman Perizonius (1615–1715). But with these figures we come to a new period in European intellectual life, which has not so far been discussed.

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[51] Caron (1947) *inter alia* rescued Erasmus from the reproach of not having considered the sounds which underlie the written characters. The same reproach could not be made of Scaliger. Compare also Bibliander's views on 'sounds'.

In Julius Caesar Scaliger the isolation of classical grammar and literary studies, a product of humanism, ran its course. Stephanus' *Thesaurus Linguae Latinae* ("Treasury of the Latin Language") had appeared about the middle of the sixteenth century, and his *Thesaurus Linguae Graecae* ("Treasury of the Greek Language", 1572) a decade or two later. Scholars set to work everywhere with miraculous zeal, and practically the whole range of literary pursuits which, as noted above, had developed in Alexandria found their practitioners (see Sandys 1908: 1-123; Kroll 1909: 75-94). The proud consciousness of the separate existence of language, of its autonomy and quality of self-reference, collapsed, and was not thought of again, once the safety of a firmly constituted disciplinary practice had taken the edge off concerns about the undermining and fears of the dilution of scientific principles. Encyclopaedic, and more particularly methodical, self-criticism becomes rare. They were too busy stowing and exploiting their cargo to realise that they were no longer steering a course ahead, but drifting, and drifting off course as far as the fundamental questions of language were concerned. Only when the post-Cartesian philosophy of the Enlightenment had begun to vindicate the rationality of the achievements and exploitation of sound sense did a concern for linguistic function, albeit fenced in by rationalism, begin to awaken in this noblest descendant of humanism. This will be discussed later; but for now we shall be turning to the other scholarly derivative—comparative linguistics, at least in a rudimentary form.

Bibliander

Even within the humanist tradition, Vives had already outgrown a one-sided concentration on nothing but Latin. In a world in which the esteem of living vernaculars had grown up with the notion of nationality, the question of the relationship of language to languages had made its appearance. We can give concrete evidence of the transition, or perhaps of a transition, from the world of humanistic ideas to this general study of language. It is a voluminous work by a pupil of Vives.

Bibliander (Georg Buchmann, 1504-1564) sets out to establish Vives' idea of a common basis of languages (*ratio communis linguarum*). In 1538, a certain Postellus had produced an Introduction to twelve languages: Hebrew, Chaldee, Syrian, Samaritan, Arabic, Ethiopic, Greek, Georgian, Serbian, Dalmatian, Armenian and Latin (see Benfey 1869: 225-226). Bibliander, a theologian who since the 1530s had occupied Zwingli's old chair at Zürich, published his *De Ratione Communi Omnium Linguarum et Literarum Commentarius*

("Commentary on the Principles common to all Languages and Literatures")
at Basle in 1548. However, this did not fully satisfy Vives' requirements. The
comparison of languages made here—Turkish, Persian and Hungarian, *inter
alia*, are languages which Postellus had not dealt with—attempts to derive the
languages investigated from a single one, namely Hebrew: "Hebrew is the
firstborn, and the others are conceived and born of her" (*Ebrea est primigenia,
reliquae ex ea propagatae et genitae sunt*). In this process the so-called Japhetic
languages had degenerated further than the Semitic. In the present context
this means that Bibliander found the differences greater. Bibliander considers
resemblances or differences between the characters in which the languages
were written to provide an important clue. Differences between languages and
their words arise from, or are conditioned by, the spread of human
settlements, political domination, education. Modifications to words are of
four kinds: addition, subtraction, transposition and exchange (*mutatio*). The last
category is Bibliander's answer of last resort. He also notes that speakers often
have only a limited vocabulary in their native languages; this is wrong;
language should be fostered and developed.

Bibliander is a remarkable figure in linguistic theory. He leads the next
generation after Erasmus and Vives further in the direction already taken by
Valla; this had begun with rejection of imitation, and continued with the
reduced interest in literature shown by Vives when he championed the ver-
naculars, and in general removed language from the yoke of thought. Bib-
liander definitively established the evaluative comparison of languages; and
in this respect the privileged position of Latin was over. Vives' vision of
linguistic functions, however, makes way in Bibliander for polyglot learning.
He shares with Erasmus, rather than with Valla, a respect bordering on
realism for the sound-symbolism of *Cratylus*. He appeals to this in his defence
of etymology; this has meaning, and is supported by the coincidence of
objects and words (*convenientia rerum atque vocum*): "What is more, some con-
formity must exist between words and things. And I judge it to be entirely
proper to place this law among those which apply equally to all languages"
(Bibliander 1548:130).[22] This seems to confirm the impression that human-
ism and realistic scholasticism are distinguished only by their different view
of the chief element of the Trivium: one favours dialectic, the other rhetoric
(or, here, grammar). But their religious and philosophical standpoints are
largely similar. The attitude of the Renaissance, on the other hand, is
opposed to both of them in this respect. — Bibliander's sound-symbolism is,
of course, not fully worked out. *Vitis* ('vine') comes from *vincire* ('to bind'), and
vincire comes from *vis* ('strength'). The sound of *u* (= *v*) expresses strength:

"Nobody can doubt that those syllables in which the letter *u* has consonantal value, e.g. *uafer* ('cunning'), *uenter* ('belly'), *uelum* ('sail'), *uulnus* ('wound'), give out a thick and what might be called a strong sound".[RR] For this reason the *u* in *amasti* (for *amauisti*, 'I loved') is omitted; it sounds too strong for the verb *amare* ('to love'), and overburdens the ear (*onerat aurem*). Apart from this there is no further trace of this principle in his comparative method. Ramus, only ten years his junior, was to observe sounds thoroughly and differentiate the vowel *u* from the consonant *v*, a difference which was unobserved in Bibliander's adherence to the (written or printed) letter.

Bibliander's achievement lies in demonstrating conclusions which Vives had foreshadowed: "For many random comments which indicate that knowledge of these things had been pondered in the mind of this man [Vives] may be read in his books on 'Academic Disciplines' or the 'Method of Juvenile Study'" (pp. 24-25).[SS] Even as a young man he thought he could observe a common system in all languages and letters (*eam rationem communem omnibus linguis et literis*) in comparing Latin, Greek, Hebrew and German, "as the learned have begun to make manifest" (*ut eruditi viri faciundum esse praecipiunt*). He stood sponsor to general and comparative linguistics as a successor of the humanists, albeit imperfectly, for the penny had not yet quite dropped.

Coornhert and Valerius ab Auduater

The eagerness of lay citizens for a culture based on a scholarly ideal of literacy and eloquence in language, coupled with an ethical and religious eirenism, may be traced from Vives, and not less from Erasmus. One very important representative, perhaps the most important representative, of this tendency, it seems to me, is Coornhert. There is a forgotten link in the history of humanism, a link to which, as Kuiper (1941) pointed out,[52] Coornhert is attached: the "encyclopaedist" Cornelius Valerius ab Auduater (1512-

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[52]   Kuiper's study deals with an almost unknown topic, the history of humanistic rhetoric in the Netherlands. "No poet or prose author", he says (1941: 3), "has been closely examined so far in respect of his rhetorical principles." His investigation convinced him there were ramifications which went beyond the field of rhetoric, i.e. to the humanistic ideal of a didactic compendium of general culture. Indeed, the humanistic ideal of literary accomplishment and eloquence, erudition based on language, permeated the whole of scholarship from its base in the Trivium to the peak of the physical and ethical disciplines. Here the emphasis falls on the linguistic character of the arts of the Trivium, and because the functional dynamism of the living language is most obvious in its rhetorical application, humanists tend to conceal dialectic and grammar behind rhetoric. Kuiper adduces a large amount of data which confirms my view of humanism.

1578).

The establishment of a methodological overview leading from the stage of basic grammar to that of moral philosophy was something which Erasmus had always had in mind, had been approached by Vives, and was achieved by Valerius. He provided this overview in the form of a series of compendia of the individual arts; thus there appeared in succession a Dialectic, *Tabulae totius Dialectices* ("Tables for the whole Art of Dialectic", 1545); a Latin Grammar, *Grammaticae Institutiones* ("Foundations of Grammar", 1554); a Rhetoric, *In universam Bene Dicendi Tabula summam Artis Rhetoricae complectens* ("A Table containing a complete summation of the Rhetorical Art of Eloquence", 1556), an Astronomy and Geography, *De Sphaera et Primis Astronomiae Rudimentis Libellus utilissimus cui adiecta sunt brevia quaedam de Gaeographia Praecepta maximè necessaria* ("A most useful short account of the Sphere and the Rudiments of Astronomy, to which are appended some highly necessary Brief Elements of Geography", 1561); a textbook on Physics, *Physicae, seu de Naturae Philosophia Institutio, perspicue et breviter explicata* ("An Introduction to Physics, or Natural Philosophy, clearly and briefly explained", 1566-67); and one on Ethics, *Ethicae, seu Moralis Philosophiae brevis et perspicua Descriptio* ("A brief and clear Account of Ethics, or Moral Philosophy", 1570).

These compendia—above all the Rhetoric, written, like the Dialectic, in what was known as tabular form—remained in use for many years. They had an international influence; on Thomas Wilson's *Rule of Reason* (1551) in England, for example. Kuiper has indicated how Coornhert's *Wellevenskunste* ("The Art of Virtuous Living") is in many places a practically literal translation of Valerius' Ethics.

The influence of Valerius is in inverse proportion to his originality; "not a shining genius, but a talented and conscientious paedagogue", whose didactic gifts and lucid writings so effectively helped to direct the energy the citizens spent in acquiring a general education and literacy towards specific objectives, rather than being dissipated in thin air. They now knew what to aim at.

The relationship between dialectic and rhetoric in Valerius is the traditional humanistic one; dialectic is an art of discoursing convincingly on any subject proposed (*ars de qualibet re proposita probabiliter disserendi*), an abridged method of debate (*disputandi ratio contractior*), while rhetoric is described as a broader and more brilliant method of speaking and elaborating [one's words] (*dicendi et ornandi ratio latior atque splendidior*). As Kuiper says:

At that time, extended methodical instruction in "persuasive speaking" was still

necessarily regarded as a corollary of the eloquence which is offered by rhetoric (1941: 112). ... No epistemology is given here, as it was in so many dialectical systems of the day.[53] Valerius likewise maintains his distance from formal logic.[54] His book contains, not an abstract theory, but a practical guide for use in exercises in persuasive speaking, the Louvain professor being a great advocate of such exercises. It is a good example of a genuinely humanistic rhetorical dialectic. Stripped of its mediaeval ballast (disputes between nominalists and realists, terminism), and written as far as possible in a pure, i.e. Ciceronian Latin, style, this work, too, achieved great success. (pp. 113-114)[TT]

Of Valerius' grammar, Kuiper observes (pp. 131-2):

> The precepts of the arts must be observed by the students in the works of good authors, whereupon they have to follow their example in their own writings. For the sake of learning good Latin they must read not only eloquent authors, but also those from whom one can acquire an honest and liberal knowledge of many good things, such as ancient Greek and Latin historians, and those who wrote about natural phenomena, on the pattern of virtuous living, on humane studies and of the variety of diverting literature.[UU]

In "diverting literature" are included Erasmus' *Adagia* ("Maxims"), Gellius' *Noctes Atticae* ("Attic Nights"), etc.: "After such a course of instruction the pupil can move on to higher studies, the art of medicine, jurisprudence, or the most sacred study of the Holy Scriptures". Here Valerius concludes the description of the aims he sets himself in his instruction in the arts.

The centre of rhetoric is elocution. Arrangement (*dispositio*) is discussed only briefly. "Elocution is the method of decorating the oration, or the selection of words and sentences suitable to the topics discussed, which allows us to speak in Latin, or to speak plainly and clearly, or ornately, or appropriately,"[VV]

Valerius' Rhetoric was, as already noted, destined for a very long life. His grammar was superseded in the field of classical literary studies by the work of Vossius. Valerius' achievements do not, however, lie so much in original contributions to knowledge; he supplied the general ideal of culture with a didactic framework,[55] and thus defined the way from humanism to an influence which

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[53] In a footnote, Kuiper gives as an example Melanchthon's question, "What are the grounds of certainty in teaching theories" (*Quae sunt causae certitudinis in doctrinis*), from his *Erotemata Dialectices* ("Dialectical Questions"). On this point, a resemblance to Ramus may also be seen.

[54] Incidentally, this delicate distancing from dialectic is also revealed in the way Valerius does not actually deny the anti-dialectical, pro-linguistic polemics of Valla and Vives, but rather forgets them. In these fierce vindications of the autonomy of language there beats the heart of the humanistic love of language. Valerius' self-distancing from formal logic is no more than a feeble vestige of this anti-dialectical *noblesse oblige* of the Humanists.

[55] Kuiper sums up Valerius' work as a didactic encyclopaedia. He speaks (1941: 225), appa-

although paedagogical rather than scientific, was, to my mind, nevertheless of the greatest importance, *inter alia,* for the whole of Dutch culture, and thus for our national character: in the spirit of Vives, the idea of the cultural mission of language is detached from Latin, and becomes associated with the vernacular; in the spirit of Erasmus, the extraction of practical knowledge (*cognitio rerum*) from the store of antiquity is retained. The rhetorical component prevails over the dialectical, in line with the humanist tradition. But even if the theoretical consideration of language and its function is choked by practical applications; these nevertheless bring about a commendable realization of the functional value of language as an edifying factor in education and schooling.

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The examination of these three outliers of humanism has revealed some transitions and links. These post-humanistic trends are: (1) the study of classical literature, which could not have come about without Erasmus, (2) the general study of language, still in the form of a speculative etymology—the influence of Vives was more decisive here—and (3) the ideal of scholarliness and linguistic learning among the lay citizenry, the programme of Cornelius Valerius.

The study has thrown into relief a notable value-judgment, and an association between the study of the classics and the comparison of languages; both of which phenomena call for more detailed attention.

The concept of *degeneration* was strikingly apparent in the representatives of the last two trends discussed here, J. C. Scaliger and Bibliander. This may give the impression that they were engaged in the criticism of language; but the concept of degeneration is in fact the result of a pre-theoretical prejudice, and is, indeed, an uncritical value-judgment containing no functional criticism of language. What are the facts here? Scaliger, and early humanism with him, proclaimed the primacy of a single language, Latin, as a model language, while Bibliander, and many of his contemporaries with him, proclaimed the primacy of Hebrew as the original language; in other words, the former was moved by patriotic and aesthetic factors, the latter by his view of Biblical history. This was followed by a *comparison* with other languages; French has absorbed much (namely of the original Latin words) and is slovenly, proclaims

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rently in reference to the same work of a 'philosophical encyclopaedia', but the term 'didactic' is, in my view, more appropriate.

Scaliger; the Japhetic languages deviate greatly from Hebrew, declares Bibliander. And both use the expression 'degeneration' for these deviations. (It may be the case that a slight reservation should be made in the case of Scaliger, since he sets out, in the spirit of early humanism, to apply aesthetic criteria; and we may, to that extent, speak in his case of an external criterion.) Here a positive and uncritical attitude may be observed, one which will be seen to differ in principle from the attitude towards linguistic matters which developed in Renaissance thought and came to theoretical maturity in rationalist theory. Here, too, the concept of degeneration may be found, but from a totally different point of view.

The writings of Josephus Justus Scaliger (1540-1609) adopt a remarkable transitional position between classical scholarship and comparative studies. This is shown by the tract *Diatriba de Europaeorum Linguis* ("Disquisition on the Languages of the Europeans") which appeared in 1610. This is a piece of conscientious ratiocination, or rather the concise result of a lifetime's research, free of *a priori* considerations on the lines of his father's Aristotelian views and preference for Latin, and of Bibliander's postulation of Hebrew as the original language. He traces the European languages to eleven major languages, the so-called mother-tongues (*matrices*), but as a careful scholar, he goes no further. It does not matter that he does not know the relationship of Hungarian and Finnish, or that his etymologies are frequently questionable; this was a first step in the direction of Vives' common system of languages (*ratio communis linguarum*), not the only possible one, and perhaps not in the right direction, but for all that a step, and one in the direction of constructing a scheme of relationships on the ground of inductive investigation.

So far, humanism has been traced from its beginnings to its end, but before Renaissance theories of language can be examined, it is necessary to discuss the last representative of the humanist tradition, namely Ramus.

Peter Ramus

Finally, then, humanism produced in Peter Ramus (1515-1572) a theorist who, like Bacon among the Renaissance scholars, paved the way for a transition to rationalism. Vives, as we have seen, held the view that the ruling criterion of the arts of the trivium is the practical use of language, a view for which he in turn had models in Valla and Agricola. Earlier dialectic was no more than a derivative of this linguistically determined activity of knowing and causing to know (teaching); and after it had become corrupted in the Middle Ages (by Peter of Spain among others), it was certainly not worthy to

bear the sceptre over language. Language itself has the primacy. Ramus sees
things rather differently: logic, the system of thought, kept its leading position,
but this can be accepted only when it lays down its Aristotelian and scholastic
form and takes on its natural shape, i.e. when it becomes a system of natural
thinking (*ars disserendi naturalis*). But in order to establish this system of natural
thinking, Ramus seeks counsel in—language.[56] And the logical rules acquired
in this way then had to be recognized as guidelines for all the liberal arts, for
all knowledge. The linguistic practice which Ramus takes as a model is the
analytical, persuasive, demonstrative use of words; and this explains, *inter alia*,
that, although he is himself a mathematician, he does not in this "Art" claim
the support of an arithmetical manipulation of figures, but uses the cogently
demonstrative force of "geometrical" proof. In this respect he is indeed a
"precursor of Descartes" (see Saisset 1862: 61–79).

Although Ramus himself was eloquent and an outstanding teacher, he
shuddered at the prescriptive practices of the scholarship of his day. His main
concern is with the essential "nature" of the arts, and this has precedence
over all precepts. It is only practical thinking which penetrates to the essence
of academic disciplines, and the condition of scholastic dialectic had become
as corrupt and sterile as it was because it did not give an account of the
natural processes of thought in gaining knowledge.

Ramus may be said to have reorganized the arts.[57] Dialectic embraces
'invention' and 'disposition', otherwise considered parts of rhetoric; and
rhetoric itself is left only with elocution (including tropes and figures), and
presentation in modulation of the voice and gesture. Grammar comprises
etymology and syntax.[58] Emphasis on the linguistic character of the branches
of the Trivium, shown by most of his humanistic predecessors in the way they
followed Cicero and Quintilian in asserting a certain underlying primacy of
rhetoric or effective speech, cannot be found in this form in Ramus. The em-

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[56] His search for the 'natural' led him in grammar to the phonetic spelling of French; Latin
grammar is indebted to him for the orthographic disinction of consonantal *j* and *v* ("the Ramist
consonants") from the vocalic value now restored to *i* and *u*. Ramus, *Schola Grammatica*, II ("De
Sonis Literatum"). See Waddington 1855: 348–49.

[57] Ramus had a much-maligned predilection for binary oppositions. Although this undeniably
clarified the structure of the arts for didactic purposes, its critics saw it from the outset as a
speculative construct. It will be discussed below

[58] Ramus' structures of arithmetic, geometry, the natural sciences and ethics (the last in *De
Moribus Veterum Gallorum* ["On the Customs of the Ancient Gauls"]) are of less importance for the
purposes of this study. Graves (1912) has represented Ramus' systems in clear diagrammatic
form. As only some of Ramus' works were available to me, I was often compelled to rely upon
Graves. His analyses are so solid and exhaustive that this could be done with confidence.

phasis of the humanists had enabled them, as it were, to find the way finally
to natural living language by way of rhetoric. Ramus, however, no longer
needed the dynamic use of language as a court of appeal or an argument, for
he was no longer looking for a natural language removed from the shadow
of formalistic logic, a pure language existing in its own right and by virtue of
its effective use, but set himself a more ambitious aim. He was looking for the
free exercise of each of the arts, including the three arts of language, the so-
called *artes sermocinales*, but not by giving them precedence as a basis for the
rest; in this respect he goes beyond the primarily linguistic concerns of hu-
manism.[59] That this free exercise had for preference to be in speech, that the
systems of the arts he drew up were justified in his view by their clarity and
regularity, and that therefore the criterion of the truth-content of his systems
perforce lay in his eyes in their didactic usefulness—in these respects he was
still a full-blooded humanist. And yet he was so far ahead of his time in his
attempts to draw up systems that he unconsciously approached the truth that
language as such is in Saussure's phrase *un système où tout se tient* (a self-consis-
tent system), a system in its own right, not congruent in a logically consequent
way with objects in the real world; in short the principle of phonology and
structuralism.

Before these matters are discussed, a few biographical and literary notes
would be in place. Ramus, born of a good but impoverished family, was filled
with an insatiable thirst for knowledge and education, and entered the Col-
lège de Navarre at the age of twelve as the servant of a rich student, per-
forming menial tasks by day and studying by night. It must have been then
that the foundation was laid in this necessarily self-taught scholar—excluded
as he was from teaching drills depending on memory, from textbooks written
in verse and recited aloud, from reliance on stupid rote-learning—for his urge
to systematize, for his desire for a controlling survey. "It was from this, in
fact, that he drew, along with a great esteem for logic, a profound disgust at

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[59]   Ramus did not develop his universal method from a base in the Trivium, though this may,
perhaps, not be held to be primarily linguistic; however, even Vives still looks upon the mastery
of language as the basis of all disciplines, and there is not a trace of this in Ramus' theory.

Ramus occupies, as it were, the third place in the series Erasmus — Vives — Ramus. For
while Erasmus was inclined essentially to turn all scholarship into language, and Vives accepted
language only as the basis for learning scholarly disciplines, Ramus applied a universal scientific
method to all disciplines. This was, indeed, *based* on language, but was not defined by himself
in this way, but rather as going back to "natural" reasoning. Descartes, as a fourth member of
the series, completes this development, as it were, by providing a universal method, one which,
however, is no longer "natural", but founded on the natural sciences, specifically non-linguistic,
being instead mathematical (or "geometrical").

the way it was taught in the school" (Waddington 1855: 23).[ww] "Never", he explains later, "did I ever hear a word about the application of logic". And here lies the other motive closely related to this, the *usus*, the practical utility, the use. The establishment of knowledge in Plato's Dialogues by means of the art of living discourse then became a revelation to him, and led him, released from Aristotle, to some extent to "Socratize", as he puts it, even on his own (Graves 1912: 24–25). When he defended his master's thesis in 1536, the theme was "Whatever things may have been said by Aristotle, they are ficti-tious" (*Quaecumque ab Aristotele dicta essent, commenticia esse*). It is not necessary to deal here with his life as professor of rhetoric and philosophy, the bitter opposition and the great successes he experienced, or finally his conversion to Calvinism and his martyrdom in the massacre of St Bartholomew's Eve. His work is extensive, and his influence, as a result of his personal charisma, was even greater. Controversy between Ramists and anti-Ramists continued until well into the seventeenth century and well beyond the borders of France. In France itself his influence, like that of Calvinism, was suppressed by the policies of the Counter-Reformation, and undermined and finally supplanted by the influence of such thinkers as Montaigne and Descartes.[60]

Ramus' goal was to deal with the whole cycle of the arts, a project which is shared by other humanist scholars of the sixteenth century, and of which a most eminent example was to be seen in the works of Valerius ab Auduater. Ramus also aimed to present the arts (and also the Bible) in the vernacular, a development which had emerged in England (see Kuiper 1941: 26), mainly in the sixteenth century, and which will be discussed in detail below in connection with Bacon. Ramus' abandonment of the classical languages, like his encyclopaedic undertakings, is a mark of a transition from humanism to a later stage.

Ramus' *Dialecticae Partitiones* [or *Institutiones*] ("Divisions [or Fundamentals] of Dialectic") and his *Aristoteliae Animadversiones* ("Aristotelian Reflections") appeared in 1543; *Oratio de Studiis Philosophiae et Eloquentiae Conjugendis* ("Oration on the Combined Study of Philosophy and Eloquence") in 1546, and *Rhetoricae Distinctiones* ("Definitions of Rhetoric") in 1547. By 1558 he had published a

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[60] It is typical of the oblivion into which Ramus and his works had fallen, and the resultant superficial view of his importance for linguistics that even Sandys (1908: 184), in a work of liter-ary history which has not generally received a full appreciation, makes no mention of Ramus' grammatical and critical works. Caron (1947: 16, *n.* 3) also provides a remarkable example of linguists' ignorance of Ramus. It is chastening that the best treatment of Ramus is to be found in histories of paedagogy. The same applies also to Vives.

long series of writings on Cicero and Virgil, and editions of their works. Four more works on Cicero appeared posthumously. His work on the customs of the Ancient Gauls (*De Moribus Veterum Gallorum*) appeared in 1558. His Dialectic came out in French in 1555. His works on grammar, physics and mathematics appeared mostly between 1560 and 1570: *Scholae Grammaticae* ("Schools of Grammar"), *Rudimenta Grammaticae [Latinae]* ("Rudiments of [Latin] Grammar") and *Grammatica* as early as 1559; *Grammatica Graeca* ("Greek Grammar"), *Rudimenta Grammaticae Graecae*, and *Gramere* in 1562; *Schola Physicae* ("School of Physics") in 1565; *Préface sur le Proëme des Mathématiques* ("Prefatory Remarks on the Introduction to Mathematics") in 1566 and the *Prooemium mathematicum* itself in 1567; *Scholae Mathematicae* ("Schools of Mathematics") and *Geometriae Libri Septem et Viginti* ("27 Books on Geometry") in 1569; a further short tract on rhetoric in 1567 and a general work on the arts, *Scholae in Liberales Artes* ("Schools of the Liberal Arts") in 1569. His *Arithmeticae libri duo et Algebrae totidem* ("Two Books on Arithmetic, and the like number on Algebra") appeared posthumously in 1586.[61]

Ramus' interest in the whole cycle of academic disciplines may clearly be recognized here; in Ramus, however, it is not primarily a list drawn up for pedantic purposes, as in Cornelius Valerius, nor is it expressly philosophical, as in Bacon; an attempt will therefore be made to define its true nature. Encyclopaedic universal humanistic knowledge at all events implied more than mere didactism for Ramus. The humanists' concentration on language had in fact unwittingly dug its own grave in attempting scientific universality, for it was not methodologically equipped to achieve its object; but these universalist pretensions suggested to the rationalist age which was to follow the principle of a general key to the inner chambers of truth, a key which supposedly applied to all sciences. Bacon's late-Renaissance encyclopaedic writings gave this demand greater impetus. It will be seen later—when we come to discuss mathematical rationalism—what this key was, and also how its discovery had fateful consequences for the investigation of language.

There is no need to say more about Ramus' rhetorical ideas than what has already been noted above. His dialectic follows Agricola, who has already been discussed, and it will suffice to complete the picture with a brief examination of his views on grammar.

The teaching of grammar in Paris in Ramus' days still relied on the

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[61] The following works were consulted in original editions: *Arithmetices libri II* (Hanau 1611), *Dialecticae libri duo* (Bremen 1619), *Geometriae libri XXVII* (Hanau 1612), *Grammatica* (Paris 1572; Hanau 1612), *Rudimenta Grammaticae Latinae* (Paris 1565), *Rhetorica* (Paris 1572; Bremen 1619).

Doctrinale ("Textbook") of Alexander of Villa Dei or similar school books.[62] Valla's *Elegantiae* ("Elegancies") was barely known. Access to language and literature was thus virtually blocked. Ramus' system, if, indeed, one may speak of a system, is radically different. As early as 1559, his *Scholae Grammaticae* presented constructive principles, although the work set out to be a critique of Priscian and his like. He proposes "reforms" not only in Latin, but also in Greek and French grammar; three works on Latin, two on Greek and one on French appeared between 1559 and 1562.

Starting with the three fundamental principles of his method, i.e. nature (*natura*), system (*ratio*) and practice (*exercitatio* or *usus*),[63] he observes the natural use of language, based on that of classical authors for the languages of antiquity, and on current usage for French, in much the same way as he appeals in his logic to sound common sense and *claims* to turn for scientific knowledge directly to nature. In the arrangement of the material assembled in this manner Ramus applies his famous system of binary oppositions. The question now arises whether he did this consciously as an imposition from without of a practical didactic system which has no claims to a basis in the analysis of reality, or whether he did so in the persuasion that he had grasped the essence, the nature, of the object under investigation, i.e. language. Graves seems to be inclined to take the former view,[64] and repeatedly tries to trace Ramus' basic principles back to Aristotle,[65] but in doing so he overlooks the fact that the dichotomic structure which informs the whole of Ramus' method is unique and characteristic, and that this method cannot be regarded as being based on the world of Aristotle's ideas.

There can be no doubt about the way Ramus himself viewed his method.

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[62] *Inter alia* Despauterius' *Rudiments*. See Graves 1912: 121.

[63] Graves (1912: 109, *n.* 2) is correct in translating *natura, ratio, exercitatio* as 'nature', 'system' and 'practice'. Graves's next note shows that, although Ramus was an innovator in applying these principles, he had found the three themes in Quintilian (*Institutio Oratoriae*, III, 2). Graves also notes (p. 109) that 'nature' applies to the determination of content and 'practice' to the determination of method, while 'system' "comes somewhat into consideration in both connections." I hope to be able to demonstrate this in Ramus' methods.

[64] "Like all *schemata*, this principle of division [i.e. Ramus' binary oppositions] at times plays havoc with the natural order of things" (Graves 1912: 130). On Ramus' systems of arithmetic and geometry, Graves remarks (p. 164): "While by his clear presentation he may have sacrificed something of the rigorous discipline that has been claimed by some as the chief value of the study of mathematics, he felt *clearness* to be of most importance and ruthlessly eliminated all extraordinary complexity."

[65] Graves 1912: 109-110 and *passim*. He does, however, consistently reduce the force of his derivations with terms like "probably", and "he seems", "which savors of", etc.

"The truth of the arts flourished in nature before any precepts were thought out" (*Artium veritas prius in natura viguit, quam ulla praecepta cogitarentur*). Ramus expressed himself with great clarity, especially in his "Aristotelian Reflections". His particular complaint against the old dialectic is that it does not investigate the natural process of thought. Every art finds support and binding rules in enduring and unchanging nature. Dialectic alone has so far abandoned this universal law in favour of an independent existence, thus becoming a victim of arbitrary speculation. Just as a portrait painter endeavours to represent the human form and character, so must logic reproduce natural dialectic, this being the art of discourse in the Platonic sense. Any area investigated will benefit from such a description; with the help of the Arts it will be able to give its power greater application. At the head of this application stands language,[66] since it pronounces judgment on these things.

From the foregoing[67] it may be safely concluded that Ramus held the structure of language, as he presented it in his grammatical writings, to be a structure proper to language, not a classification of linguistic data applied for didactic reasons. But this is just what makes Ramus such a remarkable figure in the history of linguistic analysis. Is he a proto-structuralist, a structuralist *avant la lettre?* This throws a special light on his binary procedures, for phonology and structuralism operate with a similar method. Let us, then, examine these similarities—and some differences.

On one occasion (see Waddington 1855: 356) Ramus directed a call to French jurists, asking whether among so many lawyers there was one who was prepared to clarify and simplify this chaos.[xx] The chaos he had in mind was that of the myriads of French laws, which he compared unfavourably to the simplicity of the Roman Laws of the Twelve Tables (*Leges XII Tabularum*). This is typical of Ramus. He hates lack of clarity, inconsequent summarizing, rote-learning and memorization, especially as evidenced in the study of language in the *Doctrinale*. According to Ramus, there is an inherent order which resides in all objects and all areas of investigation; to discover this is the basic task of scholarly practice. The final objective of science is reached not when the scholar arrives at total correctness, but when he arrives at total order, clarity, lucidity, accuracy. In this subjective self-imposed norm of clarity Ramus remains true to humanistic principles, to a didacticism based on lan-

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[66] "Although this rhetorical [*sic*] inclination was not very original, it aroused a great deal of attention in an age which was eager for novelty". (Cf. Windelband & Heimsoeth 1948: 303).

[67] Based largely on Graves 1912, chapters 5 ("General Principles ... "), 6 ("Content and Method of the Trivium") and 7 ("Content and Method of the Quadrivium").

guage; but in the content of this norm, which has, for example, nothing to do with Attic clarity (σαφηνεία) as a component of stylistic elegance, but everything to do with the binary oppositions he uses to establish structure, he is a figure of transition to rationalism—but not so much to Descartes as to Port-Royal. A century later Lancelot was to be bold enough to praise the Greek scholar —and heretic!—Ramus for his method in the preface of his *Nouvelle méthode grecque* ("New Greek Course"). This is not surprising, as he does not employ the mathematical method of Descartes; but, on the other hand, Ramus' didactic ordering does bear a definite resemblance to the practical and rational argumentation of Port-Royal. Ramus does not tire of emphasizing the practical value of clarity and utility as the goal of knowledge; "the main point is to make the learner by frequent practice familiar as soon as possible with the way of applying the rules".[YY] But all the same, he would never have admitted that the lucidity and clear arrangement he had achieved was imposed on the material he was investigating and did not correspond to its nature. To sum up: Ramus practises academic studies according to a method of ordering, not, however, one which is determined by following an ordering present in the matter under investigation—even if he thinks it is—but one which is applied subjectively, and in principle has to serve for all disciplines, an all-inclusive series of bifurcations. His motive and aim are the attainment of didactic clarity and accuracy. But he considers the arrangement applied in this way to be inherent in the matters under investigation and interprets them as their own natural and rational order. The illusion of a parallel with the structuralism of A. W. de Groot, for example, is therefore no more than an illusion. De Groot finds by analysis dual relations of government (between determiner and determined) actually present in language, and analyses by his method of binary oppositions a system which is present—subfunctionally—in all languages, a systematic quality (what Bühler and others have called *"Ordnungszeichen"* ('mark of ordering'). The mathematical rationalism which came after Ramus demanded a system of language, or imposed one on it, which is just as little proper to it as Ramus' universal system of binary oppositions. These two systems, or rather methods, are incompatible. When mathematical rationalism became dominant in the seventeenth century, Ramus' principles ceased to be applied. Only when mathematical rationalism was superseded by the Enlightenment would Ramus have a second chance. As already noted, Lancelot remembered him, but once pragmatic rationalism had developed it became too self-assured to appeal to authorities. It derives its rationalities from language—and equally from other disciplines. There is also, as will be seen, a conception of analogy among Greek scholars in the

Netherlands which recalls Ramus' bifurcations. But this is no more than a resemblance.

Ramus may thus be considered a humanist with pre-rationalist tendencies. We have already come across a similar parallelism of rational and linguistic thinking in, for example, Abelard. (Prantl, too, noticed the similarities between Abelard and Ramus.) Just as Bacon is, so to speak, the last Renaissance man, Ramus is the last humanist. Both point the way to rationalism.

Ramus saw clearly—more clearly than any of his humanist predecessors— in his "Aristotelian Reflections" (p. 112 ff.) that the entire orientation and apparatus of Aristotle's logic rested on grammatical distinctions. To that extent his opinion is like that of his fellow-humanists, who at all times and on all occasions note the linguistic character of the old dialectic. But when he adds that there is a need for a new logic on the model of geometry, he goes further than any earlier humanist; and this thought gives a foretaste of what Galileo's rationalism was by then already about to accomplish.

I will conclude with a few final remarks on Ramus' system of binary oppositions. In my view Ramus' method is essentially linguistic. But it was introduced intuitively by Ramus the humanist, not derived from an analysis of language. The general application of the principle of binary opposition to all disciplines—to all of them—did in fact not start with his analysis of language, for even his treatment of the ancient Gauls relies on binary opposition; his analysis of language emerged from his methodological predilections.

Yet this binary system is remarkable, especially in linguistic theory. Ramus is, without a doubt, a humanist through and through. For the humanist the act of speaking about objects, in other words using language to manipulate reality, opens the secrets of knowledge. (Consider also Ramus' "Socratizing"). Renaissance thinkers criticized the humanists on the grounds that in this process a linguistically accurate presentation serves as a surrogate for an analytically correct perception, in other words, that humanist science in practice sells linguistic potatoes as analytical lemons; and rationalist enquiries into nature replaced humanist science by analytical studies and insights, at least in this area.

What, then was the actual aim of Ramus' theory of the sciences? Knowledge and insight, he claims; but in fact all he is looking for is clarity and ease of interpretation. This final aim is the one intrinsically concerned with language. Indeed, Ramus in essence reduces objects to language, while he claims to be freeing them from language.

The identification of Ramus' methods as a binary system does not of itself tell us anything about his insights into language; but when we reflect that his method of practising science was based entirely on language, his binary system —which in his own view was the key to the methods he applied—may be thought to be an anticipation of the functional structure of language as revealed to us by modern structuralists. Language is subject to order; and in using language the speaker is occupied, sub-functionally, in establishing order. This capacity of language to establish order may be seen from the investigations of modern structuralists to rest on objective binary divisions. In the wake of a language-based movement like humanism, which was inclined to give discursive description the status of analysis, detailed analysis, the very procedure necessary for deducing the structural regularity of the thing investigated from the thing itself, yielded to descriptive classification in the academic disciplines. And the pattern of this ordering of objects, here the ordering of academic disciplines and their content—i.e. not the order of the things themselves, but the order of the subjective treatment—clearly rests on binary division.

It is in this sense that Ramus is clearly important for the theory of language. He is by no means a proto-structuralist, but he is, to be sure, a scholar who works with the structural resources of language.

The Contribution of humanism

The following conclusions may be drawn about the contribution of humanism:

Petrarch wrote his poems, Boccaccio told his stories, and in this way they poured out into their world a stream of elegant, lyrical, and above all living language, both in the vernacular and in Latin. They rebelled against the way *Modistae* and terminists alike had imposed rigidity on language as a result of the bias of scholasticism in favour of logic. Their Roman pride led them to Virgil and Cicero, to poetic and rhetorical masters of pure Latinity. Bruni extended his interest further, to the historians; he was a historian himself, and thus saw more clearly the derivation of Roman literature from Greek, and gained sustenance not only from the form, but also from the content of classical authors. Valla went further in his critical inquiry, freeing humanism from the imitation of acknowledged masters, making conscious efforts to create an internal, individual "elegant" Latin style of his own, and turning to language as a leading function in the acquisition of knowledge, criticizing the old logic from the standpoint of sound common sense as manifested in

language. The nucleus of the power of living language lies in its rhetorical content; and in the footsteps of Quintilian, rhetoric subsumes all linguistic and literary activity.

When humanism came to the northwest its aspect changed; the aesthetic component gradually receded in favour of educational and ethical ones. Agricola wrote his *De inventione dialectica* ("On Dialectical Invention") largely in the spirit of Valla's *Disputationes*, but Erasmus looked back rather to the *Elegantiae* ("Elegancies"). Rhetoric remained the central fortress of the Trivium. Erasmus was a lover both of literature and of learning. His ethical outlook in relation to language was widely received, and also imitated. Vives, as a paedagogue and theorist, recognized the importance of the vernacular, and gave further thought to the importance of language as a general human faculty. In Valerius humanism was reduced to an encyclopaedic pedantry which drew up a balance-sheet, at the same time closing the business, or at least spending the profits. Ramus, led by what Bacon called a "hunter's subtle nose" (*odoratio quaedam venatica*) attempted to make a grandiose approach to the rationalism which was already being hinted at in late Renaissance writing, by infusing inherited material into a new logic, aiming at simple clarity, a development which met with greater success in the Renaissance itself in Bacon's *Novum Organum*. But then, it was effectively the Renaissance, after all, which handed down the new spirit which was developing; humanism turns out in the end to have been no more than an interlude.

Humanism vindicated the independence of language from thought, but it had not been able to give this independence an adequate theoretical basis. Valla, Agricola, Erasmus, and the late-comer Ramus did not achieve this. In theoretical terms, humanism degenerated into a practical citizen's ideal of eloquent literary ability. The study of literature, particularly of classical literature, did, indeed, remain in all its glory as concrete evidence of humanism, or rather as a monument to it; but, as a result of the acquisition and possession of this specialized knowledge, humanism, with its anticipation of functional ideas, was, so to speak, poured into a canyon, a Grand Canyon to be sure, but none the less a canyon. From inside its high walls it was impossible to orientate oneself or to set a course. And while no attempt was made to do this, no effort—however strenuous, in my view at least, it might be—was spared in the collection and arrangement of data. The power of humanist linguistics lay in its isolation, but this very isolation denied it the possibility of having any influence on the intellectual climate. Quite the reverse, indeed, for as far as categories and methodological principles are concerned, the study of letters was subjected to the varying influences of the

intellectual fashions of the day, of philosophical theorizing, and all the more so because, now that linguistic scholarship was no longer preoccupied with its own principles, philosophy concerned itself deeply with language. For rationalism, encouraged, *inter alia*, by Bacon's encyclopaedic scholarship, had pretensions to universality; and the extension of the power of linguistic thought under the humanists had finally posed a problem which later philosophy could not avoid, much as it would have wished to do so.

The humanists based their studies on language, not on logic; they were men of letters, not philosophers. Apart from such approaches and associations as those described, for example, in the case of Valla, humanism was respectful of authority, and kept its distance from the strife of religious passions. This is how it came about that humanism was, so to speak, driven off the rails and pushed aside by Renaissance ideas. The Renaissance had a keenly antagonistic spirit of paganism, and in this respect humanism was much closer to scholasticism, which in turn had trodden in the steps of the "synthetic"[68] Fathers. Scholasticism and humanism shared many features in their principles and aims, but in fact their differences lie in their apparently identical point of departure. The accepted basis for both is the authority of the language of books and of the Scriptures. Here the humanists discovered more original textual authorities. The aim the two movements set themselves was schooling, for the schoolmen the complete Christianization of Europe, for the humanists the growth of culture. In the case of humanism the transformation of culture by the introduction of printing must not be overlooked.[69] The realization that one's voice did not die out into silence between the grey walls of a chapterhouse, but that one had the whole world as one's readers must certainly be noted as a powerful stimulus for humanism.

Humanism may be regarded as a primarily language-orientated (or 'lingual') movement, just as we speak, for example, of a social movement (before and after 1900), of a political movement (before and after the French Revolution). Such movements can be of greater or lesser compass, may affect whole continents, or single nations, or even social classes. But it seems that they always arise from an appeal to a special human functional activity, or to a group of such activities, or to a subordinate feature of one such activity.

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[68] 'Synthetic' in the association of pagan and Christian patterns of thought.

[69] For comparison, consider the influence of journalism, film and radio [not to mention television and electronic data-processing—*translator*] today. In my opinion, we are generally too much inclined, in characterizing an age, to lose ourselves in theoretical and abstract analyses, and to overlook or undervalue facts which stare us in the face.

It is possible, also, to speak of a "techn[olog]ical" age *(technisches Zeitalter)*, of "the age of the child" (in terms of paedagogy), etc. It would be possible, in accordance with differences in preferred functional activity, to establish a comparative synchronic characterization of nations based on an analysis of groupings of functions. It is not meaningless to speak of the powerful aesthetic sense of a nation, or of its lively sense of justice, of its sentimentality, of its sobriety, etc. Such an inquiry would coincide very closely with an inquiry into the ideals, or norms, of a culture.

The humanists' view of the normalizing functions of language is uncertain. On the one hand, humanism is characterized by the objectivity it shows, in Italy above all, in its attempts to establish a conformity with ancient models; and there was always a question among humanists, not in Italy alone, whether, for example, the writer should go beyond the vocabulary of classical authors, and if so, how far—conformity, in other words, claimed imitation as a fundamental rule of linguistic usage. On the other hand, we have to reckon, especially in Valla, with a consciously subjective stylistic norm of unmistakably aesthetic nature. Sometimes, moreover, following the lead of Petrarch, it is excessively individualistic: to each his own style, one, that is, fashioned after his own canon of beauty. In early humanist lyric poetry we may also note a sub-functional activation of the expressive and affective use of language. The more emphatically humanism entered the lists against the sterile dialectic of the schoolmen, the more the centre of gravity of its use of language came to lie in the employment of rhetorically effective utterance containing elements with which to move and influence the listener and the reader; it is only in this way that language becomes "living" language for the humanist.

In north-west Europe humanism flowed at first in the existing channel of the teaching activities of the Brethren of the Common Life. The quality of language as an effective instrument, in which the humanists' revival of language centred, made humanism eminently suitable for adoption in the school world of the Low Countries and surrounding areas. While the aesthetic criterion maintains its position, the influence of ethical values which was already present in the north bore upon humanism (see Mestwerdt 1917: 78-174). Language is measured by ethical standards, for by these it is assessed for its value in education. This is consistent with the fact that the element of rhetorical organization in the renewal of linguistic usage, which was held in high esteem in the south for its effectiveness in moving the hearer, was honoured in the north rather for its edifying and educational value.

This establishes clearly that there are good grounds for regarding the lin-

guistic tendencies of the humanists as a form of functionalism. It is not on account of what language "depicts" or "represents", of its "suppositions" or "significations", or because is the "vehicle of thought" (*vehiculum cogitationum*) that humanism makes its conquests, but on account of what language does, what it achieves.[70] This, at all events, was the message of humanism: language is not a vision reflected from a tranquil pool, but a positive action with which in a certain sense objects and men can be controlled. Hence, especially at the beginning, and expressed in traditional terminology, language is rhetoric; in the footsteps of Cicero, but above all of Quintilian.

In the discussion of humanism a distinction was only once drawn between making language the basis or source of knowledge ("linguism") and concentrating on the use of language ("lingualism"). The first is the attitude of a single extreme humanist (Valla), who denies other functional manifestations the right of independent existence—this relates in the first instance to analytical thought, in the interests of subsuming or, for that matter, of blending these functions in that function of language which is primarily considered to be rhetorical. The other attitude applies where humanism is capable of using language freely, and of thinking freely of the supremacy of "dialectical" διά-voια (thought). It is, however, difficult to apply these distinctions thoroughly, because the humanists so rarely thought their views through to the end in theoretically explicit terms. This is not surprising, for humanism is indeed not primarily a movement in modes of thought, but a movement in language. Humanists are above all users ("functors") of language, not theorists of linguistic function, and they lay emphasis on the practical use of language, not on views of language.[71]

Humanism vindicated the autonomy of linguistic reality, in contrast with scholastic intellectualization, and in doing so vindicated the fundamental independence of all linguistic thought. It did this in practical rather than in theoretical terms. In the heat of the polemic between language and logic the notion of appropriateness (*suum cuique*) had little chance. But this was the only rational ground for a truce. Logic soon re-established its predominance, but did so with other weapons than mediaeval thought-processes (*intellectus*).

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[70] 'Achievement' is not necessarily to be taken here in the sense of Bühler's *Leistung.*

[71] This distinction is excellently handled by Reichling (1935, *passim*).

THE RENAISSANCE

Critical attitudes towards Language — Bruno — Bacon

L IKE HUMANISM, the Renaissance marks a resistance to the mediaeval view of the biunity of language and thought. But each movement does this in its own way, and with different motives; and the two trends may also be characterized and distinguished in linguistic matters.

Humanism is like a fairy-tale prince, indignant at finding his Cinderella, language—descended of the noblest stock and heiress of an imperial dynasty —dressed in rags and downtrodden in the house of scholasticism, neglected and forgotten in the chilly servants' quarters of scholastic thought. He raises her from servitude, brings her beauty to light and sets her upon the throne. The Renaissance beats at the door of Scholasticism with a totally different challenge, namely to demand a guide to truth. Or rather, western man did once knock at this door to ask for counsel and direction for a way of life. But in vain. The householder, thought, said he was "not at home", and sent his double and substitute, language, to the door. And Renaissance man turned away, having received words instead of assured certainty and certain assurance, words for things, as he might receive stones for bread. That is why the seeker after knowledge railed in his disappointment, trembling with rage at all authority; he had chosen his own way, and for this reason he had devoted himself to independent and direct investigation of objective reality, and above all the reality of natural phenomena, seeking at them for the rebirth of his own identity and his own real existence. Renaissance man is tired of language; all he wants is facts, not words, words, words!

Thus the opposition to the mediaeval cohabitation of language and thought under one roof among the humanists and in the Renaissance proper were two different things. I have already described humanism in outline; the fundamental role of language is naturally much smaller for the Renaissance, and when it appears, like humanism, to refer back to classical literature, it is in fact concerned with the pagan content of that literature, disregarding the

linguistic shape in which this content is clothed, and unconcerned whether the clothing is beautiful or otherwise. In this way the Renaissance leads to natural philosophy, while humanism leads to literary and linguistic studies.

At the very source of the Renaissance, and in its fundamental aims, there lies a critical view of language. Mediaeval nominalism had merely criticized knowledge, directing its attack by way of language, in effect saying to knowledge, "You are vague and untrustworthy, for you are no more than language"; the Renaissance, on the other hand, says to language, "You are an imperfect representative; you must be purified, if you are indeed to be of service to thought." Humanism, also directing its remarks to language, had said "You are free, be yourself; you may take your seat on the throne of thought: you are entitled to do so, for you shape the world and sustain it; the law to which you subject mankind is a barely perceptible burden."

I concur in the opinion of Burdach, Cassirer and others that the Renaissance aimed at the rebirth of free, sovereign man. It turns both against Rome's ecclesiasticalization of the concept of rebirth, and against the Reformation, which looked forward to the active presence of God. The Renaissance is profoundly reverent in its attitude to life and the world, but consciously anticlerical and anti-revelatory, and sometimes deliberately pagan, opposed to tradition and to any sacred or profane authority of the word, being intent upon a direct investigation of things and of nature.

Before going on to discuss those men of the Renaissance who have left us views about language, it is desirable to point out a unique combination of ancient conceptions presented in Renaissance thought. The interest of the Renaissance in ancient pre-christian philosophies not only gives fresh currency to certain facets of Epicurean and Stoic philosophical tenets, it also combines some which in the history of these philosophical systems were opposed to one another. The Stoics had offered an ontology in which an anti-materialist theory of energies was combined with determinism; Epicureanism, on the other hand, had proclaimed a homogeneity of material in its theory of atoms, combined with an anti-deterministic tychism, i.e. a theory of randomness. But as early as Pomponatius (1462-1524) we find a combination of Epicurean materialism and Stoic determinism, for he both denies the possibility of incorporeal spirits and sets his face against the theory of free will. He cannot call upon Antiquity to back this combination—showing himself by this free and independent attitude to classical models also to differ from the humanists— since Antiquity simply does not know this combination; but the combination we have noted here will prove to be useful in our further investigations.

The movement known as the Renaissance begins at about the middle of the fifteenth century (the Quattrocento) and continues through the sixteenth century (the Cinquecento) and the early decades of the seventeenth century.[1] The Renaissance, moreover, was from the beginning less closely tied to Italy than humanism had been, and the progression from speculative philosophy to scientific philosophy and investigation, in particular, was a northern phenomenon. Some of its leading figures, in historical order, were Pico della Mirandola, Pomponatius, Macchiavelli, Copernicus, Paracelsus, Nizolius, Telesio, Montaigne, Bruno, Brahe, Bacon and Kepler. Galileo does not appear in this list; he is a mathematical or mechanistic rationalist. Only a few of them made statements about language and theories of language, and we shall be looking at these.

The foundation of the Platonic Academy (*Academia Platonica*) at Florence in 1459 is perhaps the first epoch-making act of the Renaissance. This institution is at the same time a model of a firm association between humanist and Renaissance attitudes. On the one hand the primarily philosophical tendency of this academy, distinctly pagan in the way it developed entirely from imitation of ancient Roman models, was completely of the Renaissance, but on the other hand, the accompanying features of literary elegance, rhetorical usage and cultural edification had humanistic qualities.

In these circles, Pico della Mirandola (1463-1494) turned expressly towards humanism in the admiration he showed for Antiquity. Central to his thought is the worth of man (cf. his address of 1486); man can decline into a beast, but also achieve rebirth as a divine being. In his view, truth and science are for all time, and not the monopoly of Romans or Greeks. Mirandola immerses himself in the magic of the strange writings collected in late Hellenistic times under the name of Hermes Trismegistus, largely Egyptian in origin and the source of Arabic wisdom; he was also interested in the Kabbala and neo-Pythagorean number-mysticism.

At the time of Mirandola's death, Theophrastus Bombastus Paracelsus (1493-1541) had only just been born at Hohenheim. He would one day teach that all knowledge is self-revelation by nature, all ability the effect of nature. The highest aim of man is the freedom to choose his way of life, the "archeus".

It would be a radical misconception to disqualify this early stage of the

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Renaissance solely on the basis of what seems to us in the twentieth century to be its bizarre, fantastic and bombastic qualities. It should be seen rather as an indication of the way the human heart, trembling with expectations of discovery, plunges into the deepest of waters, takes on the hazards of the longest journeys, and does not shrink from storming the heavens. These two men do not set the character of the Renaissance, but their new spirit, entirely different from that of the humanists, may readily be detected. When the storms of the early years of the Renaissance died down, a phase of criticism set in—self-criticism, and, *inter alia*, criticism of language. But the basis is the same, a direct self-reliant quest for power and certainty over and in the world, and a searing, hubristic passion for the resurrection of sovereign man.

And now let us examine the implications of the Renaissance for language.

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An approach to Renaissance thinking has been noted in the humanist Valla: humanism and the Renaissance alike bitterly oppose scholastic dialectic, but their motives are different. In place of pedantic, hair-splitting dialectic the humanist sets up disputation, a refined art of dialogue: Vives devotes a special treatise to this as a means of revealing truth and falsehood in pure, clear, natural and graceful language—we may think, also, of the Socratic tenor of Ramus' argumentation. The maxim "Nothing but good may be said of language" may serve as a distinctive mark of the humanist. In other respects he might very well adopt the watchword of the Renaissance: "Back to reality and to the investigation of nature!" For the humanist, however, the function of language remains the art of determining (*examinandi*) the true and the false— or of explaining (*explicandi*), as Vives puts it. And knowledge of things (*cognitio rerum*) derives either from literature (as in Erasmus) or from language (as in Vives). The glory of knowing is that it is language. In Vives we found a theory of signification which had a very modern ring, setting out to show that all knowledge comes from language. The close superficial resemblance of this undertaking to the theoretical systems of terministic nominalism is obvious. But there is a great difference in spirit, for the humanist holds that knowledge owes its meaningfulness to its language-like procedures, and he looks on this linguistic element as the greatest sense and achievement of knowledge.

We see a different attitude in Renaissance scholars when they complain that the syllogistic argumentation and thought-processes of the schoolmen were inevitably sterile, since the men of the Renaissance, to begin with at least, regarded the concept as no more than a sign for the object, while scholastic realism offered, in place of any account of objects on the basis of

direct observation, explanations which were no more than words repeated parrot-fashion from books, having no basis in anything real, i.e. resting on hallucinations and airy speculations.

In expressing such views, the Renaissance adopts the proof of nominalism in form and intent. It is here that negative criticism of language arises. Reduction to words is an abuse and weakness of thought; and in this view lies, indirectly no doubt, but none the less tellingly, a slight on language, for the Renaissance considers that language cannot approach reality, cannot represent it, and thus cannot be a judge of truth and falsehood (*examinator veri et falsi*), as humanism had maintained. The man of the Renaissance gives precedence to an immediate controlling contact with reality; if this contact is to give knowledge, it must be free from all language, for language damages this contact and therefore contaminates its accuracy and truth. The humanist, on the other hand, claims that the contact can only be made by pure language, for this prevents damage; expressibility in language gives honour to thought.

Arguments taken from the semiotics of terministic nominalism can clearly be found both in humanists and men of the Renaissance. The difference is that the one school constructs a positive evaluation of language from this dependence, while the other finds in it grounds for negative criticism.

In his *Antibarbarus Philosophicus sive Philosophia Scholasticorum* ("The Philosophical Anti-barbarian, or the Philosophy of the Schoolmen", 1553),[2] Nizolius (1498-1576), a contemporary of Vives, provides an example of a development of ideas which steers a middle course between the attitudes of the Renaissance and humanism. The purpose for which he reverts to nominalist criticism of the realists is the same as that of Occam and his predecessors and followers: to confirm the unique reality of individual objects. There is no reality corresponding to so-called universals, and they are therefore superfluous and misleading as items of knowledge. They are serviceable and useful only as significative generalizations, as one-word summaries, as convenient verbal expressions. It will be seen that Nizolius' view is close to humanistic evaluation of language: language is useful in helping to form a summary, and

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[2]   Also known as *De Veris Principiis et Vera Ratione Philosophandi contra Pseudo-Philosophicos* ("On the True Principles and True Method of conducting Philosophy, against False Philosophers"). Re-edited by Leibniz in 1671, and printed in Gerhardt's edition of Leibniz's works, (1875-1890) IV: 111-127. Nizolius is so much of a transitional figure that it is possible to consider him as a humanist with a tendency towards Renaissance views; but in a later work, *Observationes in M. T. Ciceronem* ("Observations on M[arcus] T[ullius] Cicero", 1555) he may be considered to be a humanist.

makes a summary manageable. But the logical criterion, modest though it is, remains dominant: a summary marked by a linguistic expression has no foundation in objects and facts and their unique reality; it is no more than a sign, one on which, in view of its inexactitude, one cannot logically rely. Therefore some kind of propaedeutic linguistic training must precede the exercise of philosophy, to reveal the comprehensive character of universals as linguistic.

An older contemporary of Nizolius, Fracastoro (1483-1553), had evolved an epistemology in which an attempt was made to describe the process by which a concept develops.[3] In Zabarella (1532-1589) analysis of the process of cognition is revealed to an even greater degree. Association and differentiation, combination and separation are the principal factors in the acquisition of knowledge. Nizolius takes a middle position between these theories, and an associated train of thought underlies his concept of comprehension by summation. Julius Caesar Scaliger, too, is of this age, and his method, noted above (p. 172), of starting from the smallest elements is perhaps influenced by such considerations. It was shortly afterwards, but only after scientific thought had acquired a mathematical basis, that the notion of deliberative combination and separation, viewed as addition and subtraction, were to become an important factor in Hobbes's discussion of his concept of the sign.

Fracastoro was a physician and scientist, and Cassirer calls him the first representative of Italian natural philosophy. He was, in addition, one of the most important transmitters of the nominalistic theory which was noted as an active, if only minor, component of Nizolius' thought.

Telesio (1509-1588), than whom few were more strongly anti-Aristotelian, was the founder of the Academia Consentina at Naples, the centre where empirical scientific investigation was first carried out. It was here that opposition developed to the fantasizing speculative tendencies of the previous generation of Renaissance scientists. Here the Aristotelian principle of substance and form was replaced by one of substance and energy. Stoicism was a great influence on the mental attitudes of Telesio and others like him.

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[3]   According to Cassirer (1906: 210), who was the first to draw attention to the place of Fracastoro in the history of epistemology, Fracastoro sets out from the symbol, which is to be understood in the Occamist sense: "Like William of Ockham, Fracastoro now distinguished concepts of first and second intention, of which the former apply directly to external objects, the latter only to our statements about objects, thus emanating from a reflex action of the understanding upon itself."

Cardano (1501–1576), another physician, subsequently mathematician and philosopher, was, in spite of his official respect for the Church, as deeply committed a man of the Renaissance as Telesio—and Telesio, too, eventually made his peace with the Church. The masses, he held, must be regarded as stupid, and therefore held in subjection to the state; and for that reason no scientific transactions were to be reported in the vernacular, and dogmas must be strictly imposed. The ethos of this thinker represents a vast change from humanistic thought, especially from that of Erasmus' friend, the Utopian Thomas More. Cardano wished to see language used, not to give clarity, to explain and enlighten, but, on the contrary, to mislead and deceive. The contrast between this and the ethical basis of Erasmus' thought is obvious, for Cardano cynically advocates the abnormal use of language in the service of unscrupulous political policy. He sees society as a sick organism which the doctor must manage with doses of deceit. Macchiavelli, thirty years his senior, had already described this attitude, but in the case of Cardano the emphasis falls more particularly on the use of language.

Politics and the study of nature enjoyed a preferential place in Renaissance thought, and are frequently found in association in the philosophers themselves. Copernicus (1473–1543) and Paracelsus (1493–1541), however, confined themselves to the field of nature, as did the later generation of Tycho Brahe (1546–1601), Galileo (1564–1642) and Kepler (1571–1630). In Copernicus' astronomy the newly-gained freedom of enquiry was manifested in an astonishing, world-shaking way. In this science mathematical calculation gradually underwent a change of form, and became, instead of arcane Pythagorean lore, a scientific method of counting and measuring. Modern man has no more distinguished ground on which to base his triumphs. Kepler's laws of planetary motion were from the beginning couched in a modern mathematical form, and Galileo is not simply an investigator of nature, but as much a philosopher as a prophet of advanced mathematical technique. With Galileo and Kepler, however, we enter a new period which will have to be treated separately.

Let us turn for now to the philosophical latecomers of the Renaissance, Bruno, Francis Bacon and Campanella, who combine their scientific conceptions with theorizing about ideas on language and culture. Last to be considered will be the northerner Bacon, since it was only towards the end of the period that the centre of gravity of European intellectual life shifted to the north. There will also be some special observations about Montaigne.

Giordano Bruno

Giordano Bruno (1548–1600) was perhaps the most characteristic represen-
tative of the revolution in thinking which undermined and overthrew old cer-
tainties, and shone like a pillar of fire by night. A Renaissance philosopher
through and through, he carried about in his astoundingly comprehensive
mind, even if only by implication rather than by direct statement, an attitude
towards language which is all the more remarkable for seeming to belie the
the appraisal of Renaissance scholars so far given, and for that matter clearly
confirmed by those whose pronouncements about language have so far been
examined—the view, that is, that the Renaissance was to mount a criticism
of language, and to do so on the grounds that words offer no security, and
that the certainties of the Schoolmen of the past were no more than words.

Even in its early stages, the Renaissance had freed itself from the
thraldom of the scholastic domination of the word, but the tone of its
conviction, as with any movement which begins as a reaction, was initially in
the main negative. Its slogan, "Find the facts" was, to start with, more of a
battle-cry against scholasticism than a watchword of its own activity. But in
the course of time the new thinking had in fact found new approaches to the
realities of nature; and now it could turn round and confront the façade of
the old prison from which it had once escaped to freedom, triumphantly
bearing newly acquired factual insights derived from objective investigation,
all this being the brilliant result of the free thought of sovereign man. It no
longer had to protest against false certainties, false because they were merely
verbal; now it had new certainties of its own to proclaim. The Renaissance
had now gained a positive mission; and it is as a missionary and hero that
Bruno presents himself to the world with his self-assured and happy gospel.
Happy? "Happy in sadness, sad in happiness" (*In tristitia hilaris, in hilaritate tristis*)
is a saying of this apostle. But the life of passion, of heroics, of exile, was to
end in tragedy, at the stake on the Campo di Fiori.

The lines separating the modes of being, understanding and signifying (*modus
essendi, intelligendi, significandi*) had been practically invisible in mediaeval realistic
thought. Yet the place of the several members had been clear: first the objects
(*realia*), then the understanding (*intellectus*, representing the Greek διάνοια or
νόησις), and finally language (*sermo*), or the sign (*signum*). The third member
was post-intellective, or 'metanoetic'. For the realists of the Middle Ages lan-
guage was a reliable and accurate instrument, but a metanoetic one, used to
convey thought to others, the uttered word (λόγος προφορικός) of tradition.

The word as an ordering device (λόγος ἐνδιάθετος) was, by contrast, for-
gotten. Indeed, if any attention was given to it at all, it was necessary, now
that language and thought were almost always one and the same thing, to
uphold the interpretation that, rather than thought operating as a discrete
process, *logos* acts in two ways, first ordering and arranging reality and after-
wards uttering it. Mediaeval man had no eye for the unique function of lan-
guage and sign in thinking.[4] There had, indeed, been one exception: Ramón
Lull, as we have seen, had used language as an instrument in thought and for
the use of thought—though this was regarded even in his own time as extra-
ordinary; and he had done so in a technical way; he used language as his
instrument and produced results in thought. If a way of thinking like that of
Lull discussed above (pp. 56–61) is to have any credibility, a fundamentally
realistic conviction must necessarily be adopted as a basis. However, a the-
oretical insight into the character of such linguistic usage in conditioning
thought (i.e. giving it ennoetic character) was obviously not an attendant
necessity. Lull did not see things in this way, and a clearly conscious aware-
ness of this process had to wait until the time of Hobbes. If Lull had given
theoretical consideration to what he was doing, he would have been able to
observe how it is possible to proceed from the old *logos*—taking *logos* here in
accordance with the mediaeval notion to be a glotto-ennoematic combination,
i.e. one of speech and thought-patterns—to the new *logos*. In fact, in his ap-
paratus he manipulated the words for concepts in the interests of oratorical
ends; in this way an apologist could never be at a loss for words.

The Renaissance was everywhere predominantly negative, anti-scholastic,
or, where it was generally sceptical—as in the case of Montaigne, for instance
—the familiar criticism of language made by the terminists on the basis of
nominalistic epistemology is to be found, whether or not this is under Epicu-
rean influence. The nominalistic assimilation of thought and language is

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[4] Rotta (1909: 104–110) devotes a substantial passage to 'internal speech' (*sermo interior*) in
patristic thought. The patristic tenet that thought is nothing but the arrangement of words
(*cogitatio nihil aliud est quam verbi formatio*) is the parallel to the mediaeval view that thought is
nothing but interior speech (*cogitatio nihil aliud est quam interior locutio* [Bonaventura, *Sententiae* II,
3.1]). Aquinas' remark on metanoia (*verbum nihil aliud quam cogitatio formata*) is in full agreement
with the last maxim. If we consider the ethos, implicit in the very term scholasticism, of the
didactic attitude of mind which had been produced by the schools of converted North-West
Europe, and of areas awaiting conversion, this unidirectional view of the communicative role of
language is not surprising. When the notion of the creation of thought through language enters
into linguistic theory or practice, this is not the adaptation of patristic ideas, or of those of
Antiquity, but an independent effect (as e.g. in Lull), or a completely modern conception (as e.g.
in Hobbes).

accepted even by humanists; but their motive in making this assimilation is
to be able to claim with satisfaction (and in contrast with the original inten-
tions of the nominalistic arguments) that thought and knowledge are essen-
tially language, or at least a system of signs.

It was hardly to be expected that there would be a close association of
nominalism, as generally accepted by the men of the Renaissance, with the
realist's view of language implicit in Lullism. What is the place of nominal-
ism, then, in Bruno's conceptions? Bruno is a pantheist; for him God is
present in, and constitutes, the whole unbounded universe. In this the new
view of the world presented by Copernicus is the basic component. In the
minimal units, the monads, the microcosms, God is reflected as the omni-
present driving force. The dualism of form and material becomes a bloodless
piece of theorizing in comparison with the tempestuous positiveness with
which Bruno proclaims the world soul as a primary divine principle, a
principle which is present even in the smallest object. Hence the free human
personality encompasses the whole universe in its consciousness; the creative
dynamism of the universe is concentrated in imagination in the human mind.

The negative influence of nominalism and scepticism on Bruno is slight.
He is too positively, too abundantly assured of certainty for this. His certainty
is more "realistically" founded than that of any mediaeval dogmatist. He is
a prophet, like Ramón Lull before him, but a prophet in another cause. How-
ever, he lacks insight into the rationale of mathematics and its system of signs,
the insight, that is, into the reliable use of the mathematical sign as a source
of knowledge, which his younger contemporaries Galileo and Kepler could
have given him, the insight which might perhaps have made him critical of
the linguistic usage of the *Ars Magna*, and which could in principle have come
to him from Copernicus.[5] Bruno remained faithful all his days to the re-
markable linguistic usage of Lull. After a short stay in Geneva he moved in
1578 to France, teaching first in Toulouse, and later in Paris. In Paris he
lectured on Lull's *Art.* This earned him the admiration of Henri III of France
and opened court circles to him, and through their introduction he lived the
life of a courtier and cavalier for a few years (1583–85) at the French Embassy
in London. He opposed Aristotle, who was dominant in all pulpits, Catholic

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[5]   This is a shortcoming which has been noted with surprise by practically all those who have
examined Bruno's thought. In mathematical matters Bruno did not advance beyond the ideas
of Pythagorean magic. He even makes an explicit attack on mathematicians in his *Articuli centum
et sexaginta contra mathematicos et philosophos* ("One Hundred and Sixty Articles in Opposition to
Mathematicians and Philosophers" [1588]).

and Protestant alike, but he received no help from the humanists. On the contrary, he regarded them as archetypal pedantic burghers imbued with self-satisfied verbosity.[6] Bruno's sphere is the swashbuckling vainglory (*hubris*) of the adventurous courtiers of his day; he sets himself up as a *grand seigneur*, writes his sonnets and indulges in amorous exploits. It was here, too, that he wrote his *Degli eroici furori* ("On Heroic Frenzies") in 1585. This is the age of Shakespeare; Erasmus and Vives for him are not decades, but centuries out of date.

After his stay in England he went to Germany, the homeland of his sources, Albertus Magnus, Nicolas of Cusa, Copernicus, Paracelsus. Lull was his introduction everywhere, and it was Lull who, from his grave, held Bruno's fate in his hands; for the Venetian aristocrat who lured him to Italy and the Inquisition was looking for his instruction in Lull's art of memory.

Few humanists could match Bruno as an artist in words, but even in this respect he differed from them fundamentally, for his spirit was imbued with passion as volcanic as the mountains at the foot of which he was born; he was more of a human being than a thinker, yet less "humane" than the humanists, who were by then shrinking into arid intellectualism. His exploitation of "realistic" anti-realism showed Bruno to be in full sympathy with the imminent incapsulation of language in thought, an incapsulation which only a short time previously humanism in its youthful ardour had undone.

Two strands may be observed in Bruno's use of Lull's *Ars Magna*. The first is the way he exploits it for its dazzling but bogus mnemonic devices, in order to gain access to academic circles and high society. The second strand is the way he takes it seriously and tries to apply it to a renewal of logic and rhetoric. It is naturally this second trait which interests us.

The poetic and figurative nature of his thought was from the very beginning in harmony with the unbounded and varicoloured riches of the possibilities of Lull's mode of thought. True philosophy for him is music, poetry and painting in one; true painting is at once music and philosophy, true poetry at once an expression and a construction of divine wisdom.[7]

His work *De Umbris Idearum* ("On the Shadows of Ideas") is the first

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[6]   Cf. Dilthey, "Bruno" (1914: 306): "But the antagonist of Aristotle was far from seeking an alliance with the humanists of the day. From his youthful comedies on, his butt was the pedant, and it was from the empty grandiloquent phrasemongers of the time that the character of the pedant was sketched."

[7]   *De Compositione Imaginum,* quoted by Überweg (1926: 51).

systematic exposition of his philosophy, and also an attempt to establish Lull's *Ars Magna*.[8] It was also the work which gained for him the patronage of the French king. A fuller version of the title,

> *A Proclamation of the Shadows of Ideas, including the Arts of Investigation, Invention, Judgment, Disposition and Application, Explained in Accordance with the Implication of their Text, and not with the Commonplace Operations Carried out by the Memory, Dedicated to Henri III,*[A]

is an indication of the connection of his theoretical aims with Lull's system of combination. The *Art* did not enjoy a good reputation, and the express assurance that he will not treat of the commonplace operations carried out by the memory indicates resistance to this state of affairs.

Bruno deals with his project in a twofold form and manner (*sub duplici forma et via*). The first mode is "a higher and general one, as being both designed to order all the operations of the mind and also as being the principal one among many methods …".[B] He supplies two "wheels" for this purpose, the first with thirty aims (*intentiones*), the second with thirty concepts (*conceptus*). The second method of treatment (Bruno [1582]1886: 19) is "a short cut to a reliable method of preparing the memory by artificial means" (*via contractior ad certum Memoriae per artificium comparandae genus*).

The content of the aims and concepts, as also the instructions for the use of the wheels—this, incidentally, is the same as with Lull's—is of less interest to us than the elaboration of his views on what the title calls "internal writing" (*interna scriptura*). I have not located any more detailed account of this in the work itself. The expression *"interna scriptura"* in the title remains the only indication of Bruno's sense of his (ennoetic) use of language as a component of thought. He does, indeed, repeatedly call the concepts marked on his wheels words (*voces*), but otherwise Bruno speaks of internal reading (*interna lectio*), and expressly equates this with understanding (*intellectio*).[9]

But while Bruno seems not to have given a full account of internal writing

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[8]   This presentation is among the works of the school of Lull, inasmuch as it gives mnemonics as a basis in metaphysics and epistemology, and this is applied in the second part as an art of memory. Inasmuch as man, who, as an imperfect being, is incapable of absolute truth, has any view and conception of nature, he possesses in his views and conceptions no more than the shadows of ideas. These shadows are neither substance nor accident; they are ideas of substance and accident. The knowledge which man gains from the shadow of ideas is the more complete the closer it approaches the primal unity which it cannot attain, and the less complete the more it tends to be lost in the sensible and material. Cf. Überweg 1926: 51.

[9]   Cassirer (1906: 346) says, in discussing Bruno: "True comprehension is therefore always an internal reading and understanding". This is clearly a quotation, but no reference is given.

or internal reading, it may be considered inherently probable from his use of these terms that he was aware of the ennoetic use of language. His art of internal writing and internal reading builds reliable concepts from the shadows of ideas, which he regards as Plotinus had done. This is not the place to enquire how this notion of what might be called the spontaneous generation of thought led him to abandon the principle of gaining knowledge from observation advocated by his admired Copernicus. Since, however, the tradition of ennoesis was transmitted via Bruno from the realist Lull probably to Hobbes and certainly to Leibniz, it is important to note at this point once again that mathematical calculation and its role in scientific investigation remain a closed book to him,[10] for the assimilation of the mathematical sign with the concept would set a limit to ennoesis in Hobbes and Leibniz. However, it was in Bruno's contemporary and fellow Renaissance scholar, Campanella, that some awareness of this procedure begins to make itself felt.

Thomas Campanella

In Bruno's younger contemporary Thomas Campanella (1568-1639) we may see the Renaissance passion for the sovereign human personality, a law unto itself and free of all external laws, beginning to cool into the simple desire of rationalism for certainty. After living for some thirty years in ecclesiastical imprisonment, he enjoyed a peaceful and secure end to his days under the protection of Richelieu, in contact with Gassendi and the Mersenne circle. He devotes more space than does Bruno to his political ideas—witness his *Città del Sole* ("City of the Sun"); he makes self-preservation, security and power the highest ideals of his life. To these he adds self-knowledge—"I know for certain that I am", is his maxim—and control over natural forces. Natural science and her handmaiden, mathematics, are the means employed. Nature is to be examined not from books but directly; books are no more than dead copies of life, nature itself is the living book (*codex*). But volition (*velle*) and ability (*posse*) are subordinated in his philosophy of nature (*philosophia realis*) to knowing (*nosse*). His projection of an ideal state with its speculations on culture and paedagogy, deriving from the humanists (Thomas More among others), reveals a set of Renaissance ideas far removed from the cynical political ideas of Cardano. In his assessment of the value of mathematics for science, in the

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[10] Bruno already used such terms as "monad" and "mirror of the universe". Cassirer (1906: 581) disputes Brunnhofer's account of the extent of Bruno's influence on Leibniz. Brunhofer, in Cassirer's view, gives too much weight to verbal resemblances in formulas and expressions.

pre-Cartesian nature of his basic assumptions and in the subsumption of *velle* and *posse* under *nosse*, he is on the verge of the transition to rationalism. In his rejection of knowledge derived from books he is unmistakably anti-humanistic, and, in addition, probably critical of language.

While this supposition is drawn from Campanella's general philosophical development, it is borne out by his philosophical grammar, as reproduced in his *Philosophiae Rationalis Partes Quinque vid. Grammatica, Dialectica, Rhetorica, Poetica, Historiographia, iuxta Propria Principia* ("The Five Parts of Rational Philosophy, viz., Grammar, Dialectic, Rhetoric, Poetics, Historiography, according to True Principles", 1638), which first appeared a year before his death. The preface is dated 1635.

A significant hint of the weight allotted to the various subjects may be seen in the compass of the writings: the Grammar receives about 150 pages, the Logic almost 500, the Rhetoric approximately 80, Poetics about 150, and Historiography 15. The Grammar, which in fact deals exclusively with Latin, begins by distinguishing a civil grammar and a general philosophical grammar, a critical distinction which was shortly to recur in Locke. Civil grammar is a skill (*peritia*), while philosophical grammar is a science. His contemporary Vossius was to call the grammar of an individual language an art, and general grammar, i.e. grammar common to all languages, a science, thus showing that he had learnt from Vives and J.J. Scaliger, for example, to reckon with a plurality of languages. The distinction made by Vossius, however, is not critical, and by no means resembles Campanella's. What is more, Campanella's distinction between civil and philosophical grammar has even less to do with the old humanistic contrast between "vulgar" and "classical". It is, indeed, the classical humanists who, according to Campanella (1638: 3) occupy themselves with the skills of what he regards as the critically unworthy civil grammar:

> It depends on the authority and linguistic usage of eminent writers. [But] philosophical [grammar] depends on its system, and this grammar has scientific value. Vulgar grammarians [sc. the humanists!] condemn it; ... they hiss when we derive words from objects, rather than from authors. They condemn Duns Scotus [sc. the Speculative Grammar of Thomas of Erfurt], Thomas Aquinas, and others who speak rather from the nature of the object.[C]

We may pause at the fact that Campanella here seems to have a good word, even if indirectly, for Thomas Aquinas and the realistic metaphysics which led Speculative Grammar to set a high value on language. Where, then, does his criticism of language lie? The approach here is of a totally different kind from that of Bruno and the ultra-realistic views of Lull. Campanella's evaluation

of speculative grammar flows from his proto-rationalism; he aims to assess grammar in terms of reason or of objects, or perhaps from the nature of objects; but his premature rationalism is still firmly rooted in an old-style ontology. Given that speculative grammar is certain that its categories of existence— which, incidentally, Aristotle had derived unnoticed from language—were also manifested in the modes of signifying, and that Campanella, adopting basically the same categories as a criterion, passes judgment on language—only rarely, if ever, it must be said, to disapprove, but always to elucidate—it may be said that Campanella comes to the same conclusions as those reached by the speculative grammarians. It is his aim and his terminology which are different, rather than his method.

Thus while it is difficult, if not impossible to consider this philosophical grammar as a rational grammar, it does show similar principles in the critical stance it adopts towards language and its use, not to mention towards the use of authors regarded as normative as a source for imitation. His criticism also suffers from methodological inadequacy. Its structure follows the following pattern: first, there is a discussion of regularities, then an indication of exceptions; these are followed by an exposition, which in turn ends with a conclusion to the effect that the rule under discussion is not invalidated (*inconcussa*). For example, he deals (1638: 94) with the "agreement of parts in the structure of Latin speech", and having answered the questions, "Why is anything which performs the action spoken of in the nominative?" and "Why does the verb agree with the nominative?", Campanella comes to the exception, that is, the so-called impersonal verbs. There is no difficulty with *Me delectat scribere* ("It pleases me to write"), for *scribere* stands for *scriptio* ('writing'), and is thus a nominative. But what about *Petrum taedet vitae* ("Peter is tired of life", or more literally, "[The living] of life tires Peter")? It ought to be constructed with the nominative *vita*, "as happens in vulgar speech and in other languages". There then follows this attempt at an explanation, "But the Romans used the genitive in place of the nominative, supplying either *aliquid* ('something'), as I say *aliquid boni* and not *bonum*, or else *actus*, i.e. *actus vitae* ('the act of living')".[11] This is a sample of Campanella's analytical method.

There is more to be said about Campanella's polemic against the humanistic grammarians. Their "civil grammar follows authority and use, so that it does not admit new words for new things" (*grammatica civilis sectatur*

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[11]   sed Latini apposuerunt genitivum pro nominativo, vel quia intelligitur *aliquid*, ut cum dico, *aliquid boni* [treating *aliquid* as a pronoun with a dependent genitive, not as an adjective], et non *bonum*, vel *actus*, id est, *actus vitae*.

autoritatem et usum, ut nec novarum rerum vocabula nova admittet), he says. This is an over-simplified view of humanism as a principle of imitation, though such a view did apply to a great extent in Campanella's day to the literary pursuits of humanism south of the Alps (see above, pp. 146 and 149-150). Philosophical grammar, on the other hand, follows reason. The aim of humanist grammarians in his view is to preserve words and to utter orations in a like manner, the true aim of philosophical grammarians being to devise (*invenire*) and arrange (p. 5). Humanistic grammarians are embarrassed by the fact that "the same word means one thing in one art, and another thing in a different art". Further:

> Civil grammar has age on its side, and this is the form grammarians adopt; they say that language was mature under Cicero and Caesar. Philosophical [grammar], however, does not respect the age of a language, but its rationality; it therefore embraces good words of all times ... ; [using] words for things, not things for words.[D]

Philosophical grammar creates or accepts new words, provided they are appropriate for what has to be said.

This, once again, sounds rationalistic. Campanella cannot, however, really be accounted as more than a proto-rationalist; he is still imbued with the spirit of the Renaissance, for how does he develop this point? Was he really the proponent of a new rational language, as Wilkins was thirty years later, or, for that matter, a purifier of natural language along rational lines, like Descartes, Leibniz and others? Nothing of the kind, although a new language lay within his horizons. On p. 94, in a summary on "Regularity in the languages of the nations, and in languages which might be created" (*De concordantia in nationum linguis et quae denuo institui possunt*), he says himself that creators of new languages would have to take account of his thoughts on the parts of speech.[E 12] And on p. 152 Campanella gives some ten rules which would serve for the creation of a philosophical language. Although in such places he gives clear indications that he knows of different structures in other languages, for example the lack of case or personal endings, his own work is restricted to a (rather gentle) survey of Latin, which he in fact carries out in an entirely conventional way: a book on the parts of speech, another on the structure of speech (*constructio orationis*), and a third on writing and reading (*scriptio, lectio*). It

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[12] I have made no enquiries into whether and to what extent Wilkins went into this question; but Campanella mentions it specifically in the preface to the edition of his new philosophical language.

is clear that this is in fact very different from a grammar in the form of a treatise on style and meaning like those which the earlier humanists had provided, but he has not yet reached a rationalistic view of language. Stripped of typical scholastic terminology, speculative grammar is very similar to Campanella's rational grammar. They have the same categories and forms, and the same syntax. Campanella the proto-rationalist may well have heard the clock of new certainty striking, but his contemporary and protégé Galileo would have been better able to show him the clapper—mathematics, employed as an investigative method of obtaining knowledge and mastery of the realities of nature. While Hobbes, only a few years later, was to see language as an instrumental device for calculation, it was only rationalism which achieved full proficiency in language. Campanella did, indeed, admit an instrumental aspect of language, but that derived from Plato's *Cratylus*. Indeed, he himself begins his remarks as follows: "Plato says in the *Cratylus*: A noun is an instrument denoting substance", and Campanella continues: "so the whole of grammar is an instrument", for the use of "the whole human community".[F] But he does no more.

It is instructive to compare Campanella with his contemporary Scioppius, who will be discussed later. Scioppius was a post-humanistic textual and grammatical scholar who also operated from immature rationalistic premises, but used them as a means of preserving usage. Campanella takes issue with usage and puts forward plans for a completely rational language freed from any considerations of usage or variability. It thus seems that the analysis of Campanella's grammar confirms the view that his attitude to language was that of a linguistic critic of the Renaissance, proto-rationalist opponent of the humanists.

Montaigne

Michel Eyquem, Seigneur de Montaigne (1533-1592) had a great deal of influence in France, although his scepticism acknowledges no system, even that of the Pyrrhonism on which he draws. His engaging informal tone and amiable doubts gnawed at the roots of the Renaissance as it developed, and accelerated its loss of self-confidence. The vanity of words is one characteristic, among many, of his thought (*Essais*, I, 51; [1572]1865: I, 450ff.). His basic question, *Que sais-je?* (What do I know?), is a first indication that the Renaissance is returning to the question of knowledge. Criticisms of language, direct and indirect—mostly the latter—scattered throughout his works, reproach mankind for raising and debating questions which are purely verbal.

Thus the tenor of his doubts, as far as language is concerned, is that of nominalism, a criticism which we have met at the beginning of the Renaissance, and is missing only in Bruno.

Francis Bacon

Francis Bacon, Lord Verulam (1561-1626) was a systematic thinker of great influence who stands in philosophical matters on the bounds of the Renaissance and the new rationalist order, though he may still be counted as a man of the Renaissance. In him the totally personal will for power is narrowed down to the maxim "Knowledge is Power". Bacon is a thinker to whom the great importance that is rightly his was ascribed in later ages, for example by the Encyclopédistes. And no history of linguistics can fail to mention his "idols of the market-place" (*idola fori*), but this theoretical notion can nevertheless not be considered without reference to the rest of his theories.[13]

Opposition to scholastic dialectic had always claimed that syllogistic logic delivered no new knowledge, and merely played with words. Ramus had tried to renew logic, though he set out from a starting-point in language; and Vives, Agricola and Valla had already been active in this direction. As humanists they considered that it was language that opened up the world and interpreted it. The Renaissance—Telesio and Campanella, for example—set up practical experience as the way to the practical reality of nature. Bacon, too, tries his strength on the desideratum of a reliable method of gaining knowledge, and presents it under the ambitious title of *Novum Organum* ("New Instrument", 1620). This work, together with *De Dignitate et Augmentis Scientiarum* ("On the Dignity and Incrementation of the Sciences", 1623), forms part of his largest work, the *Instauratio Magna* ("The Great Renewal"), designed as his life's work. In the *Novum Organon* Bacon offers us what we may call his logic, his epistemology and his methodology; in *De Dignitate Scientiarum* his encyclopaedia. The smaller *Nova Atlantis* ("New Atlantis"), posthumously published, opens up a Jules Verne-like prospect of a world in which the great works of nature (*magnalia naturae*) are revealed and applied for the benefit of man (*ad usus humanos*) by means of scientific collaboration in a kind of Academy of Sciences, the House of Solomon. His encyclopaedic ideas were an honoured model for the encyclopaedists; his House of Solomon was recalled at the foundation of the Royal Society of London in 1662; and Leibniz, the orga-

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[13]   O. Funke (1926: 43ff.) gives a fuller treatment. As a pupil of Marty, Funke had an idiosyncratic view of linguistic questions, and his article offered few insights for the present study.

nizer of the Berlin Academy and promoter of international scientific collabor-
ation, was an admirer of Bacon.

Bacon's notion of the "idols" has become familiar, thanks in part, no
doubt, to their popularizing and memorable names. To understand this and
other relevant views of his about language properly, we first have to see how
far the Renaissance has progressed. Bruno's assurance had been as rapidly
evanescent as it had been brilliant, and the pedestal of Copernicus' new
vision of the world and the cosmos was, indeed, solid, but it was narrow and
high. There was still immeasurably much more natural reality than this one
astronomical discovery to be investigated.[14] Bacon now proclaims induction
as the one certain way to knowledge, primarily, that is, to knowledge of
nature. Deduction and syllogistic logic are in themselves sterile and unfit for
this purpose. "Human understanding alone is, for sure, powerless in science,
since there is no natural harmony between the understanding and the truth"
(Sassen 1933: 113).[G][15] It is here, indeed, that Bacon's uncertainty begins to
make itself felt; for his aim is to achieve knowledge by means of reason:

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[14]   Although the question is in fact a concern of philosophy, it may be noted—since it is not
without significance for the present study—that the application of the term 'empirical' to Bacon's
philosophy is disputable. Such a categorization of thought cannot be applied where a thinker
professes experimental enquiry in words, but fulfils it neither in his mental processes nor in his
epistemology. This is the case with Bacon. His mental scheme unquestionably adopts the forms
of the scholasticism he attacked, and his list of examples and elimination procedures, and even
his theory of "idols" reveal that he does not, fundamentally, set out from the observation and
investigation of nature, but from given positions, previously established opinions, which survived
in him and his 'modern' contemporaries. The thought-based attitude against which he warns
with his "idols" is part of this character. If Bacon had indeed been an empiricist, the apprehen-
sion about residues of knowledge present in our brain as the result of previous thinking would
not have taken such a prominent place in his views. Only later, after Descartes and Hobbes—for
Hobbes was not an empiricist—is it appropriate to speak of an empirical opposition (as in Locke)
to the thinkers who based constructivist dogmatic theories on experience.

[15]   When, however, Sassen continues: "Therefore all hitherto accepted convictions in the realm
of science now had to be abandoned", his description of Bacon's views is more radical than
Bacon himself was—unless he is thinking only of the natural sciences, and more specifically of
Bacon's theories about them. For while Bacon's works criticize old points of view, they also
reveal acceptance of them; and his practice, e.g. in his acceptance of the dichotomy of form and
material system, is certainly not modern. Cf. also Boutroux (1929: 16f.) "In conclusion, Bacon's
'form' is nothing other than the philosophers' stone of the alchemists transformed into idea: the
great task consisted in the conversion of a given metal to generic metal, then to archetypal metal
(au genre), the 'mercury of the philosophers'. To untreated metal (métal en soi) was added Xerion,
the 'projective powder', or specific difference between one metal and another, and it was thus
that the desired metal was obtained. The philosophers' stone was the projective powder which,
added to generic metal, produced gold. Archetypal metal, the mercury of the philosophers,
becomes for Bacon archetypal nature (natura generalis), and the specific difference is the powder
added to it from the specific nature which is the aim of the experiment."

Knowledge is power.

Bacon expounds his views on the idols both in the *Novum Organum* and in *De Dignitate*. Discussion of these illusions, or pre-judgments in the *Novum Organum* begins with Aphorism 38:[16]

> Idols and false notions have now taken possession of the human mind and are deeply entrenched in it; they beset the minds of men so severely that not only is access to truth difficult, but also, once admission has been conceded and granted to truth, they crop up again in the very renewal of the sciences; and they will be troublesome, unless men are warned[17] and guard against them as far as possible. ([1620] 1857: I, 163f.)[H]

After this general characterization of what he understands as idols, he speaks of the peculiarly linguistic intrusions into thought, calling them "idols of the market-place" (*idola fori*). Bacon distinguishes, as is well-known, the *idola tribus* (idols of the tribe), based in human nature itself, *idola specus* (those of the individual man), *idola fori* (those of language), and *idola theatri* (those deriving from various philosophical tenets). Aphorism 43, on the idols of the market-place, reads as follows:

> Certain idols also come about by the agreement and mutual society of the human species, and we shall call these Idols of the Market-Place on account of the commerce and association of men. For men associate in speech, and words are imposed according to the comprehension of the masses. And so the bad and inappropriate imposition of words besets the mind in extraordinary ways. Neither the definitions nor the explanations with which educated men have been wont to defend and justify themselves in many matters have been able to rectify the situation in any way. But words obviously do violence to the mind and put things into confusion, and lead men into innumerable stupid disputes and delusions. (p. 164)[I]

The origin of the idols which have entered into men's minds (*quae immigrarunt in animas hominum*) is clearly indicated in the aphorism of the idols of the market-place—"For men associate in speech", but once the words have been internalized they become established, and thus are enabled, as entrenched thoughts (*ennoemata*), to vitiate certainty, the certainty on which the kingdom of man (*regnum hominis*) must be built.

Before going on to discuss the background of the idols (i.e. the way in which Bacon discusses language in his encyclopaedic work) and the place he assigns

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[16] Bacon's Latin texts (see appendix B) are taken topresent his thoughts in their definitive form.

[17] This is reminiscent of Nizolius' propaedeutic principle; see above, p. 197.

to language among the branches of knowledge, it is desirable to pause for a moment to consider the encyclopaedic tradition in general.

Strange as this view may seem, it was apparently correct of Rothacker to observe (1948: 5), after complaining of chaos in the fundamental concepts of the humanities and disputes about them, that "no history of the partitioning of the arts has so far been written". The question of where and how one intellectual discipline is to be situated among others is also, naturally, of direct importance for the present enquiry into the various functions of language—see Chapter 1 of this study—so that it is necessary to go somewhat more extensively into associated problems.

It seems that there are good grounds for distinguishing two encyclopaedic currents in Antiquity, two currents which are not separated from one another, but which are different in spirit. In the first place we have the Stoic division into the physical, the logical and the ethical or practical sciences. This is of philosophical origin. In the second place we have the programmatic division into the Seven Liberal Arts, which clearly derives from paedagogical practice. It is this second arrangement which the Middle Ages took over from the Compendium of Marcianus Capella (c. 450 A.D.), and which proved so suitable for satisfying the needs of a practical curriculum in the educational system of the missionary schools. The division of the Liberal Arts into the Trivium, comprising Grammar, Rhetoric and Dialectic, and the Quadrivium, comprising Geometry, Arithmetic, Astronomy and Music (including Poetics), is familiar. This division remained the foundation of scholarship throughout the Middle Ages, and where education gradually came to be organized into a university system. The Trivium is the gateway to the Quadrivium, which completes the syllabus. A certain opposition seems to have become established between the disciplines (the *artes*) of the Trivium, regarded as propaedeutic and technical, on the one hand, and on the sciences proper (*doctrinae, scientiae*) of the Quadrivium on the other; and while the *artes* were in the process reduced in status to no more than a preliminary study, their value as the foundation of all knowledge and learning was enhanced. Most obviously in the second half of the Middle Ages, Medicine, Law and Physics consolidated their position more firmly alongside Ethics and Metaphysics, the last two detaching themselves, as it were, from Theology, which had been studied from the outset. The old system of the arts was naturally subject to modifications.[18] We may speak of a limited dispute between a limited number

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[18]   Particularly the higher component, the Quadrivium. Medicine seems to have replaced music

of disciplines or groups of disciplines, when the *via moderna* (modern system) is set against the earlier *via antiqua*. It is the Faculty of Arts, particularly at Paris, which turns against Theology and its pretensions. By the end of the Middle Ages, the introduction to the Trivium had become more and more the concern of the educational institutions of the smaller towns, the grammar schools or Latin schools, as they were variously named both then and later.

As humanism gained ground there arose another controversy, as already described. It posited the primacy of the more linguistic arts within the Trivium, entailing a depreciation of dialectic in favour of rhetoric. Although the concern of the Renaissance itself to bring mankind under its sway certainly undervalued rhetoric as an effective means of winning hearts and minds, its basically antithetical stance in religious matters led it further from the earlier didactic and encyclopaedic character of humanism. Of humanism itself it may be said that it remained faithful to the system, and only modified relative values within the Trivium. The Renaissance, however, seized on natural science (*physica*)[19] as the basis of its view of the world, and opposed scholastic dialectic, not only reinterpreting it in terms of language, but also rejecting it as the basis of knowledge. To this end it made avid use of nominalist criticism, a form of criticism which is rarely, if ever, found among the genuine humanists, no doubt on account of the way it devalues language. With its cry of "Back to nature", the Renaissance, finally, required a new logic. In this way its advocacy of change was much more radical than that of humanism; and we can also see that when the Renaissance came to produce an encyclopaedic theory, as it dids in Bacon, the old systems were abandoned. Or rather, the old scholastic and descriptive arrangement of Trivium and Quadrivium gave way to, or at least is overlaid by a theoretical and systematic pattern—whether this be new, as in Bacon, or old, as in Locke (who, despite his rationalist credentials, reverts to the old Stoic pattern). This is of a piece with the predilection of the Renaissance for a theoretical approach to philosophy. It is clear from the large number of disciplines, or parts of disciplines, which are ranked by Bacon as "desirable" (*pro desiderato*) how little there remains in his programme of learning of an ordering of studies, a school syllabus.[20] There are gaps in a philosophical ordering of

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early on. It is perhaps the propaedeutic rather than academic nature of the subjects of the Trivium that made it more enduring than the Quadrivium.

[19]   Anticipated here, however, by the physical emphasis of nominalism (see Sassen 1932b: 249).

[20]   D'Alembert regarded Bacon's encyclopaedia as a catalogue of what still remained to be discovered. See Schmidt 1934, s.v. 'Bacon, Francis'.

human inquiry and learning, currently unfilled, but desirable as completions of the cycle of knowledge, a cycle that no longer described an ἐνκύκλιος παιδεία (all-round education) in the arts of a school curriculum, such as that with which the humanists, in view of their inclination towards paedagogy, had been complacently content,[21] but which rather set out to provide a division of the sciences (*partitio scientiarum*) with a philosophical basis.

In another respect, too, the new programme marks a turning-point. The New Age had brought about a powerful acceleration in the tendency towards the differentiation and specialization of the separate disciplines. Before Bacon's time it was still possible to know a great deal about almost everything. This was no longer the case; and as a result of the laification of education and the intensification of social life since the emancipation of the burgher, the number of practitioners of the sciences experienced an enormous increase. It is easy to understand, in the light of this, that Bacon's new programme was at once a visionary project and a theoretical framework.

Bacon was responsible for implanting the new idea of encyclopaedic knowledge in the western world.[22] It has never been lost again. It is only against this background that we can properly understand controversies over scientific competence in the seventeenth and eighteenth centuries, and indeed those which continue to the present day; and different formulations and orderings made later do not essentially detract from this assertion. Bacon's views led within the individual sciences or academic faculties to an urge to give account of the nature and extent of one's own specialism.

Leibniz and the Encyclopédistes of the Enlightenment were directly inspired by Bacon. Locke's reintroduction of the Stoics' arrangement has already been mentioned (p. 17). In the course of further investigation the demonstrable presence of the new encyclopaedic background may lead one to expect that theoretical pronouncements about a science, and in the present context specifically about the science of language, should concern themselves with fundamentals. The consciousness of encyclopaedic scholarship could not be shrugged off, and became ever more telling with each serious attempt at theoretical and scientific self-definition. A science could only escape this consciousness by withdrawing behind the walls of the merely workmanlike collection and arrangement of facts. Classical philology cocooned itself in this way

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[21] Compare the "encyclopaedia" of Cornelius Valerius, described above, p.177.

[22] In spite of undergoing modifications, Vincent of Beauvais' *Speculum Majus* ("Greater Mirror", *c.* 1250)—the source of Jacob van Maerlant's *Spiegel Historiael* ("Mirror of History")—was influential as a traditional programmatic compilation of the profane sciences. See Sassen 1932b: 168.

for a time, but every definition of place and objectives gave scholars, willy-nilly, more to do.

Let us now look into how and where Bacon situates language in his Encyclopaedia, the Divisions of Science (*Partitiones Scientiarum*) contained in *De Dignitate et Augmentis Scientiarum*. His encyclopaedic plan, in which he, as a typical Renaissance thinker, entirely abandons tradition, sets out from the faculties of the human mind, viz. (1) *memoria* (memory), (2) *phantasia* (imaginative powers),[23] (3) *ratio sive intellectus* (reason or understanding), from which derive history, poetry and philosophy respectively.

History is differentiated into natural and civil history (*historia naturalis* and *civilis*). The former is subdivided into *historia narrativa* and *inductiva* (narrative and inductive history). Civil history is of three kinds: ecclesiastical, literary, and civil proper (i.e. political, etc.). Bacon sets out the aim of literary history as follows:

> that knowledge of what theories and what arts flourished in which age and in which part of the world should be recovered from all memory ... so that ... the literary spirit of that age [i.e. the one under discussion] may be summoned away from the dead as though by some incantation. ([1623]1857: I, 504)[j]

It is clear that the boundaries of literary history as defined here are very extensive. This is justifiable if we understand the "theories and arts" to mean cultural life in general.

Poetry, the "humane learning" which is based on imaginative powers, i.e. the second major part, receives short shrift from Bacon. It is despatched in a single chapter (Book II, chapter 13) of a large-scale work: "Poetry is a kind of learning hedged about by many rules in words, but relaxed and unrestrained in content" (*Poësis est genus doctrinae, verbis plerunque adstrictum, rebus solutum et licentiosum*). Bacon's anti-humanist attitudes are very clear, as also is his typical aversion from any verbosity. A typical aversion—but an aversion in theory. However, it is with theories that we have to do here.

Books III-X deal with *Doctrina Rationalis*, i.e. with philosophy. It is divided into two parts: theology and philosophy in the strict sense. The latter covers natural theology, i.e. theory of the divine (*De Numine*), theory of nature (*De Natura*), and theory of man (*De Homine*). Under the science of nature, Chapter

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[23]   *Translator's note: Phantasia* is rendered as 'imaginative powers' rather than by the more obvious 'imagination', to differentiate it from *imaginatio,* which has its own place in a system of mental faculties, approximately as the registration of a mental image.

6 of Book III deals with mathematics, which, as an appendix of natural science, can hardly be called a science in its own right.[24] In the framework of *De Homine*, in Book V, which first treats of the individual man (and later of human society), Bacon discusses Logic, and the division of logic into the arts of invention, judgment, memory and delivery (*artes inveniendi, iudicandi, retinendi et tradendi*), under the heading "On the Mind of Man" (*De Anima Hominis*—a chapter which follows one on the body of man). It is in the section on judgment that the idols, including the idols of language, are discussed. We find language under review again further on, in the art of delivery.

A few preliminary observations may be in place here. Bacon considers language, both as a component of thought and as communication, to be part of logic. This, then, is diametrically opposed to the attempts of the humanists to make logic ("dialectic") part of language. What is more, language is treated at two places, and seen in two kinds of sub-functional subordination to rational thought. Finally, it is important to note the context in which Bacon spoke of the idols of the market-place and the theory of "idols" in general, the context of the art of judgment. This is the first point to discuss.

Among the items in the logic of proof is induction; for the elaboration of induction, however, Bacon refers to the *Novum Organum*. Another component is the use of syllogism, "the reduction of propositions to principles, using middle terms" (*reductio propositionum ad principia, per medios terminos*). The methods of the syllogism have a positive side, direct reduction, or demonstrative proof (*reductio recta*, or *probatio demonstrativa*) and a negative side, inverse reduction, or proof by contradiction (*reductio inversa*, or *probatio per incommodum*). The mention of contradictions forms a transition to the theory of elenchs or fallacies; we might say, adopting for once Bacon's popular usage, the theory of red lights, the *monitores*, the watchmen, as he calls them, who warn us to take care. The components of this theory of refutation and debunking are the refutations of sophisms, of interpretation and those of images or idols (*Elenchi Sophismatum, Elenchi Hermeniae* and *Elenchi "Imaginum sive Idolorum"*). Briefly the first two sets relate to the deceptions of sophistic arguments, and of the Aristotelian categories.[25] The third group consists of the deceptive mental images, the idols

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[24] An anticipation of rationalism to come, where mathematics is understood in ennoetic terms (i.e. in terms of conditioning thought) to begin in scientific thinking about nature.

[25] At this point we come close to language. Compare such remarks as "... clearly [Aristotle] derives [his logic] not so much from scientific as from linguistic usage. His logic, magnificent as it is in its way, is at bottom analysis and classification of the forms of the sentence, even if he is fully conscious of the distinction between logic on the one side and psychology on the other" (Vorländer 1927: I, 132); "This arrangement [of the categories], ten in all including substance,

which infect (*inficiunt*) thought, infections introduced into thought from language.

Bacon develops his account of the idols as follows:

> The idols are the profoundest fallacies of the human mind. For they do not deceive in separate items, as the others [i.e. sophisms and categories] do, by pouring a fog on judgment and setting snares, but are clearly derived erroneously from a faulty predisposition of the mind which, so to speak, contorts and corrupts all the preconceptions of the understanding. ([1623] 1857: I, 643)[K]

After the Idols of the Tribe and the Idols of the Individual Bacon comes to the Idols of the Market-Place, linguistic indoctrination and its dangers:

> But the most dangerous are the idols of the market-place, *which have insinuated themselves into the understanding* by tacit agreement between men about the words and names they have imposed. Words are mostly imposed in accordance with the comprehension of the masses, and separate things according to differentiations which the masses comprehend, but *when a keener understanding or closer observation wishes to distinguish things more sharply, the words are resistant*. The *remedy* for this state of affairs, viz. giving definitions, is in most cases unable to cure this fault, for definitions themselves consist of words, and *words generate more words*. But although we think we are in command of our words, and although it may be easy to say that we should speak as the masses do, and think as the learned do, given that technical terms, the province of the expert, might be seen to satisfy these conditions, and might, by giving definitions in advance for the arts, after the prudent example of the mathematicians (as we have already mentioned), be sufficient to rectify the incorrect use of words; yet *all this is not enough* to reduce the many ways in which the spell-binding and illusory qualities of words mislead the mind and impose upon it, so that they direct their influence—like a flight of arrows from Tartar bowmen—back to the understanding from whence they came. And therefore there is a need for a new and more powerful remedy for this ill. ([1623: V, ch. 4] 1857: I, 645f.)[L]

The passage is quoted *in extenso* because practically every word is important (but emphasis has been supplied). First, some random remarks: Bacon is well aware that in spite of the fact that words have established themselves in thought, they still have communicative force; i.e. that while language forms thought-patterns, these nevertheless arise from inter-personal transmission of thought (or, in the terms used in the present study, that ennoematic language is nevertheless of transitive metanoetic origin).[26] Words, however, have a reci-

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to which grammatical observations perhaps contributed" (Windelband & Heimsoeth 1948: 118).

[26] [*Translator's note:* A simplified paraphrase would run, approximately, "that while language is conditioned by thought, it also serves to transmit thought from one individual to another".]

procal effect on the thought in which they were adopted, and from which they subsequently emerged (back to the mind, from which they came). Hobbes was to make much more of the distinction and the functional difference between language which constitutes thought and language which transmits thought. There is additional significance in the fact that the premisses of the mathematicians are thought of as possible trustworthy replacements for this untrustworthy world of idols. But since Bacon is thinking in this context, i.e. in connection with corrective substitution, exclusively of pure basic or primary definitions, it must be observed that he regards the idol (or ennoema) as a basic (or axiomatic) component of thought rather than as a functional (or instrumental) means of thought.[27] This at once marks out the precise difference—along with one or two additional features—between Descartes and Hobbes. Bacon does, indeed, make use of the concept of language as instrument, but does so in dealing with the view of language as communication, *sermo,* to which he devotes the whole of Book VI, and where he deals, *inter alia,* with the instrument of speech ("De Organo Sermonis"). Before going into this, he deals, in a final chapter of Book V, with a few rules concerning what he calls *emblema,* the representation of sense impressions in the memory; but he does not here take any account of language.

So now we come to Book VI. This deals with the art of communicating (*tradendi*), or of delivery (*proferendi*) and pronunciation (*enunciandi*). Bacon makes a ternary division, into (1) the instrument (*organum*) of speech—actually grammar; (2) the method of speech, which constituted, in his view, the substantive and principal part, dealing with what in the past would have been dealt with under dialectic, and (3) the illustration of speech—what had been

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Author's note: Bacon's view of the "social character" of language was illustrated on the previous page, where he speaks of "tacit agreement", and also by such expressions as "men associate through language"; but it is weakened by the word "tacit"; and "through language" is weakened by being followed by "that words are *imposed* in conformity with the comprehension of the masses". Nevertheless, the reference in the last phrase of "common adoption" is indicative of some community. Hobbes, on the other hand, will be seen, apparently, to have forgotten the character of language as a common possession of humanity.

[27] The unfamiliar terminology will perhaps be acceptable, since it is, after all, important to distinguish between (1) the "ennoematic" situation of language, which sees language as a basis, a framework intrinsic to thought and subordinate to it, a basis on which thought inescapably relies for support, though it would preferably be free of such support, and (2) the concept of "ennoesis", which sees language as a functional instrument within thought, deliberately used and exploited by thought. If it were not too difficult to distinguish between the two terms, the two concepts might be termed (1) language as *ennoema,* and (2) [use of] language as *ennoesis.* The former diagnosis would then be attributable to Bacon.

called rhetoric. Grammar (1) is divided into two main sections: (a) spoken language (*locutio*), under which Bacon deals with metre, and (b) written language (*scriptio*), which, he declares, is purely literary or philosophical. These sections are preceded by a further subdivision, which does indeed form part of the rules of speech, but is properly placed before and outside grammar. This is a treatment of the marks of objects ("De Notis Rerum"). These marks are: gestures (*gestus*) and pictorial writing, i.e. hieroglyphics and what would now be called ideographic symbols, the Chinese "real" characters:

> Clearly hieroglyphics and gestures always have some resemblance to the object they signify, and are to a certain degree emblems; and we therefore call them "marks of objects by reason of similarity". But real characters are simply arbitrary inventions. ([1623]1857: I, 653)[M 28]

It is interesting to see that Bacon is conscious of the importance of a general theory of signs, even if he mentions it only as a desideratum.

Before equating "marks" with words and letters, Bacon uses the image of coins which was to become so familiar through Hobbes:

> We are dealing here, as it were, with coins of intellectual matters; and it would not have been irrelevant to know that just as coins may be struck from materials other than gold or silver, the marks of objects may also be struck by other means than words and letters. (ibid.)[N 29]

Grammar proper, i.e. literary grammar (*grammatica literaria*) exists in order that one may learn to speak languages correctly and rapidly. The question of analogy, for example, is part of philosophical grammar (*grammatica philosophica*).[30] Philosophical grammar is another vacant desideratum. What we would call phonetics is not part of grammar, but is discussed under sense and things

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[28] The deaf and dumb conduct whole conversations in their sign-language(s); and Chinese characters have nothing to do with the spoken language. What Bacon is expressing here is that they are "real" characters, not nominal characters. May one not think here of Saussure's concept of *valeur*, i.e. to be what other *valeurs* are not; or of Cassirer's concept of representation as the presentation of one content by means of another content? And, given the whole context, is this not an anticipation of Saussure's *sémiologie*—even though this went no further than the expression of something desirable? In this connection, great weight can be given to Bacon's position ([1632]1857: 651): "This must be clearly posited: Whatever may be divided into a number of differences sufficiently large to explain the varieties of notions (in so far as these are perceptible to the senses) can be a vehicle of thoughts [transferred] from man to man".

[29] The parallel between words and coins seems to originate in Aristotle, *Sophistic Elenchs*, I. I have also noted it in Vives, who emphasizes the currency of public conduct as a term of comparison. In any case, Hobbes has precursors in the use of this parallel in Bacon and Vives.

[30] This suggests that Bacon no longer looks on analogy as grammatical agreement of word-forms, but as potential agreement between language and reality, i.e. the mediaeval *congruentia*.

which may be sensed. The second section (b) of grammar, on writing, deals with the alphabet, secret writings of all kinds (*ciphrae*), upon which Bacon dilates. This ends the chapter on rules, and the chapter on method follows.

Method, says Bacon, is normally treated under dialectic. He then goes over to something which runs directly counter to his tendency to subdivide: "The types of method, being various, will be easier to enumerate than to separate into classes" (*methodi genera, cum varia sint, enumerabimus potius, quam partiemur,* p. 663). Method is, rather, a technique for conveying information (*prudentia traditivae*), practical ability in the use of informative language. Bacon will waste no words, he declares, on the single method of Ramus;[31] instead, he begins by defining a schoolmasterly teaching method suitable for the general public, but gives preference to the initiatory method (*methodus initiativa*), "which should open up and lay bare the mysteries of the sciences" (*quae scientiarum mysteria recludat et denudet*), i.e. which makes disclosures (*intimat*). The aim of the schoolmaster is to prevent his pupil having doubts, that of the novice-instructor, to prevent his disciple from falling into error: "Indeed, this discipline, which is imparted to some like a finished texture, is to be introduced into the mind by the same method, if at all possible, in a manner different from that in which it was first discovered" (p. 664).° Bacon gives this method a popular name, "handing on the torch" (*traditio lampadis*), or "teaching our sons in learning" (*methodus ad filios*). This method remains for the time being a desideratum. Here one may, of course, think of Descartes' *Discours de la méthode*, and the "texture of ideas" (*tissu des idées*) and "profitable knowledge" (*bonne science*) which it enshrines, the more so as Bacon continues, "The method of the mathematicians has, indeed, some resemblance to this kind of transmission" (*Cuius quidem generis traditionis Methodus mathematicorum ... similitudinem quandam habet*). It is because Bacon did develop this observation that we place him where we do on the boundary between the Renaissance and Rationalism; but his perspectives are surprising.

Bacon is referring here by "mathematical method" to what logic was later to call "the geometrical mode" (*mos geometricus*), and it is important for us to note how close Bacon came to giving this method the place so far occupied by the imparting of information in the acquisition of knowledge. He sees that it must be inculcated in the son or novice before it can live an independent life in him; and for this reason he uses the same term as he does with the

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[31] From the context it is clear that Bacon obviously underrates the didactic, analytical and constructive character of Ramus' binary oppositions.

theory of the idols of the market-place, "introduce" (*insinuare*). His still imperfect awareness of the importance of mathematics for natural science is no impediment.

There is no need to go into more than one further point in discussing Bacon's methods: this is the criticism he makes *inter alia* of the typical scholastic method by means of questions with definitions (*per quaestiones una cum determinationibus*); it is as prejudicial to progress, he says, as the capture of minor defences by an advancing army. Finally, just as Ramus' method is excluded from the list of those to be taken seriously into account, so, finally, is Lull's *Art of Grammar;* this is nothing but

> a confused heap and mound of the terms of each art, designed to let those who can reel off the terms be considered to have mastered the arts. Collections of this kind recall a store of outdated items, where many components may be found, but nothing which is of any value. ([1623]1857: I, 669)[P]

It will be seen that while Bacon is here discussing Lull's system in the context of the use of language to convey knowledge, his criticism applies to the fact that thought is based on it; knowing the words is not a matter of having mastered the arts. This is a valid objection to the views of his partner in ennoesis.

Chapter 3 deals with the illumination of speech (*illustratio sermonis*), i.e. rhetoric or oratory. Naturally, there is no trace in Bacon of the humanistic development of rhetoric to a generalized art of virtuous living; rhetoric serves merely to "commend and entrust the reasoned text of compositions to imaginative powers (*phantasia*) and present them in such a way as to make them palatable and encourage decision".[Q]

So much for a general analysis of those views of Bacon which, directly or indirectly, demonstrate his view of language.[32] Let us now turn directly to the chapter on rhetoric, which, so to speak, dismisses humanism.

Bacon devotes the third chapter—a long one—of Book VI of his encyclopaedia, to rhetoric. The last theorist of a school of thought which was to survive, somewhat modified, to suit the principles of rationalism, he examines here a discipline which in humanist thought had been first among equals. We may expect that this placing and characterization of rhetoric will be symptomatic of the attitude of the Renaissance, perhaps even of the attitude of (impending) rationalism, to humanism. A Renaissance in prospect, about to set out on a voyage of discovery, here takes leave, as it were, of vestigial

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[32] Book VII deals with ethics and psychology (including characterology), Book VIII with sociology, economics and politics (law), Book IX with theology.

humanism, a leave-taking at the point of embarkation.

It is no parting of two equal rivals. Renaissance thought is an all-embracing shift of mental attitudes, a metaphysics typically characterized by self-aware contemplation, of theoretical tendencies based on reflection. Humanism is a movement of more limited origin and pretensions, even though there were many resonances outside its home territory. It was mainly transmitted by men of letters, and flights into theory are few and far between.

Thus we do not encounter, in Bacon's chapter on rhetoric, one philosophical system confronting another philosophical system; for this to have been possible humanism would have had to have a philosophical and theoretical foundation, and this was not the case. But none the less humanism had produced theorists of rhetoric, especially in the England of Bacon's day; and Bacon had to take account of their views in his assessment of the place and value of rhetoric in his philosophy. There is also a group which stands apart from these humanistic theorists of rhetoric and does not share the humanists' exaggerated valuation of rhetoric; we might classify these as tending towards Renaissance thinking. Both groups, in turn, have a rearguard of more practical writers on eloquence. Wallace distinguishes two groups:[33]

> First there are those who see rhetoric as a *complete, independent art of speaking and writing prose*. Following in the *classical tradition of rhetorical theory*, they hold that the composition and delivery of discourse embraces five main operations: inventing or discovering ideas and arguments appropriate to the audience and occasion; organizing and arranging ideas into an articulate whole; managing language and diction with a view to clarity, impressiveness, and distinction of style; retaining or memorizing what must be uttered; and finally, pronouncing or delivering the speech. (Wallace 1943: 187; emphasis supplied)

This is, of course, the familiar set of five topics, *inventio, dispositio, elocutio, memoria, actio*. The list of the "chief treatises on rhetoric written by Englishmen who view their subject as a *full-bodied, independent art*" includes, *inter alia*, Thomas Wilson's *Arte of Rhetorique* (1553).[34] Wallace remarks further (1943: 188)

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[33] After the foregoing passage was written, I was surprised to find that Wallace (1943) had made a bipartition of contemporary rhetorical theory in Bacon's circle, confirming the validity of my distinction between the thinking of humanist and Renaissance scholars about language. This came from an investigator who stated his aim as being "to set forth and evaluate" (p. 1); but his exposition is made in terms of descriptive literary history rather than of linguistic theory or critical evaluation—unless, indeed, we accept his unaccountable prejudice against the Renaissance stylistic group and in favour of the humanistic classical group as objective "valuating". Wallace calls his "two directions" 'stylistic' and 'classical' (p. 187); acknowledging in a footnote indebtedness to Sandford 1931 and Howell 1934.

[34] Kuiper (1941: 358f.) sees in the same author's *Rule of Reason* passages which are "little more

... these works aim to furnish principles and procedures that will promote judgment and skill in writing and speaking. *Their authors* are practical-minded *teachers* who for the most part do not discuss the academic philosophy of rhetoric. Anxious to give directions that will take the student through the complete action of composition and presentation, *they remain unperturbed over the strict relation of rhetoric to logic and ethics, and consequently wisely refrain from trying to make logic, rhetoric, and ethics mutually exclusive arts.* Hence, each writer in this group applies some of the subject-matter of logic and ethics to his own ends. ... As teachers of rhetoric, then, these men intend to give practical[35] advice for composing and delivering an address.

These remarks apply to the "classical" group.

The second group, known as the "stylistic" group, limits rhetoric to style and delivery. The speaker must, of course, discover his arguments and link them together, but in order to acquire "these skills he should go to *logic and dialectic*". What is more:

> since ethics, in its search for the good, probes into character and the springs of conduct, the rhetorician properly leaves any mention of the passions to ethics (Wallace 1943: 191). ... The Elizabethan elocutionists and pronouncers, then, appear as *"scientists"* [see note 37] and strict constructionists. ... So interested are these men in dissection and analysis, and preserving the proper subject matter of each art, that neither they nor the logicians, moralists, or grammarians, can see a place for a single, well-rounded art that would meet the practical needs of composition. Nor do they perceive that such an art, although drawing upon allied arts, would *derive its principles and procedures from the topics and language of everyday discussion.* (p. 192)

This is what Wallace has to say about the stylists, "who confine *writing* and *speaking* largely to stylistics alone, or to style and delivery taken together"; a large part of rhetoric is taken up for them by the theory of figures, or rather by a catalogue of figures.

We may now consider Bacon's own attitude to rhetoric in the light of this contemporary background. In order to recognize this attitude we must observe the structures in which Bacon considers language in general and rhetoric in particular.

In the deepest strata of Bacon's system of memory, imaginative powers

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than translations" from Valerius' *Tabulae Dialectices* and Melanchthon's *Erotemata Dialectices*.

[35] In this pre-rationalistic period of European thought a conflict arose in the two-way system described above, one which was repeated under rationalism (from *c.* 1600), but in the opposite order. I refer to the conflict between a system of thought based on the theory of the sciences on the one hand, and a pragmatic system on the other. Vollenhoven (1950) discusses this contrast in detail, adding a third system (idealism).

(*phantasia*) and intellect, in which the last is the most important, we find language under poetry, which has already been assigned to imaginative powers. Like painting, it sets out to present individuality and verisimilitude (*ad similitudinem*). History, too, is properly concerned with individuals defined in terms of time and space (*proprie individuorum est, quae circumscribuntur loco et tempore*). Poetry and history had been placed among the central disciplines of the humanists, the latter by Bruni (see Voigt 1893: II, 184). Vico, too, was to institutionalize history a century later, not without humanist inspiration. But for Bacon these activities, particularly poetry as a product of the imaginative mind, are of less importance than the rational sciences.[36]

What is more, everything which applies to language is assigned to logic. If the ordering which the humanists had applied to the arts of language had also been preserved, there would have been little difference between this position and that of the humanists, for they also regarded the Trivium as comprising the "logical" arts, understanding *logos*—explicitly so in the case of Vives—to be language and thought taken together as a single entity, as

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[36] The two schematic summaries presented here, one of Bacon's "epistemology", and the other of his logic, may be helpful:

Division of Sciences
Memory (History)
Imaginative
    powers (Poetry)
Intellect: (Science)   Theology
                        Philosophy: On the Spirit,
                                       On Nature   (with Mathematics as an appendix)
                                       On Man: On the Body
                                                    On the Mind: Logic
                                                                  Ethics

Logic
Invention   Informed Experiment (*Experientia Literata;* approximately heuristics)
                    Novum Organum
                    Argumentation
Judgment   Induction (see *Novum Organum*)
                    Syllogistic proof
                    Elenchs (*inter alia* the "Idols")
Retention   Aids to memory   (writing; commonplaces)
                                      (*praenotiones* and *emblemata*; approximately mnemonics)
                    Artificial Memory
Transmission   Marks of objects   (1) gesture and hieroglyphic
    or *Enunciatio*   (2) real character
    (= *Sermo*)   The Instrument of speech or Grammar (Elocution and Writing)
                    The method of Speech, or Dialectic
                    The Illumination of Speech, or Rhetoric

classical authors had also done, though the humanists gave priority to lan-
guage. Bacon means something entirely different. For him logic is what it has
come to mean for us all since the days of rationalism, i.e. the rules of
thinking. Bacon, as it were, strips the linguistic disciplines bare, and then con-
fines them in a prison cell. Rhetoric loses the component of 'invention'
(systematic investigation), which is now given pride of place in his inventory
of logic. Bacon makes the following distinctions: first a kind of 'pre-inventive'
discovery process, not so much a skill as a flair, something of a hunter's
ability to scent his prey (*odoratio quaedam venatica;* [1623]1857: 633), to which he
gives the remarkable name of 'informed experiment' (*literata experientia*); in
second place 'invention' proper, for which he refers the reader to the *Novum
Organum;* in third place the 'discovery of arguments' (*inventio argumentorum*),
which is also discovery proper.[37] It seems to me that there is here a latent
reminiscence of discovery as it is seen in humanist rhetoric, where in practice
it fell together only too often with the making of learned "discoveries" in
classical literary authors. That this breadth of reading could have become a
sense of direction in philosophical enquiry as Bacon describes it, probably
explains the term 'informed experiment';[38] "In making rational decisions", he
says (p. 616), "man may act in one of four ways: he may discover what he
was seeking, he may assess what he has discovered, he may retain what he
has assessed, or he may pass on what he has retained".[R] Inasmuch as
'informed experiment' comprises 'what he has discovered', it is clear what this
meant for Bacon.

After discovery Bacon discusses judgment. Ramus had posited *inventio* as
the first dichotomy in his dialectic, and arrangement or judgment (*dispositio sive
iudicium*) as the second. As a transplanted rhetorical organization may be seen
in what Bacon calls judgment, we should pause to examine this combination.
After discovery and judgment (in the sense of rhetorical arrangement) there
follows the art of retention, i.e. the *memoria* of ancient rhetoric. Next comes
speech (*sermo*) as the art of passing on, and in this, as we shall see, a rhetoric
reduced to an art of delivery (cf. the lower part of the diagram in note 36).
Now when we compare this division of logic with the traditional humanistic

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[37]   Of this third *inventio*, the discovery of arguments, Bacon says (1857: 663): "The discovery of
arguments is properly called discovery, for discovery is the revelation of things unknown, the
acceptance or rejection of things previously unknown". It is, in fact, more or less "a reduction
to memory, or a hint with its application".

[38]   Ultimately Bacon seems to mean an erudition on the model of his own polymathic
encyclopaedic knowledge.

division into discovery, arrangement, memory, delivery and gesture (*inventio, dispositio, memoria, elocutio* and *actio*), we can see how Bacon as it were stripped rhetoric bare in transferring the five components into which it was divided, modified of course in some respects, to his logic, and leaving a deflated rhetoric no more than the task of gesture—and even this in subordination to the communicative language by which it was conveyed—gesture which once, when rhetoric was at its height, was a mere minor component.

A greater affront can hardly have been offered to the overweening pride of humanistic rhetoric. This had once been the art in which the trivium, seen as a whole to be based on the use of language, had centred as in a nucleus of activity, effective in function and use (*usus*), now consigned to a back room in speech (*sermo*), itself reduced to a hostel for travellers, a vehicle of thoughts (*vehiculum cogitationum*).

Bacon is not inconsistent in allowing dialectic to retain its place in speech. In his view it contained nothing but the methods of orators, i.e. what, in traditional rhetoric, had constituted arrangement (1857: 662).[39] Now that speech as a whole fell under a *logica* of new pretensions, dialectic, as a component of speech, had become an insignificant[40] piece of practical wisdom (*prudentia*). Bacon failed to notice that it was just at this point that the so-called geometrical method was a cuckoo's egg in the nest of the methods of oratory.[41] The geometrical method, as the strongest and most assured, was destined to drive out the older dialectical methods from the traditional—metanoetic, i.e. representational—nest of language. Descartes places the geometrical method of oratory not in an ennoetic "inner speech" (*sermo interior*), but in the metanoetic demonstrative language of information. In this way he may be seen to follow on from Bacon.

It is therefore not surprising that there is no place in what Wallace calls the "classical" group for Bacon's rhetoric, though Bacon belongs to the

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[39] Cf. Wallace (1943: 140): "He [Bacon] allows his categories to overlap". This characteristic of Bacon's thought confirms the conviction stated here that his logic reflects the division of rhetoric into five parts.

[40] Dialectic does, indeed, receive a friendly pat on the back in Bacon's remarks (1857: 662): "the theory of the method of speech is constituted as part of the substantive and main part of transmission"; but this is tantamount to saying that, after being demoted, language is told that in its own household, the most "logical" descendant is best.

[41] "The method should be appropriate to the subject-matter which is being treated. For mathematics is conveyed in one way, politics in another. ... We require ... special methods to be applied" (1857: 666). This is absolutely right, but this correct insight did not prevent the beginning, fifteen years later, of the victorious career of the geometrical art of reasoning (Descartes' *Discours* dates from 1637; Galileo's *Discorsi* from 1638).

"stylistic" group. But he actually goes further in his conscious subjection of language, and therefore of the rhetoric which applies to language, to the rules of logic. Wallace says (1943: 206), as has been observed, *mutatis mutandis,* above, "Bacon desires, above all else, to prevent the *miscarriage of reason.*"

> The object of dialectic is to inculcate the form of arguments to provide support for the mind, not pitfalls ... For the object of rhetoric is to fill the imaginative powers (*phantasia*) with observations and shadows which give assistance to the reason and do not encumber it. (1857: 671-2)[S]

This typically pre-rationalistic point of view determines his view of rhetoric. In its view, practical rather than theoretical, of linguistic functions, which brought to light the nature of linguistic acts, humanism relied on the effective component of language as manifested in the rhetorical use of language. Then this element was given exaggerated prominence, and it became the dominant factor. Bacon brings the whole of language back under the yoke of logic,[42] and leaves rhetoric, along with dialectic and grammar, as no more than varieties of communicative language; and rhetoric, as the preserve of fancy (*phantasia*), was held in particularly low esteem. "Substance of matter is better than beauty of words."[43] For this reason Bacon himself does not dilate upon the theory of tropes and figures as did the rhetorical "stylists" (*stylistici*) who were related to him. Bacon's contribution to rhetoric is slight, says Wallace (1943: 209; 210). The remarkable fact is that the overvaluation of rhetoric by the humanists almost brought them to a correct view of the way language functions in its own right, i.e. *language is action;* and that Bacon's well-founded correction of this, in gaining for the rhetorical use of language its allotted sub-functional status, is accompanied by a fatal step backwards in the light of the vision of the autonomy of language: language is now *the vehicle of thought.*[44]

The Renaissance — Retrospect

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[42] Bacon's awareness of the humanist movement and his opposition to it is clear from the drafts of his *De Augmentis* preserved in his posthumously published *Valerius Terminus or the Interpretation of Nature* (1857, III: 228ff.). Bacon recalls here the old controversies between philosophy and rhetoric ("Socrates divorced them") and of Cicero's point of view ("willing to magnify his own profession").

[43] *Advancement of Learning* (1857: III, 284), quoted by Wallace (1943: 209).

[44] Wallace (1943: 218) assesses Bacon's subfunctional view of language as follows: "he was the first to work out the central function of rhetoric on psychological grounds". By 'psychology', Wallace understands Bacon's so-called "faculty psychology, which dominates Bacon's classification of knowledge" (p. 27).

It is perhaps useful to take a retrospective view whenever there is a transition to a new mode of thought, or a new attitude to life. We are now approaching the transition from characteristically Renaissance thinking to a scientific rationalism based on theory. After the initially modest and tentative resistance to scholasticism on the part of the humanists, the Renaissance had come to the point reached by almost every revolutionary movement, where it made radical additions to its initially restricted aims. No longer satisfied with the humanists' change of allegiance, by which the authority of ecclesiastical dogma or Aristotelianism over thought gave way only to the dominance of an authentic tradition of the word, succeeded in turn by the dominance of linguistic erudition in general, the Renaissance consolidated, secularized, and made positive its rejection of authority and established the ideal of man untrammelled by norms, ruling as a sovereign and living in freedom. Although leading men of the Renaissance were ready to seek fame in rhetoric and poetry, language (including both literary and didactic language) was for them no more than a means of communication, and never an end in itself, or even a milieu in which their cultural ideals could reside. If the ideals of the Renaissance made a home and settled anywhere, it was in objects, and in the investigation, not the naming, of objects, i.e. in the facts of nature and the study of nature. It is noticeable that many Renaissance thinkers were medical men (e.g. Paracelsus, Fracastoro, Telesio, Zabarella, Cardano). For Bruno, the new Copernican cosmology is the basic principle of his view of the world and of life. In Bruno the Renaissance is integrated into a radical, self-assured and comprehensive subjectivism; compared with him the humanists are babbling burghers, and scholasticism, which had still been earnestly opposed by Telesio, who applied the sceptical theoretical system of Occam, aroused in Bruno nothing but scorn; in Bruno, the Renaissance has proceeded beyond its initial negative phase, and proclaims its own positive principles with the greatest possible assurance. For this reason Bruno can take over Lull's *Ars Magna*, for his own blazing certainty is the equal of the certainty of this over-intense mediaeval thinker and realist. For Bruno, too, the connection between the mode of signifying and the mode of understanding is at its closest, and these modes are for him, as for Lull, practically identical. With Bruno the front line of the Renaissance made its furthest advance, and after him a withdrawal began—at first almost imperceptibly—to take place. Attention gradually began to turn to what can be preserved, to where a stand can be made, to what strong-point one could fall back with a prospect of maintaining it.

In Bacon we can see that final resistance must lie and remain in the in-

vestigation of nature. In the practical application of knowledge of nature man establishes his security, sovereignty and power. But while he is not yet clear how to entrench himself—subjectively—in this position (it was already clearer in Campanella), he does already have a vague notion that *mathesis* (learning) will provide an entrenching tool and materials for defensive works. As his position is founded on the control of nature, language is a precarious base for consolidating it, and at best has to be used with critical reservation. Although the method is not yet clear to him, he clasps nature tight as an objective entity which promises man knowledge of and mastery over her resources in the future, and can thus save some fragment of human sovereignty from impending disaster. And with this objective attitude the Renaissance comes to an end, and is succeeded by its heirs, Galileo, Hobbes, Descartes and others of their persuasion, the pioneers of mathematical and scientific rationalism, an effective and assured method of controlling nature.

Meanwhile, Bacon's critique of language achieved a remarkable displacement, a displacement which keeps pace with the advanced stage Renaissance ideas reach in him, compared, for example, with Telesio. Bacon did not use for his criticism the nominalist themes which Telesio still used in contesting the provision of knowledge offered by the schoolmen. This is because scholasticism is no longer for Bacon the arch-enemy. After, or with, Erasmus and Vives, Luther and Calvin, Bruno and Montaigne, the sole dominion of scholasticism over the minds of men was a thing of the past, at least in the north. Bacon has to satisfy the demands of certainty, whether they come from within his own circle or from outside. This is not to pretend that Occam's epistemological criticism of language would not have been useful for Bacon, but it was not appropriate for him. He is not a subjectivist mathematical thinker asking himself questions of epistemological and empirical import, let alone one answering the questions of others. His interest in the basis of certainty of man's knowledge of and power over natural phenomena is purely practical, and this is the occasion of his drawing attention to the idols of the market-place, the misleading of thought by language, which leaves an ennoematic residue in thought-patterns. By his practical and objective attitude he brings a new factor into play in the dialectic concerning language. Or rather, he transforms an old factor, internal speech (*sermo interior*). And this transposition, while it is in theory only weakly represented here, is a link in the development of linguistic theory in general which must be taken into account.

The difference is that Bacon does not repeat the old question of how language is based on thought, but on the contrary considers the extent of the foundation of knowledge on language. It may be objected that Lull had al-

ready achieved this change of direction. But it seems that things were not generally seen in that light—a reason for this will be suggested in due course—and Bacon himself certainly was unaware of it.

Although Bacon may seem to have had a thorough knowledge of Lull and his *Ars*, his criticism of the idols of the market-place is not specifically directed against the theory of this mediaeval scholar; it remains general. There are no indications that Bacon clearly realized that he in fact had before him in Lull an example of a fundamental trust in the idols of the market-place as such; indeed, if anything, the indications point the other way. Lull's use of words had perhaps too superficial an application for this, and Bacon may well have realized it. He himself was thinking of the false mental images which are carried unconsciously and infect the processes of thought without the user's being aware of it. And there is, indeed, a functional difference. Lull operated with language as a means of constituting thought, but for Bacon language resembles a static substratum within thought, an ennoema.

Bacon's reservations concerning the reliability of this basis are not couched in terms of nominalistic theoretical positions, for his basic concept of language as a substratum of thought is new; there is no question here of universals; but there is—still somewhat tentatively perceived, it must be said—the question of the validity and certainty of knowledge in general, and in conjunction with this the question of the overall trustworthiness of language. In his general suspicion of language the nominalistic tradition of Renaissance linguistic criticism lives on.

In Bruno, too, negative, nominalistic criticism had been replaced, but in his case by an aggressive positivity. Constant attacks by humanists and Renaissance scholars before Bruno's time against the weakness of the scholastic line in dealing with the relationship between language and thought, attacks which had often cloaked an inability to devise a structure of thought for themselves—critical piece-work of this sort comes to an end with Bruno. He does not hesitate, even, to adopt Lull's technique of equating language and thought. So while Telesio and his predecessors of the early Renaissance continued to use the theoretical positions of the terminists against scholasticism, Bruno takes advantage of a method of linguistic usage, a usage, however, derived not from just any unspecified *Modista* and opponent of the terminists, but, so to speak, from the arch-*Modista*, Lull. Bruno does this because he needs language, and can use it for the fulfilment of his ideas, just as that prophet had done, because he, Bruno, was also himself a prophet.

This non-nominalistic trait continues in Bacon, the more remarkably so because, in contrast to Bruno, he enters the field of criticism of language, and

at this time nominalistic schemes lay ready to hand for any attitude to language.

Bacon brought about a new consciousness with his ennoematic view, the view that language is an unavoidable component of the intellect, an element on which it relies willy-nilly. Lull's *Ars* had not brought this about, for here the ennoetic use of language is an optional component, to be invoked or abandoned at will. But the idea of language-in-thought must have been fostered by Lullism in its most recent manifestation in Bruno. This idea of language as the basic or instrumental component of thought goes further; the line is marked out by (Lullus) Bruno — Bacon — Hobbes (Leibniz).

However, there is also another trait present in Bacon. This is the trait which explains why dependence on language and trust in it is an object of his criticism. It is doubt. After certainty had reached its zenith in Bruno, scepticism was in the air, most notably in Montaigne. On what did the new knowledge actually rely; where was the guarantee of certainty? What dangers lie in the ennoetic use of language? The answer comes at once, after doubt has itself become a method—from method. And this is the line of development from Montaigne to Bacon, and on to Descartes. The "saving" method is to be that of mathematics and science. But Bacon did not as yet see this.

It is thus important for the history of language and linguistics to take account of this remarkable theory of the idols of the market-place. The attempt has been made here to situate it in the context of Bacon's encyclopaedic writings and of the spirit of the age. It influenced the place allotted to linguistic function in anthropology, and prepared the way for the rationalists' view of language.

CHAPTER 8

AXIOMATIC RATIONALISM[1]

Introduction and Part I: — Descartes, Hobbes, Locke, Leibniz

S PECULATIVE GRAMMAR, in the hands of the realists, had postulated the congruence of object, concept and word. On the other hand, in using the concept of the sign, the more sceptical nominalists had attacked the reliability of these congruencies, arguing that it is the nature of the sign not to be congruent. Lull, however, drew the extreme conclusion from the concept of congruence and posited a reciprocal relationship between concept and word, i.e. he set up language both as basis and as instrument of thought. Humanism had drawn a different conclusion from the congruence of thought and language, renewing the classical duality of *logos*, by which to contemplate objects is to speak of them. The Renaissance, initially anti-scholastic, had adopted the nominalists' critical attitude towards knowledge, and in so doing took up a position opposed to the humanists. At the zenith of its affirmatory self-assurance (in Bruno) its reliance on language approached Lull's confident ennoetic view of language as a component of thought. But when Renaissance views became tinged with scepticism, Renaissance scholars, too, began to doubt whether language, as a store of mental preconceptions (*ennoemata*)—linguistic prejudices, Bacon's idols of the market-place—was a suitable basis for knowledge. This scepticism is not that of the nominalists, although it does resemble it in one respect, for Bacon's renaissance views and those of the nominalists are identical in so far as they reject the congruence of language and thought and discount the reliability of language as a guide to knowledge.

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[1] *Translator's note:* 'Axiomatic' renders the Dutch term *scientiaal;* it will become apparent in the course of the chapter that this has the connotation of deductive proof in the manner of mathematics or geometry from data which are regarded as self-evident, i.e. axioms. The equivalent English word *sciential* is rare, and glossed by the OED (²1989) as 'of or pertaining to knowledge'. There is, however, one example: "Their entire consonance ... with the Scriptures and with sciential and practical reason ..." (Coleridge, *Literary Remains,* 1838), which suggests an occasional affinity to Dutch usage.

They differ in that nominalism regarded language as giving a false representation of thinking, the result of a process previously described as 'metanoetic',[2] while the later Renaissance, being interested in method, tended to regard the opposite process (*ennoesis*), by which language was seen as a component of thought, as a misleading antecedent, a false premiss, a treacherous quicksand. Nominalism acknowledges only the representative, demonstrative function of language, but, in its turn, the later Renaissance—not exclusively, but mainly —acknowledges its function in thinking. This is because it turned, in its final stages, against a humanism which in the view of Renaissance scholars derives knowledge from language, as a result of its tendency to identify verbalization and knowledge; and also, more positively, because it had become ever more interested in the method of acquiring knowledge, in the basis of certainty, and in the means of assuring the certainty, of the knowledge to be acquired. In these circumstances it rejected language, or at least warned against its dangers.

By about 1600, the course of intellectual history had brought attitudes towards language to the point that the humanistic view of function had become restricted to an exclusive concern with textual studies the sole object of which was to collect and arrange grammatical data, losing in the process all interest in the essential methodological principles of language and linguistics, while Renaissance thinking gradually brought a stronger influence to bear on men's minds, and to persuade them of the ennoetic quality of language as a mental structure.

The beginnings of rationalism are to be sought in Kepler, and more especially in Galileo. It was prepared by the scientific undercurrent of the Renaissance, which had continually gained in strength. The sovereignty of man, expressed and felt as a subjective feeling of being a law unto himself, had come to a halt in a self-induced chaos and a struggle for power of each against all. It was by ascribing power to knowledge, rather than to the individual, that man was able to come to terms with the business of living; and the sovereignty of reason took the place of the old declaration of the sovereignty of man, the survival of which had placed mankind in a position of being afraid of itself.[3] The will to power gives place to the desire for rational

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[2]   *Translator's note:* Cf. p. 201, and also p. 218, *n.* 27. "Metanoematic" would be closer to the Dutch text, but seems to suggest the representation of *noemes,* i.e. individual notions, rather than the process implied by *het denken* (translated as "thinking").

[3]   Bloody religious conflicts made a decisive contribution to this feeling of uncertainty. The change in the attitude to life becomes obvious when one compares the attitudes of Bruno on the

certainty, ambition for power and heroics give place to insight and mastery in the realm of thought, vague enthusiasm and boldness to exact concrete knowledge.

From very early on it had seemed that mathematics would provide such certain knowledge, but intellectual mastery of reality had here gone no further than the narrow sector of countable and measurable static units. The whole range of moving objects fell outside its ambit. And then Galileo arrived and subjected motion to a principle based in mathematics. Galileo's discoveries sent a shock-wave through the world of science—through the world of science because it was there alone that the far-reaching consequences of these researches and their results could be appreciated. When philosophy had mastered the achievements of natural science, it was a scientific philosophy which did so, for only the philosopher who is himself a theoretical scholar can comprehend and assimilate these concepts. We shall shortly have occasion to note the fact that these concepts led to a completely mechanistic view of the world and a deterministic ontology which combined Epicurean and Stoic features; but for the present it is highly important for the history of the theory of linguistic functions to observe that the mathematical mode of thought was subjectively allowed to fall together with logic. By this process instrumental components were brought into thought and identified with it; but this was not felt as a difficulty; after all, logic was traditionally characterized as an *organon*, as a tool, and the 'Topics', for example, had long been an inventory of logical devices. This must be realized if we are to understand that the whole range of numbers and mathematical diagrams was now accepted without resistance as a repertory of logical devices for abstract thought. It has also to be understood that there was nothing left to be done but to accept the principle that the units of language are also instrumental signs, just as numbers and diagrams are instrumental signs. Acceptance of this principle led to the fateful subjection of linguistic theory to logic with which rationalism has burdened us for centuries.

Initially, mathematical thinking came to accept the position allotted to language in earlier linguistic studies, i.e. to treat it as a part of thought, and, in fact, as an instrument which was held to be absolutely identical *per se* to thought *per se*, in other words, was considered to be entirely cogitative by nature. And even though Bacon had treated language as the basis rather than as an instrument of thought in his critical analysis of language, he had held

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one hand, and Descartes and Hobbes on the other.

that it functioned as a mind-set (*ennoema*), or system of thought within the mind, and that as such it was dangerous. Siting language in the mind could only prepare the way for the assimilation of language and mathematics.

Mathematics operates with signs, i.e. numbers and diagrams. But now the mathematical concept of the sign, which was certainly as old as the linguistic one, acquired a special and emphatic reassessment which is the polar opposite of the nominalistic valuation transmitted by Renaissance sources (apart from Bruno). This valuation had always taken the sign to be a typical example of vagueness, inexactitude, inadequacy; the word was nothing more than the sign of the concept, and the concept was nothing more than the sign of the object. The new rationalistic and mentalistic concept of the sign as conceived by mathematicians and men of science marks it out as a model of exact and adequate instrumentality, as the means *par excellence* of establishing certainty, as the guarantee of logical accuracy.

The notion of the sign had started in mathematics, but its extension by incorporation in the apparatus of logic transformed it into a mental structure (a *noema*) and a logical instrument. This virtually turned things on their head—not suddenly, but step by step, in steps which can be closely traced in Descartes, Hobbes, Locke and Leibniz—and the dominance of logic set in, a development that was to be fateful in determining attitudes to language. It was not just the application of rational criteria to language, but ultimately its total subjection to logic. The nature and sense of language were included under the rubric of the sign, or more precisely of the mathematical symbol. As may be expected, this attempt to explain the autonomous function of language by categorizing it as a subfunction of thought—which for the axiomatic rationalist means abstract thought—led to all manner of tensions, and could not be accepted in its entirety, as will become clear in the course of the discussion which follows. Where natural language was judged by the criterion of correctness, simply as a result of being incorporated in logic, it inevitably underwent correction. From this time, too, artificial constructed languages may be found growing up like mushrooms. The claims of these languages vary; one system announces its language as a substitute for natural language, another as a simplification of natural language or an analysis of its essence. Here etymology, in the form of rudimentary comparative linguistics, sometimes plays its part. The study of literary texts, which had gone by default in a theory based on principles, had no contribution to make here. It is only when sound common sense began to resist the encroachments of axiomatic philosophical thinkers that textual study, too, joined the ranks of the opposition. But even then its practitioners could not rise above the sense of

inferiority which troubled them; as though they were at times ashamed of language in the depths of their hearts and felt themselves compromised by the inadequacies of language. It is only with Herder and Hamann[4] that the autonomy of language is once again vindicated. But by then sensibility had been discovered, providing a new point of departure and a basis of operations which had hitherto not been used, if, indeed, it had even been recognized (except perhaps, by Vico). The question then arises, Does language satisfy feeling? And this criterion offered an escape of some kind from the trap of evaluation in terms of logic.

The development of rationalistic views of language has to be traced step by step—although this will mean in fact following the main points (*summa sequar fastigia rerum*). It will be necessary to start with the philosophers, since the development is initially not to be found anywhere else—or if it is found, it is entirely under the domination of philosophy. The humanistic age, when literary and linguistic scholarship predominated, is over and done with; we now enter a philosophical age, perhaps "the" philosophical age, the age of the great constructors of systems, Descartes, Hobbes, Spinoza, Geulincx, Locke, Leibniz and many others. Language was not as yet totally incorporated into logic, but a start was made by way of rationalization. The inclusion of language in thought, as sketched above, is not yet found in Descartes; he shows little interest in language, and when he expresses his opinions about it he looks upon it as the expression and presentation of thought, i.e. he is thoroughly traditional—perhaps the influence of his humanistic fellow-countryman Ramus is a contributory factor here. But even Descartes applies a noticeable rationalization to language. The notion that language is contained in thought emerges decisively in Hobbes; but this is entirely in the context of the function of language, of what it achieves (*quod praestat*). But for all his justification of language there are considerable gaps in Hobbes. He is not really a linguistic scholar. Locke comes to language involuntarily, but is also unable to tackle the problem. Leibniz masters the difficulties with matchless intellectual power, and it is something of a dramatic spectacle to see how this tyrant of the mind forces the whole universe into his system, and in the process language into his logic. But we shall see in this last usurpation that the captive language captured logic (*lingua capta logicam cepit*).

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[4] The very subject of Hamann's first publication on linguistic theory (*Versuch über eine akademische Frage,* 1760), a reaction to the Berlin Academy's prize essay competition of 1759, on the reciprocal influence of language on opinions and opinions on language, has a close connection with the question of *ennoesis* and *metanoesis*.

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Let us consider some of the natural scientists who applied mathematical prin-
ciples, referring to them to illustrate some aspects of the fact that this new
approach to knowledge had for their purposes to occupy the place of the
acquisition of knowledge from language or by means of language, i.e. from
books—the humanists' literary sources, or through reasoning—the school-
men's dialectic.

Leonardo da Vinci, Kepler and Galileo inaugurated exact science. There
were many natural philosophers in the fifteenth century, but scarcely one who
was so deeply conscious of the significance of mathematics as Leonardo da
Vinci (1452-1519). He it was who remarked: "Anybody who despises the
highest certainty of mathematics feeds his mind with confusion, and will never
be able to silence the sophistical doctrines which lead to nothing but con-
tinual disputation." [5] Mathematical method bears its finest fruit in the investi-
gation and delimitation of causality. It is by way of mathematics, then, that
Leonardo, the engineer and philosopher, enters the realm of mechanics.

The initial hypothesis of Kepler (1571-1630) is that planetary motion is
subject to a strict mathematical regularity, and it is only this regularity which
makes investigation possible. The laws named after him are the first formu-
lations of natural laws in mathematical form. He sees no sense in the abstract
general concept of number. The relations between numbers as such have no
value as knowledge; they become significant as instruments for gaining know-
ledge only by being applied to the astronomical configurations and motions
(Cassirer 1906: 259) which they are employed to represent. Views like these
mark the difference between the rationalist Kepler and the arithmetical and
ontological mysticism of the neo-Pythagoreans, who tried to reduce objective
phenomena to numerical relationships. For Kepler, arithmetic is of value only
as an instrument of the mind for analysing the causes of natural processes,
more particularly in his case of astronomy. Abstract arithmetic without appli-
cation is sterile; the investigation of nature without arithmetical method is
blind. To this is added the concept of force or power, which supplants the
view of natural phenomena as static substances. The force of nature, or
energy, is released from its association with entelechy and substantial form.
Kepler proclaims that the structure of the world must be understood not as
a divine living organism, but by the analogy of a divine clockwork mechan-

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[5] Quoted by Cassirer 1906: 248-9 from Richter 1883: II, 289. This remark clearly differen-
tiates the principle of calculation from that of (verbal) expatiation.

ism. "It is my aim to call the celestial machine not the image of a divine animal, but that of a divine clock" (quoted by Cassirer 1906: 271).^A

Kepler's friend Galileo (1564–1641) wrote and worked to the same effect. The two shared the campaign against the traditional dialecticians. This kind of person believes, wrote Galileo, that philosophy is a book like the *Aeneid* or the *Odyssey;* that it does not lie in the realm of nature, but—and this is what they say themselves—must be found and investigated[6] by the comparison of texts. Galileo obviously opposes those Humanists who remained faithful to Aristotle. It is very characteristic that the complaint was made from the traditional side that modern thought set mathematics in the place of the *Topics* (Cassirer 1906: 291). This was in itself a fair comment, for the *Topics* were the system of mental (ennoetic) tools of traditional logic, and their place had now been taken by mathematics.[7] Perhaps because he had stronger grounds for dispute than Kepler, the independence and conviction of Galileo are more immediately apparent. By the infallible decision of calculations, he proclaims, the duality between truth and objectivity had been brought to an end.[8] Thus the true book of philosophy is for him the Book of Nature, which always lies open in front of us; "but it is written in characters other than those of our alphabet, i.e. in triangles, squares, circles, cones, etc. To read it speculation is of no avail, but mathematics is essential" (cf. Schmidt 1934, s.v. 'Galilei'). From such remarks—the assertion that books are mere dead copies of life was also made, as noted above (p. 204), by Campanella—it meanwhile becomes apparent that there was opposition to humanism, or at least to that branch of humanism which blindly invoked linguistic authorities, quite as strong as the opposition to dialectical scholasticism.[9] With his theory of matter Galileo joins the Epicureans; his rigorously mathematical doctrine of causality, how-

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[6] One of Galileo's adversaries refused to look through his telescope on the grounds that it might bring his mind into confusion.

[7] That modern thinking was fully aware that arithmetic and geometry had become instruments may also be seen in Hobbes—who was an admirer of Galileo. See Hobbes, *De Homine* II, 10.v (ed. Molesworth, 1839: xxx).

[8] "The Aristotelian principle that no proofs of mathematical rigour were to be found or expected in natural objects was therefore intrinsically incomprehensible to Galileo. ... All merely probabilistic conclusions, which might be acceptable in rhetoric or jurisprudence, therefore contradict the requirements and the ideal of the physical sciences. The task set here is to derive conclusions by *deduction and derivation* from given premisses." (Derived by Cassirer [1906: 304–305] from Galileo, *Il Saggiatore* [1623]).

[9] I have noted above (p. 173) that scholasticism and humanism are not greatly removed from one another; and they were clearly not seen to be so by Renaissance scholars and their contemporary rationalist critics.

ever, follows in the track of Stoic determinism. Here, too, lies a difference from free will as conceived by many a humanist (by Valla and Erasmus, among others).

As far as linguistic theory is concerned, it may be noted that the assimilation of mathematics with language proper, as a system of signs, was nevertheless prepared by way of an associative comparison (in Galileo's words, "Geometrical figures are characters in the Book of Nature"). The comparison is made with a mathematical system which functions ennoetically, i.e. as a mental process. In this connection we may see in Leonardo da Vinci a confrontation with the sophistical explanation of nature in words. In Kepler, a strong emphasis is given to mathematics as a process of thought. Galileo noted in addition the demonstrative capacity of mathematics; and it was on this last point that Descartes was to build.

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Let us recall that it was humanism above all which contributed (in Ramus, for example) to a renewal of dialectic in the manner of Socrates and Plato, relegating the Aristotelian and scholastic formalization of logic to the background, and making way for a view which, as a result of the characteristically linguistic basis the Humanists gave to rhetoric, allotted greater functional activity and demonstrative didactic powers to thought. It is no doubt another facet of this tendency, still powerful at the beginning of the seventeenth century, that Descartes laid stress on language as a demonstration of the assured attainments of profitable knowledge (*la bonne Science*).

It is remarkable that no trace is to be found in Descartes of the view of language as a component of thought (ennoesis), while his English contemporary and rival Hobbes makes this view the central point of his attitude to language. But this becomes explicable as soon as we remember that Hobbes had been secretary to Bacon, that same Bacon who had drawn attention to the interdependence of thought and language with his concept of the idols of the market-place as misleading *ennoemata*, and the England where Bruno's version of Lull's views had been taught in Oxford and London was perhaps not yet forgotten. In France, on the other hand, it was the spirit of Ramus which predominated; and, as we have seen, his thought and scholarly practice was entirely directed towards didactic demonstration to the learner. Thus the intellectual climate in which Hobbes was working favoured the connection of language and mathematics as an instrument of thought; but Descartes, following Ramus at least in spirit, was inclined to regard language as a record passing on the content of thought. What is more, if Hobbes's theoretical writ-

ings had reached their peak before those of Descartes, the latter would have had to come to terms with them; but it was the other way round: Descartes was at his most active in the forties, and Hobbes in the fifties. Finally, mathematics, which was to be incorporated into thought as a logical tool, was still engaged in establishing an integrated system in the form of algebra—this was developed more especially by Viëta (1540–1603).

The modern sense of certainty, however, is completely different from the naive certainty of the Middle Ages, which had been concerned with the congruence of the mode of being and the mode of understanding; it was, perhaps, led by its very nature to all kinds of experiments aiming to establish, in a form as rigorous and exact as that employed in mathematical proof, the demonstrative quality of the sign. It was one experiment of this kind, that of a precise language of signs, presented to Descartes, that induced him to express his views on this language, and by implication on language in general.

The occurrence of such attempts to establish a precise artificial language is new, and provides a remarkable example of the suffusion of the new mathematical spirit into linguistic matters. Although the presence of artificial languages was by no means unknown or overlooked, the type which now emerges is totally different in principle from secret languages, for example, from the "ciphers" which Bacon discusses at some length. Besides a resemblance, there also remains this difference from Lull's *Ars Magna*, although, as noted below (p. 317), the Jesuit Kircher, a contemporary of Descartes, attempted a renewal of Lull's methods.

Let us first remind ourselves how Bacon describes the fallacious influence of language on thought in his chapter on the logic of discrimination, and plays for safety, recommending that it should be based on initial definitions, i.e. definitions in the manner of premisses "in accordance with the safe practice of mathematicians" (*secundum prudentiam Mathematicorum*). But even here there was a danger of undue linguistic influence, for "even definitions are constructed from words" (*et definitiones ex verbis constant*). Nevertheless, Bacon is already voicing here the notion of adopting mathematical methods to purify the use of language in drawing conclusions.

To confirm that it was appropriate to preface a discussion of Descartes and those who, like him, base their theories on the evidence of science, by adducing these influences as a consistent set of principles, one final point may be made. It was French and English cultural spheres—and Dutch ones, for that matter —which were most decisive in seventeenth-century thought. Italy had become isolated as a result of the Counter-Reformation; Germany was disorganized by the Thirty Years' War, but the North-Western sphere of

activity formed a closely-linked unity. Scholars stand in manifold and close association with one another by correspondence and personal contact. The growth of ideas therefore produces few eccentric offshoots, and there are scarcely any distinctively national schools of thought. It is therefore possible to deal with Descartes and Hobbes, for example, in close association with one another, and to see them as confronting substantially the same problems.

René Descartes

René Descartes (1596-1650) gave very little express attention to questions of language. Pride of place belongs to the letter he sent Mersenne from Amsterdam on 20 November 1629 (*Correspondance*, no. 22; ed. Adam & Michaud, 1936: I, 89-93). Descartes had matriculated as a student the previous year at Franeker (Friesland), and his "latent" life of study in the Netherlands had begun at this point. He had made his "marvellous discovery" (*inventum mirabile*) a good decade earlier, and in the meantime the attention of philosophers and mathematicians had been drawn to him, and his fame had been established. The manuscript of his *Meditationes* (published in 1640) also dates from 1629. He had composed his posthumously published *Regulae* ("Rules") even earlier.

It may therefore rightly be asserted that the letter of 1629 was written by a Descartes whose philosophical system had already reached a high degree of maturity, by a Descartes who was an amiable, modest man, but at the same time a fully convinced and self-assured thinker. After a sceptical retreat to the last ditch of *Cogito ergo sum* ("I think, therefore I am"), reason recovers its lost territory, and after taking this point of departure the guarantee of certainty is placed in the method of reasoning. This method, one of mathematical reasoning, is one which Descartes had learnt to value in Galileo, among others, and which had even been applied in Spinoza's geometrical method (*ordo geometricus*) to ethics. The role of language in the process of teasing out knowledge was never a matter of special interest to Descartes; and while he was concerned with the role of language in the diffusion of knowledge once it had been gained, i.e. in the proclamation and demonstration of profitable knowledge (*la bonne science*), even this concern was coincidental and by no means spontaneous. These views will be found in the Amsterdam letter.

Mersenne had sent Descartes a programme drawn up by Claude Hardy for a universal language, which in its half-dozen principles proposed that the language should consist, as far as lexicon was concerned, of primitive words, and that it should be extremely simple and regular in grammar. A dictionary

would also be needed. There is nothing special about this as far as words are concerned, says Descartes, for with a dictionary it is possible at a pinch to translate Chinese. All other languages will come to adopt the position of dialects of this primitive language; this means, he asserts, that its primitiveness resides only in the absence of grammatical irregularities. Further, by the use of a single sign for, e.g. *aimer, amare,* φιλεῖν ('to love'), a universal written language may be obtained. This, too, Descartes regards as an obvious development. However, he fears two difficulties which may arise from the introduction of such a language. First, some of the new combinations of sounds will constitute an insuperable barrier for one nation, others for another nation.[10] Secondly, if the primitive words were taken from the speaker's native language, they would easily be assimilated.[11] But this is not the case; there are as yet no books written in the language from which it can be learnt. It would be more convenient to stick to Latin or some other extant language:

> The only use I can see emerging from this invention is for the benefit of writing. That is to say, that it should cause a large dictionary to be printed for each of the languages in which it was intended to be understood, and would give common characters for each primitive word dependent on the sense, and not on the syllables, e.g. a single character for *aimer, amare* and φιλεῖν.[B]

Descartes thus looks to a universal character for some relief. He then makes a positive contribution to the question, as a direct result of his own system of thought and of rational principles based on scientific axioms.[12] We

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[10] The acuteness of Descartes' thought about this matter emerges clearly from his remarks about the various "difficult" combinations of sounds in various languages. It is only recently that a linguist (Troubetzkoy 1939 [posthumous]) gave serious consideration to the constitution of the phonetic system of an artificial language.

[11] The six propositions of the programme which Mersenne sent Descartes (which included one in which the new language is presented as "arcane") were very vague about the appearance of the primitive words. From the use of the term "arcane" it is evident that the artificial language was also intended to be a secret language. Many secret languages were devised and had been devised; Bacon goes into the matter in detail. The notion of a language consisting of rational "ciphers" apparently derives from secret languages. The "primitive words" of Hardy's project also suggest a claim to rationality.

[12] The whole passage is given here *in extenso* (with intercalated comments) in order to save many elaborations which would otherwise be necessary, e.g. in the case of Leibniz. The possible objection to the exhaustive treatment of this passage from Descartes, viz. that the views expressed here, being contained in correspondence, were not generally known and circulated, may be countered by pointing to the intensive mutual traffic between the eminent literary and philosophical scholars of the seventeenth and eighteenth centuries. The distribution of an idea reached far beyond the addressee. And in addition, it was Mersenne who took upon himself the task of bringing thinkers of all kinds into contact with one another.

will examine these views of Descartes by way of paraphrase. He continues:

> Moreover, I consider that it would be possible to add to this an invitation to
> settle the primitive words of this language and their characters alike, in such a
> way that it could be taught it in a very short time, that is to say by establishing
> an order between all the thoughts which can enter the human mind, in exactly
> the same way as a natural order has been established among numbers.[C]

Hardy should thus set out the inventory of primitive words and their written
representations, and do this in accordance with an intrinsic sequence of ideas
comparable to the sequence of numbers. Then the language will be easy to
master. Here we can already see the notion of an alphabet of primitive
thoughts (*alphabetum cogitationum primitivarum*) of the kind later elaborated by
Leibniz, and it seems already to be closely associated with the notion of a
fundamental ordering, a system controlling this world of ideas. But although
Descartes appreciates the parallel between words and numbers as systems, he
does not see language as an instrument of thought. This is further shown by
the remark:

> that ... just as it might be possible to learn in the course of a day what to call
> all the numbers up to infinity, and how to write them in an unknown language
> although they are an infinity of different words, it might be possible to do the
> same with all the other words required to express all other matters which might
> occur to the mind of man.[D]

Given the basic order, derived words should also be easy to learn, as should
the whole language.

But is this what Hardy is aiming at?

> But I do not think your author took this into considerations, as much because
> there is no evidence for it in any of his propositions as because the invention of
> this language depends on true philosophy, for it is impossible otherwise to num-
> ber all the thoughts of men and put them in order, or even to distinguish
> between them so that they may be clear and simple, which to my mind is the
> greatest secret that could be acquired in the pursuit of pofitable knowledge.[E]

The great secret for making a secret language cease to be secret and become
an accessible rational language, is to draw it up on the basis of true philo-
sophy, of true science. Here the philosopher proclaims the scientific basis of
his ideas. This philosophy can encompass and arrange all human thought,
and establish clear and simple distinctions in it:

> And if an account had been given of the nature of the simple ideas which are
> in the imagination of men, the ideas out of which everything they think is
> formed, and if this were generally accepted, I would venture to hope that there

would thereafter be a universal language which would be extremely easy to
learn and to write, and which, above all, would assist the judgment, representing
all things distinctly to it so that it would be virtually impossible for it to fall into
error.[F]

Thus it is only after such a philosophy has come into being that a universal
language will become possible; it will be metanoetic, i.e. the product or
record of deductive thinking. For the listeners whom the speaker or writer is
trying to convince this language, "which would assist the judgment", will na-
turally precede their acquisition of true philosophy. Hence there is some
indication that for these listeners such a language would play the basically
ennoetic role of determining their judgment, in so far as it is language which
establishes the distinct representation of things in their mind. This becomes
apparent from the ensuing criticism of natural received language which, in
Bacon's "ennoematic" view, influences thought:

> ... whereas the words we have received, on the contrary, have nothing but more
> or less confused meanings to which the minds of men have been accustomed for
> many years; this is the reason why they hardly understand anything perfectly.[G]

But Descartes is far from realizing that philosophers themselves have to
operate in language in the course of their thinking, and that this is probably
unavoidable. Finally comes a sceptical conclusion:

> So I consider that this language is possible, and that it is possible to discover the
> systematic knowledge on which it depends, skills which would enable peasants
> to be better judges of the truth than philosophers are today. But do not expect
> ever to see it in use; that presupposes great changes in the order of things, and
> the whole world would have to be an earthly paradise, something which can be
> suggested only in the realm of romances.[H]

Here, too, it is clear that rational thinking designs this language, but that
even the peasantry would be able to learn from it. But a language which had
been anterior to thought, and would be an instrument for thought, is
something which is very definitely not regarded by Descartes as a possibility.

It is not surprising that Leibniz did not let this letter escape when it came
to his eyes. He had it copied by a secretary, and appended a note to the copy
which is just as characteristic of him as the letter itself is of Descartes (see
Couturat 1903: 27). This point will arise again in the discussion of Leibniz.

Descartes has regard for language only in as far as it is the transmitter
of pure knowledge, i.e. of philosophical knowledge based on deduction from
axioms. Only when this knowledge is perfect and complete is language called
into play, and after a suitable metamorphosis it will be sent out to perform

its task as messenger in a precise and adequate manner. Not until the pea-
santry are instructed in it and through it will it acquire value as a means for
their acquiring pure knowledge. Descartes despairs of natural language; only
an artificial philosophical language has a place in his system, or rather after
his system is applied. Although he draws an analogy between the system of
numbers and the system of language, the notion that to reason is to calculate
(*raisonner, c'est calculer*) has no value for him, as it has for Leibniz, and *mutatis
mutandis* for Hobbes.

Leibniz criticizes Descartes at this point for missing the thread of Ariadne,
meaning by this the universal character (*characteristica universalis*), which leads
us through the labyrinth of thoughts; therefore Descartes did not possess "a
perfect method and true analysis" (*methodum perfectam atque analysin veram*). In-
deed, Descartes provided only for a posterior universal language (*langue univer-
selle*) of communication; while Hobbes and Leibniz, each in his own way, and
Hobbes still tentatively, provided for an anterior instrumental language of
signs. In schematic terms, Descartes sees matters as follows:

$$
\text{object} \begin{cases} \text{(a)} & \text{perception and representa-} \\ & \text{tion by the senses} \rightarrow \text{(b)} \text{ natural language} \\ \text{(A)} & \text{rational thinking} \qquad \rightarrow \text{(B)} \text{ rational artificial language} \end{cases}
$$
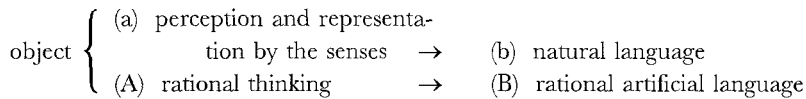
This is consistently metanoetic or postmental, viewing language as subsequent
to thought. Hobbes's position is that to proceed from (a) to (A) all that is
needed is the language of signs alone—with the vague assumption that the
use of b implies B—or, in Leibniz's words, the language of signs is the thread
of Ariadne. This will serve to clarify the discussion which follows.

A second significant document in Descartes' view of language is his refutation
of one of Hobbes' objections to his *Meditationes*. When the manuscript of this
work was ready for the press in the mid-thirties, Descartes asked Mersenne
to present it to the philosophical élite of the day, among them Hobbes.
Hobbes then expressed criticism of the the way Descartes developed his
concept of substance, and its waxen image. It is only in the mind (*sola mente*)
that we can confirm the existence of substance, in contrast to our perception
and mental image of accidents. Hobbes's objection is that Descartes does not
clearly distinguish between the two thought-processes (a) and (A) in the
diagram above. The distinction had already been observed by the Peri-
patetics, says Hobbes. Then he presents his own system: (object) → mental
image → name → concept. Rational thought, judgment and deduction are
possible, says Hobbes, only by means of combining names.

Descartes' refutation is brief: "I *have* expounded the distinction to which you refer." He had, indeed, done so. What is more, "the combination made in reasoning is not one of names, but one of objects associated with these names. I am surprised that anybody should come to the opposite conclusion. For who can doubt that a Frenchman and a German are able to think the same things of the same object, even though they use different words." For Descartes, then, language is always posterior to the concept and dependent on it, and the "natural" languages distribute a potentially identical concept among different words, with the result that these words are *a fortiori* obviously unsuitable to precede the rational concept or to give it any support. To express this diagrammatically: Descartes envisages only the hierarchy "object → concept or mental image → word"; Hobbes the hierarchy "object → mental image → word → concept".[13] Hobbes and Descartes do not understand one another. Hobbes proposes to accept names, words, as mere signs; for him the emphasis falls on mathematical operation with nothing more than such signs.

Descartes does not make things difficult for himself where language is concerned. He sets out from language-free primary judgments, according to self-evident premises which, in accordance with mathematical practice, are stated at the outset. This thinking proceeds, as he explicitly states in the sixth refutation, without words; even affirmation and negation are language-free. Language transmits thoughts, i.e. the results of thinking, and therefore plays the part of the handmaid of thinking. Thoughts may be true or false; therefore speech may be true or false. Only after exact knowledge has been attained is it appropriate to establish a new philosophical language. Descartes is far from considering language to be a unique encounter between man and reality, but he does realize that the use of language is a mark of humanity; understanding and language will always make it possible to distinguish man from the most highly-trained animal or from the most ingeniously constructed machine.

There can be no further suggestion that this rationalist acknowledges the autonomous functions of language in philosophical matters. Paradise is a world which thinks correctly, or which recognizes correct thought. Incorrectness is perversion, failure to understand, sin. Natural language is objectionable because it does not meet the demands of precise strict thought. The organization of this rational criterion subsumes language under reason. It is not appropriate to claim that Descartes goes so far as to subject language to logic; his logic and epistemology, together with their relationship to language, are

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[13] It must be recognized here, of course, that the views of both Descartes and Hobbes, more especially the latter, have been radically simplified.

not worked out with sufficient clarity. But in view of the role of representation which he assigns to language, it is natural that nothing is said about an actual transition from thought to its expression in words. For Descartes the content of thought represents a world order conceived to be mathematical. From this point of view the transposition of thoughts into language is not a movement from one sphere to another, but a continued occupation of the same sphere. It is at most an externalization of an inner perception, which itself was from the very beginning a representation, i.e. we have a transition from a representation to the representation of a previous representation. If the primary representation is incorrect or vague, then so is the secondary; if it is correct, then the secondary is also correct. But the secondary nature of language is always presupposed and assumed. Thus language has again become the shadow and double of thought, be it right or wrong, precise or vague.

There is also another reason why it is difficult to speak of a conscious subjection of language to logic in Descartes, while such a development seems to be present in Bacon. The logic of the rationalists is not the same as the logic of the Renaissance. Bacon erects a house of the sciences with storeys laid out into separate rooms, and within this encyclopaedic framework he adopts language as part of his inductive logic, a logic which is, indeed, opposed to the verbal quality of Aristotelian and mediaeval logic, and also to the language-based theory of the *logos* adopted by the humanists, but which nevertheless does not attain the modernity of rationalism. But rationalism opens the way for something new. For this reason, if we wish to establish whether Descartes deliberately logicalized language, we may measure and compare him only in terms of the rationalism of his fundamental assertions. And we may compare him only with his associates. Leibniz was to preach a complete subjection to logic; and from this it will become clear that while Descartes took the first step in this direction, he did not in fact take any positive steps further than Bacon had done with his notion of the "vehicle of thoughts" (*vehiculum cogitationum*). As a rationalist, Descartes rationalizes language from the very beginning. And in man, it is naturally part of the "thinking substance", but, in this general thinking, logic is still too little isolated for us to be able to speak of logicalization, although he postulates the parallel relationship of language and thought. Descartes has a method of thought, perhaps an epistemology; but has he also a logic, a theory of thought?

A further step towards the logicalization of language is taken by Hobbes.

Thomas Hobbes

It is not surprising that Thomas Hobbes (1599-1679) takes exception to Descartes in the *Objectio* discussed above for not making clear the differences between sense perceptions and mental images on the one hand, and meditation, judgment and deduction on the other. For although Descartes replies, not without justification, that he did explain the difference, Hobbes has a considerably greater concern for this matter than Descartes. And it is here that language is most closely affected.

During his third stay in Paris,[14] in the 1630s, Hobbes came more than ever before into close contact with Mersenne and his circle, and through him as an intermediary, with Descartes and his system of thought. It is from these years that his *Objectiones* to Descartes' *Meditationes* may be dated. At this time, too, Hobbes brought to fruition his project to construct his own system of rational study of the world and of life. His programme comprised three sections, viz., according to the titles of the three relevant works, *De Corpore, De Homine* and *De Cive* ("On the Body", "On Man", "On the Citizen"). As a result of a variety of circumstances, largely political, the order of publication of these works did not correspond to their sequence in his system. His political work was first to appear (Paris, 1642; Amsterdam, 1647); there is also a subjective factor at work here in the special and intense attention which Hobbes gave to political life; keeping out of sight (*bene latuisse*) was no part of his way of life, and probably no part of his intentions. Although this was the first of his works to appear, his political and social ideas rest on the basic mechanistic and subjective conceptions which he was to publish later. These appeared in 1655 (*De Corpore*) and 1658 (*De Homine*). Before this a new version and partial revision of *Leviathan,* his work on politics and society, appeared in English (1651). The most important sources for Hobbes's views on the functions of language are to be found in *De Corpore, De Homine* and *Leviathan.*

At the beginning of *De Corpore,* Hobbes declares: "Philosophy is knowledge of effects or phenomena derived by correct reasoning from their causes or origins, and again knowledge of possible origins of perceived effects" (I, 1.2).[115] In other words, rational knowledge of the causal relationship works forwards and backwards, from cause to effect and vice versa. Knowledge is acquired by means of ratiocination. This ratiocination, the central theme of Hobbes's philosophy, is calculation, *computatio,* λογίζεσθαι (reckoning), or, more pre-

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[14]   For more detailed information see the Introduction to the translation of Hobbes's major works by Frischeisen-Köhler (1915-1918).

[15]   Quoted, by Part, Chapter and Paragraph, from Hobbes's [Latin] Works, ed. Molesworth (1839). The four parts of *De Corpore* are Logic, Metaphysics, Rules of Motion, Physics.

cisely, addition and subtraction. Hobbes speaks emphatically of Logic or computation. Perception and memory, which animals also have, are cogitation, but not philosophy, science and reason. Nor, for Hobbes, therefore, is anticipation based on memory, prudence or practical knowledge. (A hundred years later the Scottish school of Reid was to proclaim the philosophy of "common sense".) Rational knowledge may be attained either through reasoning alone "or by reasoning with tacit cogitation by means of words" (*sive verbis tacita cognitione ratiocinando*), when perception and ratiocination so to speak coincide, are simultaneous and simple. But if one has to go back on one's thoughts and rethink them, reminders (*monimenta*), supports for the memory, are necessary in order to make counting or thinking possible (I, 2.1). These operational reminders, these *notae,* are provided by conventional, natural—not artificial —language, or languages, if it is so desired. Common words occur in ratiocination with the function of reminders, for thoughts are fluid and transitory (*fluxae et caducae*) as "marks by which former thoughts can not only be brought back but also recorded, as it were, in their proper order".[J] These marks, like words (*voces*), are "perceptible objects which we apply arbitrarily". To what are they applied? To cogitations, or more precisely, to the concepts of the mind (I, 2.2). But if the individual, no matter how intelligent, can advance no further than inventing and using these notes for himself, the knowledge of mankind will derive no benefit. This is why the marks must be shared with others as common property; this is why they are required as signs. Hobbes goes on to define a concept of sign which anticipates associationism[16] and, in addition, is reversible; for signs are "the precursors of consequences and the consequence of precursors, as we have frequently and repeatedly seen them preceding and following in the same way".[K] A cloud is a sign of rain, and rain of a cloud. But these are natural signs. A boundary stone is an arbitrary sign, and human words are also arbitrary signs, signifying thoughts and motions of the mind (*voces humanae ad significandas animi cogitationes et motus*). The difference between marks and signs is that the former are instituted by our own will, the latter by the will of others (*Notae ergo et signi differentia est, quod illa nostri, hoc aliorum gratia institutum est*).

Hobbes is expressing (I, 2.3) a conclusion about names and their use which is here—to the best of my knowledge for the first time in linguistic

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[16] In spite of their claims to novelty, Ogden and Richards—and associative linguistics in general—could well have Hobbes as a forerunner. The views they hold are fully compatible with Hobbes's notions of causality. Compare Price's description of Ogden and Richards's views as a "causal theory". (See Reichling 1935: 81, Ogden & Richards 1930, *passim.*)

history— couched in terms of function: "Both marks and signs are necessary for philosophy [i.e. for theoretical discourse]; but while names serve both these purposes, they function as marks rather than as signs."[L] Thus Hobbes is here answering a question asked from a functional point of view: What does language do? What does it achieve? What task does language perform? In his answer he implies the definition of its nature: "Thus the *nature* of the name consists primarily in its being a *mark*" (*Natura itaque nominis consistit primario in eo quod sit nota*). Here, then, he establishes the originative character of the mark in language.

The transition from the individual function as mark to the common function as sign is not developed further. The distinction between mark and sign is, indeed, emphasized: "Marks [exist] so that we may be able to remember our thoughts, signs that we may make them public" (*Notae [sunt] ut recordari, signa ut demonstrare cogitationes nostras valeamus*). We may compare: "Names in themselves are marks, for they recall only things known; they are not, however, signs, save ... in speech".[M] Just so does the mark originate in the individual for his own use—"for [the individual] man, as if he alone existed in the world" (*homini, etsi unicus in mundo existeret*)—and serves to indicate individual objects. Existence as sign means adoption into syntactical association for the purposes of communication (I, 2.3).

What are names signs of? Not of things, but of ideas, of thoughts, concepts, mental images (*cogitationes, conceptus, imagines*). It is then not necessary that these thoughts should refer to objects existing in reality. The result of subtraction may be zero; hence the term for zero, 'nothing', is not useless (*'nihil' inutile non est*), the word 'nothing' is serviceable. Hobbes accepts the great importance of the view that names apply not to objects, but to thoughts, but nevertheless decides for didactic reasons to speak directly of the thing itself, rather than indirectly of the thing named "as if it were all one whether the thing existed in fact or were fictitious" (*tanquam idem essent, sive res illa vere existat, sive ficta sit*, I, 2.6). Thus we can give names to fictions, and speak about 'nothing', or, indeed, about 'less than nothing'.

Chapter 2 continues with a further development of this thought, dealing in turn with positive and negative names—by the negative we refer to what we have not thought (2.7)—contradictory names (2.8), and common names. In this context, 'common' signs are not those used in so-called social exchanges between individuals (*communia aliis*, see above), but such names as 'tree' or 'man' (*arbor, homo*) as opposed to proper names like 'Homer' or 'he' (*Homerus, ille*). What Hobbes understands here by common name is the universal name (*nomen universale*) of ancient grammar; and then there follows

that well-known nominalistic principle, "'homo' is not the name of mankind, but of each individual severally, i.e. of Peter and John and the rest of men one by one".[N] As a result, conceptualism is also rejected: "the universal name is not the name of any one thing existing in the nature of things, or of any idea or fancy formed in the mind of any one person, but always the name of some word or name" (2.9).[O] In 2.11 we learn that there are words which did not first occur in the function of marks, but were invented simply for the purpose of signification: "Signs of this kind are useful to man, not in their own right, or for the purpose of acquiring knowledge by due consideration, but for the sake of others, i.e. for teaching and indicating ideas to others".[P] This refers to such words as *omne, quodlibet, aliquod* ('all', 'whatever', 'something'), etc., the very indefiniteness of which will not permit them to be used functionally as marks.

Hobbes concludes his chapter on Words with a description of the 'predicaments', grouped according to substance, quantity, quality and relationship. He warns that the varieties of the things themselves are not exhausted or limited by these distinctions; "an arrangement of this kind can be established only by perfect philosophy" (*huiusmodi ordinatio, nisi a philosophia perfecta stabiliri non potest*). Moreover, Hobbes does not rate the use of the predicaments too highly; in dealing with these matters, Aristotle, to maintain his authority, counted up words rather than things. Hobbes's concern is with things; he invokes this class of words (*ordo vocum*) only "after it has been confirmed by reason" (*postquam ratione comprobabitur*).

Chapter 3 deals with the sentence. Various types of utterance arise from "the association or joining together of words", questions, promises, wishes, commands, etc. The only type for philosophical use is the statement, i.e. the declarative sentence or predication, or, as it is mostly called, the proposition. The proposition consists of two names linked to one another by the verb 'to be' (*esse*). Even such a sentence as 'man walks' (*homo ambulat*) is reduced to these terms, as 'man is walking' (*homo est ambulans;* I, 3.2). It is important that it is only with the proposition that truth or error comes into play. The difference between the two is called into question only in the case of man, and this is because he uses language. We owe proper reasoning (*recta ratiocinatio*) to language, and this is its great achievement, but it also imparts error, in which man can become entangled as in a spider's web; but strong minds may break out (*fortia autem ingenia perrumpunt*). Nevertheless, truth resides in the statement —i.e in the proposition—not in the thing, for even if the truth is sometimes compared with what is only apparently true, or completely fictitious, it is

nevertheless the truth of the proposition to which reference is made (I, 3.7).^Q
[17]

Chapter 4 contains Hobbes's theory of syllogisms, and Chapter 5 describes the fallacies and errors into which those who reason carelessly (*incaute ratiocinantes*) are liable to fall. Hobbes notes, *inter alia*, seven kinds of incoherencies of names, in which the proposition is invariably false. There also follow the "fallacies deriving from the deployment of terms with the copula" and "from ambiguity" (*vitia ex explicatione terminorum cum copula ... ex aequivocatione*). Hobbes had already discussed ambiguous names in the context of unambiguous names (2.12). Here he stipulates that in the course of the same discussion they should always have the same meaning.

The concluding sixth chapter of the Logic is on method. This will not be discussed further than is necessary for the present investigation. In its first ten paragraphs the chapter deals with the discovery of arguments (*inventio*), the method of tracing causes and principles in the process of analysis (or subtraction). In I, 6.5 Hobbes reveals to us that he knows the final cause, i.e. motion, *a priori* and from evidence: "Now the principles of universals ... are manifest either in themselves or, as it is said, by the mark of nature, but there is one universal principle of them all, and that is motion".^R The final nine paragraphs describe how effects derive from causes, and present the synthetic method of proof (*demonstratio*) by addition or summation. What more has Hobbes to say about language in the context of method? In the marginal summary of §11 he makes the further statement that "words act as marks to assist investigation, and as significative terms to assist proof" (*vocabula inventioni serviunt ut notae, demonstrationi ut verba significantia*). This is then in itself a further confirmation of the weight he ascribed to his distinction between mark and sign in the framework of his logic and his whole system. In his elaboration of this idea we find an important clarification of the question of what Hobbes considers to be the origin of language, as well as an indication of the extent

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[17] In discussing Hobbes's notion of truth in utterances, Cassirer (1906: 78) says: "Hobbes's conception of truth culminates in the thesis that truth lies not in things but exclusively in words and the use of words." Cassirer should have omitted 'in words'. A little further on he observes correctly: "But the organ and the instrument which it [science] employs can be nothing but the word." He goes on to speak of words as "indications" (*Bezeichnungen*) or "namings" (*Benennungen*), which are suitable terms in the case of Hobbes, but also, in the same breath, of "ideal (notional) representatives" (*ideele Stellvetreter*), which are unsuitable, though they are suitable for Leibniz—and for Cassirer himself. With his theory of the mark Hobbes is in fact holding himself aloof from any theory of representation: "The properties of definition are ... (ii) that definition exhibits a universal notion, to the extent that it is some kind of universal picture, not for the eye, but for the mind". The artless nature of this remark is, however, obvious.

of his assimilation of thought and calculation. He begins by observing that the use of words begins in the investigative method through their being marks by which thoughts may be grouped together in the memory. For example, if anyone were to note of a triangle placed before his eyes that the three angles equal two right angles, and was later presented with another triangle, he would not know whether the same property applied also to this one. It it would therefore be necessary to begin again in each subsequent encounter with a triangle, since silent thought without any use of words would remain unconnected. The use of words prevents this:

> Marks assist discovery as aids to the memory; they do not convey meaning as words do; thus a solitary man can become a philosopher without having a teacher. Adam managed it! But to teach, that is to demonstrate, implies in addition both utterance and syllogistical reasoning. (I, 6.11)[S]

At this point we can see that however closely Hobbes draws an analogy between thinking in language and calculation, he does not yet explicitly and objectively draw the parallel between figures or shapes on the one hand and names on the other as mathematical and linguistic tools respectively. He comes very close to this analogy of the elements, but he does not completely reach it. He takes the final step in *Leviathan*. Hobbes sees the marks as instruments of thought, which, however, exist only "for the benefit of memory". Although the terms 'use', 'apply', 'function', 'assist' (*usus, adhibere, fungi, servire*), etc. come close to the concept of instrumentality, the term 'instrument' is nowhere to be found in his writings. Hobbes's notion of instrumentality will be examined in more detail later. This passage further introduces the solitary man, the man who attained language in complete isolation. This solitary man will colour discussions of the origin of language for centuries. And in the paragraph on the two achievements of language, Hobbes had already said, as we have already seen, "Names, then, would indeed have helped man to form a memory, even if he had existed alone in the world" (*Nam homini, etsi unicus in mundo existeret, inservirent (nomina) quidem ad memoriam*). These marks constitute the original language, the language of Adam (*lingua Adamica*), or rather, the original function of language. This, too, will be discussed again below; but there is no need for the present for further observations about Hobbes's views on language as presented in *De Corpore*.

<p style="text-align:center">*   *   *   *   *   *</p>

Before moving on to discuss what Hobbes has to say about language in *De Homine*, it would be well to give some attention to his compendium of

knowledge, which falls into three sections. While *De Corpore* expounds his logic and natural philosophy—logic being treated here because it is treated mathematically—and *De Cive* develops his theory of society and law, *De Homine* is concerned with man, who stands at the point where these two domains meet; for on the one hand his thoughts and deeds are caused in their vegetative and mechanical aspects by physical conditions, and on the other hand man, as a political and social being, produces order. The dominance of reason, which is based on science and mathematics, extends to all areas of practical life; and in this light we can understand Hobbes's theory of the political contract and governmental absolutism, his ethics of self-preservation based on a mechanistic psychology—enhanced circulation of the blood is pleasure,[18] restricted circulation is displeasure—and his relativization of good and evil, all encapsulated in ontological[19] determinism. His views of language in *De Homine* emphasize the two-sidedness of man, since language on the one hand comes into being as an instrument for receiving knowledge, and on the other as one for imparting rational knowledge, to give effect to rationalized knowledge and ensure its dominance in social life.

De Homine comprises fifteen chapters, of which the first ten deal in the main with the perceptions of sight and the way mathematical discourse deals with them. Chapter 10 ("De Sermone") deals with speech; the five chapters which follow deal *inter alia* with emotions, morals and religion.

In the chapter on language, the full title of which is "On Speech and the Sciences" (*De Sermone et Scientiis*), Hobbes turns alternately, as it were, in two directions, although his emphasis falls on what produces language. The text begins:

> Speech or language is a configuration of words established arbitrarily by men to indicate the series of concepts of those things which we are pondering. Therefore, just as the word relates to the idea or concept of a single object, so is speech related to the discourse of the mind. (I, 10.1)[T]

Language is typically peculiar to man; animals obey our words only in so far as they are signs, i.e. signals. Their own cries (*voces*) express only passions such as hope, fear and joy, and are involuntary (non-arbitrary), by necessity of

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[18]   Harvey's demonstration of the circulation of the blood (*De motu cordis et sanguinis*, 1628) was of at least equal importance for Hobbes and his contemporaries as the publications of Galileo, which also appeared in the 1620s and 1630s.

[19]   The term 'ontological' is used because the besetting sin of rationalism, ultimately, is revived in Hobbes, and it is this which causes him to deny the rationality of Existence, and to set reason up in powerful opposition to Existence.

nature. That animal cries are not the same as language is clear from the fact that they are the same throughout the world, while those of man are different. And it is for this reason that all other living creatures are devoid of understanding, for understanding arises purely and simply from the meaning of words: "The understanding is, indeed, a mental image, but one which arises from the established meaning of words".[U] The understanding may thus properly be called 'a mental image' in so far as mental representations as it were provide the material, but it is an image filtered, organized and converted to rational knowledge by means of language.

In 10.2 Hobbes directs his attention back to the origins of speech. Hobbes uses the expression 'by the agreement of mankind' (*ex humani constituto*) alongside 'arbitrarily' (*ex arbitrio*), and then himself goes on to ask who may have been the originators of the great benefit which language bestows on mankind (*beneficium, quantum praestat nobis sermo*). That men should have convened an assembly for this purpose is not credible. Hobbes considers that the number of words was originally small, relating only to known objects. Thus man gave names arbitrarily to the animals which God brought before him; subsequently to other things. These names were handed down, and a new generation added more. But how could man understand the command by which he was judged, concerned as it was with 'knowledge', 'good' and 'evil'? This must have been understood by Adam in another, supernatural way. Adam could not even have understood the snake's word 'death' in the normal natural way. As a result the origin of language can only be arbitrary. This is clear from the confusion of tongues at Babel. That "names should have been given to things according to their nature", as some have supposed, "is childish". For, since nature is everywhere one and the same, how could languages then have been different? It is not necessary to point out that Hobbes is seriously exposed here to confused ideas and begging the question.

In the next paragraph (10.3), dealing with "advantages and disadvantages of speech" (*sermonis commoda et incommoda*) we find an even closer approach to the analogy between names and numbers. In fact, the first advantage of speech is "that man may count by virtue of the names of the numbers" (*quod ope nominum numeralium homo possit numerare*); it is possible to determine how large, how wide, how long an object is, it is possible to add, to subtract, to multiply, to divide, to compare; it is also possible to subject time, motion, weight and degrees of intensity to measurement. This convenience and utility of language is clear in many areas: in calculating time, in astronomical and geographical measurements, in navigation, building and tool-making—all this emerges from the use of numbers, but the use of numbers emerges from language (*a sermone*

autem numeratio). It is clear that there is a difference of direction here in comparison with the treatment of the question in *De Corpore*, where reasoning is equated by analogy with computation. In that work language was limited to calculation by its (ennoetic) function as a mental process; here, however, the metanoetic aspects are stressed: the names of numbers are words, and as such are the instruments of the greatest virtue of language. As already noted, Leibniz thinks this relationship through to the end as one of reciprocity.

With the two further advantages of language, Hobbes turns completely to practical life. With language it is possible to teach another person, i.e. to communicate one's knowledge to another person, or to give and understand orders —thus providing signs with a communicative, and an "imperative", commanding or dominating function respectively. Here both the rhetorical component of Humanism and the urge to dominate displayed by the Renaissance produced a late shoot; but little of this will remain in Leibniz. For Hobbes, the imperative quality of language is still its greatest benefit, for without it there would be no society, no social order (*pax*), no learning (*disciplina*), but only "ferocity, isolation and hiding-places instead of houses". There are few places where the undertones of the rationalism of science, i.e. the rationalism which succeeds the Renaissance, are so clearly expressed as here. The unsuccessful claim of the Renaissance to human sovereignty, undermined by failures and scepticism, seeks for certainty and security in the sovereignty of reason, and cleaves to it. By means of imperative language, through which we agree to come together as societies and make contracts, we live safe, happy and prosperous lives.[20]

And what of the disadvantages of language? Since man can draw up rules, he can also draw up false rules—and teach them to others, i.e. lie. Animals cannot do this. A second disadvantage comes from listening automatically to philosophers and schoolmen and their idle chatter. The listener thinks that they are saying something, but they are saying nothing. The same automatic behaviour can lead to thoughtless utterances in speech. Without realizing it, Hobbes is here again revealing that he regards language as an instrument, for automatic behaviour can only occur in instrumental actions.

On scientific knowledge (*scientia*) Hobbes also makes the following statement: Scientific knowledge is the truth of theorems, propositions, deductions

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[20]   This eulogy of language is clearly in harmony with Hobbes's political philosophy; naturally this will not be investigated further in the present study. Here it is necessary only to assert that it would be hard to overestimate the importance of language in Hobbes's system—*language receives as great an acceptance as reason itself.*

which are derived by ratiocination from the object, as "an appreciation of fact derived from its causes by experience of its effects" (*cognitio derivata a causis ab experientia effectuum*). The truth of the fact is called simply cognition. We have knowledge *a priori* of that of which the cause depends on ourselves, as in geometry. Natural causes do not depend on us, but physical science, too, leaning as it does on geometry (*quae geometriae innitur*), becomes demonstrable *a posteriori* as a result of logical reasoning. Political and ethical theory can be demonstrated *a priori;* the demonstration—the reasoning on which this depends—is, *a fortiori,* based on language. So much then, for Hobbes's views on language in *De Homine*.

Leviathan

Similar views recur in Hobbes's *Leviathan;* but, perhaps because Hobbes was now writing in the vernacular, writing, that is, with rugged outspokenness and with rather less academic modesty, his pronouncements here have often greater effect and clarity. *Leviathan* appeared in 1651, earlier than *De Homine,* but we know that the Latin work had been sketched out long before it was published. Let us now consider *Leviathan* and the views on language which it enshrines,[21] but principally those passages which contain clarifications, supplements or expansions of what has already been seen in his other works.

Leviathan, or to give it its full title, *Leviathan or the Matter, Forme and Power of a Commonwealth, Ecclesiasticall and Civill,* is divided into treatments "Of Man", "Of Commonwealth", "Of a Christian Commonwealth", "Of the Kingdome of Darknesse". This amounts to an elaboration, or a modification, of *De Homine* and *De Cive.* The first three chapters of Part I deal with "Sense", "Imagination", and 'The Consequence or Train of Imaginations". Given that Chapter 5 deals with "Reason and Science", we can expect that language will be discussed at the point of contact, i.e. in Chapter 4 (pp. 13-21). This is headed "Of Speech". Here we learn from Hobbes that the invention of printing and letters is "no great matter", but

> But the most noble and profitable invention ... was that of SPEECH, consisting of *Names* or *Appellations,* and their Connexion; whereby men register their Thoughts; recall them when they are past; and also declare them one to another

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[21] Discussion of Hobbes in histories of linguistic scholarship—there is no history of linguistic theory—or in historical surveys of specialized linguistic topics, e.g. monographs on linguistic philosophy or theory, has been exclusively based on *Leviathan*. The description and analysis of his other works given here may serve to show that this arises from unawareness of the extent of Hobbes's views of language and their significance as components of his system of thought.

for mutuall utility and conversation; without which, there had been amongst men, neither Common-wealth, nor Society, nor Contract, nor Peace, no more than among Lyons, Bears, and Wolves. ([1651] 1904: 13)

God taught Adam how he was to name "such creatures as he presented to his sight". And Adam then extended his vocabulary further for himself: "and so by succession of time, so much language might be gotten, as he had found use for". For the Bible gives no indication that Adam was immediately taught a complete language. After the Confusion of Tongues, the scattered languages had to begin again. The "use of speech" is of four kinds, one as 'Markes' or 'Notes', and three different ones as 'Signes'. We have met these distinctions already, but they will now be repeated in association with one another, together with the four related "abuses":

1. to "register"; the danger here is "inconstancy", by which men "deceive themselves";
2. to "shew to others that knowledge which we have attained"; metaphorical use leads to misunderstanding by others;
3. "to make known to others our wills", where the danger is that what we announce as such is not in fact our will;
4. "to please and delight our selves and others", where the danger is that we may offend others with our words.

In the distinction of "proper names" and "common names" which follows there now comes the familiar proposition that common names are no more than the names of "divers particular things". A 'universal' of this kind rests upon "similitude in some quality or other accident".

The importance for Hobbes of the function of the mark (*nota*) as a component of thought is clear from the way he elaborates this point: "By this imposition of Names, some of larger, some of stricter signification, we turn the reckoning of the consequences of things imagined in the mind, into a reckoning of the consequences of Appellations" (I, 4.14). Here follows the example already given of the deaf-mute who has to approach each fresh triangle he encounters with the thesis that the three angles of a triangle together equal two right angles. The clearest the use of the mark is in "the registring of thoughts ... in Numbring". Before this was introduced, it was necessary to count on the fingers. "Without words, there is no possibility of reeckoning of Numbers."

Then Hobbes comes to the question of truth:

When two Names are joyned together into a Consequence, or Affirmation; as

thus: *A man is a living creature;* or thus, *if he be a man, he is a living creature,* if the later name *Living creature,* signifie all that the former name *Man* signifieth, then the affirmation, or consequence is *true;* otherwise *false.* For *True* and *False* are attributes of Speech, not of Things. And where Speech is not, there is neither *Truth* nor *Falshood.* (I, 4.14–15)

To avoid "inconstancies" in his search for "precise truth", the seeker must always bear in mind "what every name he uses stands for; ... or else he will find himselfe entangled in words, as a bird in lime-twiggs; the more he struggles, the more belimed". An eminent example of this may be found in the decisive pattern of reasoning in Geometry:

(which is the onely Science that it has pleased God hitherto to bestow on mankind,) men begin at settling the significations of their words; which settling of significations, they call *Definitions;* and place them in the beginning of their reckoning. ... So that in the right Definition of Names, lyes the first use of Speech; which is the Acquisition of Science: And in wrong, or no Definitions, lyes the first abuse; from which proceed all false and senslesse Tenets; which make those men that take their instruction from the authority of books, and not from their own meditation, to be as much below the condition of ignorant men, as men endued with true science are above it. (I, 4.15)

It is not possible "without Letters for any man to become either excellently wise, or (unless his memory be hurt by disease, or ill constitution of organs) excellently foolish". Then follows the celebrated dictum, which is clearly directed both against the realistic schoolmen and against the humanists: "For words are wise mens counters, they do but reckon by them: but they are the money of fooles, that value them by the authority of an *Aristotle,* a *Cicero,* or a *Thomas,* or any other Doctor whatsoever, if but a man."

After a short digression on the basic meaning of the Latin *ratio,* we read: "The Latines called Accounts of mony *Rationes,* and accounting, *Ratiocinatio:* ... Items they called *Nomina;* that is, *Names!",* and the same is true of the Greek συλλογισμός, "which signifieth summing up". After this Hobbes enumerates four sorts of names: For Matter or Body; for accidents and qualities (names Abstract); names for the idea of the object in the "fancy" (colours, sounds and all visual or auditive impressions); names of Names (e.g. general, special, aequivocal, affirmation, interrogation, etc.). These are all "Names Positive", but the use of "Names Negative" is also justified since they are clearly "of use in reckoning".

"Understanding [is] nothing else, but conception *caused* by Speech." The use of "inconstant names" is a danger, because "we conceive the same things differently", and because of the emotional colouring which "gives every thing

a tincture of our different passions"; what one calls cruelty, another will call justice, etc., "And therefore in reasoning, a man must take heed of words"—of metaphors and tropes, too; but these are less dangerous, "because they profess their inconstancy".

The remarks quoted so far come from Chapter 4, which is almost entirely dedicated to the originative function of the mark. They may be rounded off with a quotation from the beginning of Chapter 5, on "Reason and Science", which deals with the certain knowledge which can be brought about by calculation in words. This quotation is important for our present purposes, because it reveals that Hobbes had now hit upon the concrete parallel between the operative components of mathematics on the one hand, and those of his logic of language on the other. On pp. 21-22 we read:

> These operations [i.e. addition and subtraction, or multiplication and division] are not incident to Numbers onely, but to all manner of things that can be added together, and taken out of one another. For as Arithmeticians teach to adde and subtract in *numbers;* so the Geometricians teach the same in *lines, figures* (solid and superficiall), *angles, proportions, times,* degrees of *swiftnesse, force, power,* and the like; the Logicians teach the same in *Conseque[n]ces of words;* adding together *two Names,* to make an *Affirmation;* and *two Affirmations,* to make a *Syllogisme;* and *many Syllogismes to make a Demonstration;* and from the *summe,* or *Conclusion* of a *Syllogisme,* they subtract one *Proposition,* to find the other. ...
>
> ... For REASON, in this sense, is nothing but *Reckoning* (that is, Adding and Subtracting) of the consequences of generall names agreed upon, for the *marking* and *signifying* of our thoughts; I say *marking* them, when we reckon by our selves; and signifying when we demonstrate, or approve our reckonings to other men.

*   *   *   *   *   *

The ground has now been laid for some critical observations about Hobbes's views on language. The analogy between rational thought and calculation had led him to draw an analogy between words and technical methods of counting and measuring: numbers, numerals, figures, speeds, etc., and by this means he had discovered the instrumental character of language. Descartes had not known this; he had seen words in the traditional manner, as no more than derivative terms of thought, as static and substantive, even if not exact, representations of thought. Hobbes, however, ascribes a completely different and most remarkable role to the linguistic concepts implanted in the mind. They make it possible to derive theoretical and exact ideas from non-theoretical, inexact ones. In doing this they function purely as instruments. This quality of single and exclusive instrumentality renders him proof against Descartes' rebuttal of his *Objection*—discussed above in the section on Des-

cartes—on the grounds of differences between languages or words. Hobbes's notion of pure instrumentality is also formulated in his often-cited image of the coin; small change is only a means of payment, consisting of gaming counters without intrinsic content or value.

Against Hobbes's view it may first be urged that, while language does, indeed, have an instrumental quality, this is not its sole or exclusive property. Although there is, *inter alia*, an inherent technical component in language, this is certainly not its principal function.[22] Its fundamental purpose is not to establish order, although this is one of the things it does. It may not, therefore, be assessed primarily and exclusively from the order which results from it (as in behaviourism). What has happened is that, in reacting against the view of language as substance, in which words and language were judged by the degree to which they accurately reflect thoughts and propositions, Hobbes has gone to the other extreme. What is more, he incorporates this technical function of language into the province of thought. However much benefit may come from giving language this structural function, a second objection may nevertheless be raised, viz. that this view uses language, as such, less as a means of giving structure to thought than as a means of approaching the whole of reality and structuring it in a categorially autonomous manner; or rather this is what man does in using language as a means of producing order. In so far as Hobbes locates the source of language in thought, the gain of his vision of instrumentality is immediately thrown away. It is therefore only with considerable reservation that he can be regarded as a forerunner of Grace Andrus de Laguna (1927) and Gardiner (1932, [2]1951).

Objections to Hobbes may thus be based, first on the exclusivity he allots to the instrumental use of language, and secondly on the location of this instrumentality within the mind. That Hobbes regards communication and giving commands as associated functions in *De Homine* does not exempt him from this criticism, for it is the *originative* nature of language which he defines as the medium or instrument: "the mark precedes the sign". The first language is the mark (*nota*). Communication and giving commands are for him incidental, associated and derivative facilities and services (the latter implicit in the use of *servire*) provided by language, just as in earlier and later times scholars had pointed to and would point to aesthetic and ethical applications of language (for example the Humanists, or Shaftesbury).

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[22] Certain words, such as the conjunction 'that', may be said to "guide" in a technical, intra-linguistic sense. Hobbes has in mind the use of language as a whole to "guide" ideas, i.e. to be functional in its own right). See Reichling 1935: 279ff., also e.g. Vendryès 1950: 85ff.

Hobbes's view of language as an instrument is associated with the fact that he formulates the existential problem of language, for the first time as far as I know, in functional terms: What does it achieve? What does language accomplish? Not "What is it?" or "What is its content?", but "What is its function?" He answers the question, for sure, entirely from the point of view of the subject, as though it were worded, "what do I, as a thinking I, accomplish by means of language?" But, for all that, an explicit concept of linguistic function is obvious, and so is Hobbes's achievement in this direction.

To sum up: Hobbes sees the originative nucleus of language explicitly in functional terms; he makes it part of an instrumentality which, being ennoetic, i.e. a means of thinking, lies from the outset within theoretical reasoning. Such theoretical reasoning, like that of all axiomatic rationalists, is integrated for him in mathematical method. Inasmuch as Hobbes's concept of the instrumentality of thought arises in the context of language because he postulated an analogy, even an identity, between reasoning and calculating, it may be concluded that the rational use of language is calculating with words. An analogy of this kind was probably evoked by algebra, which was at the time developing rapidly.[23]

Hobbes was unable to deal with the unmistakably semantic and cogitative factor of language which makes it the bearer of items of information. As noted above, Descartes, in line with tradition, saw this factor, or rather this element, as the only one, while Hobbes was concerned—at least as far as the initial and basic aspects of language are concerned—only with its character as instrument. But both views are justifiable, the point at issue being their relation to one another. Leibniz tested his powers, the powers of a genius, *inter alia* on the solution of this problem. Leibniz was a linguistic scholar—which Hobbes was not—but in addition he was a great mathematician, and much more as well.

Hobbes's frequently expressed concept of arbitrariness is of a piece with his characterization of language as an ennoetic instrument of theoretical thought; as also is his ready adoption of words for 'nothing', 'future', etc., terms with which the realistic speculative grammar of the Middle Ages had had the greatest difficulty. Hobbes, however, realizes that arithmetic always works, even, for example, with negative numbers. In this way Hobbes breaks

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[23] "Hobbes constructs his psychology as a mathematician. To give things names arbitrarily, and then to add up the words taking account of rules determined at the outset: that is the line which wise men must follow. This is the line which the algebraicists take." Landry 1930: 137. Hobbes, however, seems to have taken a fairly critical view of the algebraicists (Laird 1934: 265).

away from the "content-like" view of language; words for him are, within
their contexts, empty place-markers for the objects in mind, i.e. of the
concepts of the objects, in the chain of cause and effect ("consequence"), i.e.
in the order of existence as a whole, which, in Hobbes's view, is of universal
and mechanistic nature. This comes about at the expense of the meaning-
content, of the reflective value, of the words. Calculation, the operation of
thoughts in words, provides the true image of reality, which is itself in any
case, according to Galileo, a process, a motion. A later dictum—by
Husserl—was to declare that language names objects by the means [i.e. using
the instrument] of their denotations (their reflective content).[24] Hobbes
believes he can do this without regard to the content of the words, which he
sees as irrelevant. Thus his concept of the mark and the sign is no more than
an abstraction of deictic, indicative nature into which he escapes from the lin-
guistic accountability of actual words and languages with their contents and
the differences between them.

Hobbes set out consciously to find the analogy between the mathematical
sign and the linguistic sign, and drew the consequences; it came about by way
of the ennoetic view of language as an instrument of thought, the origin and
development of which from the mediaeval notion of interior speech (*sermo
interior*) has been sketched above. It is this discovery or breakthrough, which
was mentioned in the introductory remarks on rationalism, which takes shape
in Hobbes's concept of the mark. Building on Hobbes's concept of the mark
as instrument of thought, Leibniz, too, sets out to rationalize, or indeed to
logicalize, the communicative aspect which at first sight seems to be the
primary function of the theory; and as a result of this he brings the whole of
language back under the domain of logic, without leaving the functions of
communicating and giving orders, as Hobbes had done, as an irreducible
residue. Brought back again, then, but, as happens with escapees, more
securely enclosed than ever. Or perhaps the following image is more accurate:
Leibniz the diplomat imprisons language in logic, but he accommodates the
rules of the logical prison to language, so that the time spent there is not felt
to be imprisonment. — But analysis of Leibniz's harmonizing solution will
come later.

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[24] "It is correct to say that expression indicates (or names) the object by means of its meaning"
(*mittels seiner Bedeutung*, Husserl 1922: I.i, 149). Cf. also "But the word always names the objects
by means of meaning" (*door middel van de betekenis*, Reichling 1935: 245).

Mathematics and Philosophy

We have now seen something of the development of rationalist views of language from the days of the natural philosopher Galileo to the time of the universal thinker Hobbes. The mastery of man over nature which Bacon had prophesied before the means to attain it were available seemed now to have been realized, in its principles and initial stages, by Galileo and like-minded scholars, by way of the scientific and rational definition of motion. Mechanics as a mathematical theory of physical motion had made a breach in the problems the world presented and provided a key to the method of dominating the whole universe. Bacon's thought has its value as prophecy, but in comparison with the ideas of his contemporaries Kepler and Galileo it was already outdated as scientific method, an echo of times past, when it was made public. It has, however, been shown above that Bacon's notions, not least in respect of language, influenced men's minds and prepared them to accept rationalistic thought-processes.

In the first half of the seventeenth century it was mathematical rationalism which led the field unchallenged. Descartes and Hobbes, with their intellectual associates, based their ideas on the admirable successes of mathematical science, but in the assumption of these thought-processes into philosophy they lapsed into exaggerated confidence in the validity of mathematical proof in the cognitive process, and overstepped the scientific boundaries which Galileo and his peers had still acknowledged. The mathematical and mechanical conception of physical science was expanded into a mathematical and mechanistic conception of the world at large; and as a result, the rationalistic view of the world and life on the basis of mathematical science was from the very start guilty of a dogmatic expansionism which, both epistemologically and ontologically—mainly ontologically to begin with—sought to apply mathematical and physical rules to areas which by their very nature were insusceptible of such an interpretation. Hobbes, above all, made an incursion into so-called ethics or pragmatics, and converted social and political life into ontological structures, using gnoseological principles and theoretical mathematical reasoning. Thus the dominance of "true Science" was extended to the sphere of voluntary activity, and the principle of existence came to be conceived by analogy with Galileo's horology.

It is obvious that this hypertrophy of deductive principles would lead to all manner of tensions. To clarify the terminology in what follows, let us consider for a moment how the territory was divided up in the view of seventeenth-century scholars. In Bacon's encyclopaedic writings, above all,

writings which had brought the ancient thoughts of the Stoics up to date, three areas of investigation were to be found: physical science, ethics or practical day-to-day matters, and logic. What happened then was that a system of thought which had conquered physical science with its mathematical method came to look upon the areas of everyday life as essentially countable and measurable. These were areas where the human mind had seemed to call a particular kind of reality into being: law and politics, morals and religious observances, the world of aesthetic judgment, economics, technology and planning—and language. These areas were now brought under the mathematical yoke of exact scientific logic, or also—as happened in the case of language—were incorporated into theoretical reasoning in a more or less radical manner, just as, earlier, the concepts of number and dimension had become detached from the realm of physical science and were similarly absorbed into a system of thought, the mathematical method.

The theory of mathematical science was not even applicable without exception in such areas of the physical sciences as those concerned with life and feeling, even though Descartes regarded animals as automata, and Hobbes considered that his principle of mechanistic causation gave a complete account both of Harvey's discovery of the circulation of the blood and of emotional life. It is all the more understandable that opposition to this dispensation should come from ethics, and that its practitioners should defend themselves. Ethics, law and politics, etc., were not susceptible of mechanization; ethics (*practica sive ethica*) did not for long tolerate having a pre-determined precise rationality imposed on it. The knowledge and wisdom contained in these areas were known to be of a different kind, although scholars obviously came to recognize them as a kind of rationality.

About the middle of the seventeenth century, the century of dogmatic reduction to scientific principles, this practical rationalism was already coming into being, and it became virtually the leading principle throughout the eighteenth century, the age of Enlightenment. This is not the place to go into this matter, but it is necessary to have a general indication of this development, as the further history of linguistic theory under the influence of exact science is fully comprehensible only if we take account of the reaction which had come about from applied science. And this is the subject of our next enquiry. After Descartes and Hobbes, who had dominated the first half of the seventeenth century, we will now be dealing with Locke and Leibniz as figures who dominate the second half.

*   *   *   *   *   *

The foregoing may give some indication of the distinction between the "axiomatic" and "pragmatic" varieties of rationalism dominant in the seventeenth century,[25] which are synthesized in idealism. The distinction between these two types of rationalism may be observed in Kant's *Critiques* of Pure Reason and Practical Reason, and in a sense Kant's distinction is being applied to his predecessors; the terminology thus has, so to speak, the advantage of historical authenticity over some other more familiar ones, in that it relates to differences of approach of which the seventeenth and eighteenth centuries were aware. As a result of his over-estimation of epistemology, Kant himself gave a lead towards the introduction of distinctions which are different from this. Since the present concern is only with the adaptation and utility or verifiability of such distinctions as applied to the theory of language, it is necessary to consider—and reject—only that made in a specific historical survey of views on language: Part I of Cassirer's *Philosophie der symbolischen Formen* ("Philosophy of Symbolic Forms"), which distinguishes and compares empiricism and idealism in a traditional way, listing Bacon, Hobbes, Locke and Berkeley under the empiricists and Descartes and Leibniz under the idealists. There will be occasion, in discussing Locke among others, to question this division.

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[25] The terms *scientialisme* and *practicalisme* [translated as 'axiomatic' and 'pragmatic rationalism'] are derived from unpublished lectures by Vollenhoven given at the Free University of Amsterdam. It cannot be claimed that all philosophical currents of the seventeenth and eighteenth centuries can be seen under these two heads, with Kantian idealism as a third phase. Both Pre-Romanticism and Romanticism proper, to my mind, clearly disrupt this scheme. The distinction made by Dooyeweerd (1935) between the ideals of science and of the personality can be applied to Romanticism, but this, again, seems to me to be too general to describe the many nuances of the conception of function in the humanities. Vollenhoven's distinctions, moreover, are better adapted to the encyclopaedic spirit of the seventeenth and eighteenth centuries.

In addition, I should like to stress that the nature of the material under discussion made the adoption of this distinction necessary. It was not only linguistic science, but every other science constituted as such in the seventeenth century which was subject to the dominance of 'axiomatic' rationalism. For this reason, an enquiry into the basis of the principles of these times is imperative. In the eighteenth century the separate sciences again try to make statements in accordance with their own principles, but are unable to escape from rationalism. This state of affairs, to my mind, fully justifies the new division attempted here. That the linguist, in particular, cannot be satisfied by the conventional division into rationalism and empiricism has been convincingly shown by Stutterheim. Although he did not finally abandon the traditional division, the following remark (1941: 390) is highly indicative: "Let us assume that, however correct it may be to contrast rationalism and empiricism in terms of deduction and induction, this contrast has less validity when we consider the two in connection with our subject. Bacon, Hobbes and Locke are called empiricists, but in their terminology, their semiotics and their glorification of the language of science, they do not differ from such rationalists as Descartes and Leibniz; they do, however, have less compunction about making a criticism of substances".

In the axiomatic rationalists of the generation of Locke and Leibniz we find, in comparison with that of Descartes and Hobbes, a heightened evaluation of epistemology. In the earlier generation its value had been limited to questions of method. But when theoretical science entered the field of practical affairs, the human mind had, so to speak, come into its own; and although Hobbes, in a spirit of mechanistic ontology, had tried to reduce law and ethics to space, matter and movement, the spirit of objectivity could finally not be corrupted. While Descartes had regarded original knowledge as reliable, provided it was clear and distinct, Hobbes had explicitly set up a preliminary stage of undeveloped reflections, conceptions and mental images. This was adequate for practical purposes, but its content gained certainty and validity only after being processed by ratiocination or rational computation. A practical attitude naturally had to take up a position on epistemology in the non-mathematical non-calculated wisdom of sound common sense. Locke recognizes this preliminary stage of empiricism, and fiercely attacks those of his theoretical compeers, particularly Descartes, who had given least credit to empirical knowledge. Otherwise his ideal of knowledge is characterized by the model of mathematical exactitude, i.e. reflection, although he clearly despairs of being able to realize this ideal; and though he promised to establish a rational code of ethics, this promise was never realized. Whereas Hobbes saw language as a means of generating ideas which could be manipulated like an instrument to bring about proven knowledge, the Baconian cry of woe and warning of the "idols" recurs in Locke. Language does, indeed, bear the stamp of the empirical source of knowledge, and etymology helps Locke to prove his basic theory—an "angel" is actually a 'messenger', to "comprehend" is to 'grasp with the hands', etc.; but he takes the view that since language must be used with the utmost cirxumspection, since it incorporates unreliable knowledge—what is popularly understood (*ex captu vulgi*)—from the outset. This makes Locke something of a defeatist axiomatic rationalist.

We find a totally different personality in Leibniz. He, too, realizes the problems which practical science posed for mathematical philosophy. Leibniz, a brilliant mathematician, an outstanding linguist, and many-sided as a politician, etc., offers a reorganization of scientific thinking which comprises the whole universe in a consistent epistemological and ontological system. In this Leibniz incorporates all the considerations of the pragmatists; for he was a harmonizer, a diplomat, in philosophy as elsewhere. Leibniz, the founder of symbolic logic, looks at language both as a means of producing thought and as the product of thought, as symbol.

John Locke

In his *Essay concerning Human Understanding* (1690), John Locke (1632–1704) gave the first elaborated epistemological theory of axiomatic rationalism. While Hobbes had subsumed existence under substance, space and motion (*Corpus, Spatium, Motus*), and regarded ideas as nothing but corporeal movements and their after-effects, Locke set up his theory on the basis of axiom, making no inquiry into the source and nature of primary sense-experiences; hence his inquiry into causes was worked out only in terms of ontology, not of epistemology. It is to Locke that we owe a search for knowledge about knowledge and its origin. He was dissatisfied with the unqualified tenet that nothing is in the mind, unless first perceived by the senses (*nisi prius in sensu*), yet set himself the problem of "looking into his own understanding and seeing how it is wrought".

Locke is a synchronic, a-historical thinker; Hobbes, on the other hand, combines synchronic and diachronic thought. As a result we have the remarkable state of affairs that while Hobbes does in fact enquire into the historical origin of a language of "marks" which lies further from the beginnings of sense-perceptions, Locke does not call into question the "ideas" which lie closer. Hobbes, meanwhile, attempts to account for the origin of the language of marks by assigning it to Adam, or to a solitary. As it happens, the attempt is rather unconvincing, for Hobbes in fact derives the content of his language of marks from the language of signs which had entered the consciousness from outside—from fellow human-beings, in fact—and should therefore have been in a position to determine the origin of natural language—or languages. However, although Locke approaches the source of individual experience more closely, inasmuch as he does not investigate derivative marks (which, in any case, form no part of his system), but "ideas", he carries out his investigation not from a historical or diachronic point of view, but from a static or synchronic one. It is a valid objection to his principles that, in order to demonstrate what he sets out to show, he would have had to examine the origin of perception in the new-born child, and indeed introspectively in his own neo-natal life (see Bellaar Spruyt 1904: 426). But Locke does not go beyond documenting "ideas" according to the various sense-organs. It is his intention rather than its realization which entitled him to be called an empiricist.

It is in line with this reservation and with the question, already broached, of where and how the dividing line in the history of philosophy between the Renaissance and Idealism may be most distinctly drawn, that we should exa-

mine the position of Locke in greater detail. Received opinion typically divides the philosophy of Descartes and Leibniz, sometimes in conjunction with Hobbes, sometimes without him—as rationalism, or the grand systems, or the renaissance philosophy of the natural sciences—from that of Locke and the philosophers of the Enlightenment, whose characteristic feature is empiricism, which distinguishes them, or at least Locke, from the first-named group. The limits of this characterization have been described by Gibson (1917), and rejected as a fundamental assessment of Locke in the following terms:

> any account of Locke's work which finds its *main* significance in an account of the genesis of our ideas fails entirely to represent either the aim or the outcome of the *Essay*, as these were conceived by its author: ... it played only a *subordinate* part in the scheme of the Essay. (Gibson 1917: 1; emphasis on *main* and *subordinate* supplied)[26]

In an exhaustive analysis of Locke's work, Gibson shows that for Locke "in the first place *knowledge* and *certainty* are equivalent terms". Only "scientific knowledge" is adequate for this purpose, and Locke finds this ideal in the mathematical sciences, an ideal which for him constituted "the standard by which he tested the worth of all our intellectual possessions" (pp. 4–5; compare further the chapters on "Locke and Descartes" and "Locke and Leibniz", and also pp. 148f., 154f.). Here we find abundant evidence that Locke's views on language were based purely and simply on theoretical science. His linguistic conceptions clearly have to be located and explained in the light of this valuation, which gives his empiricism no more than a secondary quality. This consideration overcomes the difficulties experienced hitherto in the history of linguistic ideas, and makes it unnecessary to invoke the elegant constructions of a Cassirer to conceal these inconsistencies.[27]

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[26] It is remarkable how long misconceptions can be passed down from hand to hand, while no attention is paid to those whose commendation or criticism should be regarded as important. This decisive authority is the literature of monographs. But when Tönnies, as an authority on Hobbes, expressed dissatisfaction with the traditional classification, nobody paid any attention; and Gibson's work, to the best of my knowledge, has not been taken into account. Only after the idealistic history of philosophy enjoyed a revival at the beginning of the twentieth century has there been any real chance that this conventional classification might be overturned. In criticizing the received view I shall restrict myself to its application to the history of linguistic theory, i.e. until Cassirer.

[27] It is necessary only to compare the paragraph about the empirical view in Cassirer (1923: 73ff.) beginning: "Empiricism seems to have entered upon another way of looking at language". Given that Bacon, Hobbes, Locke and Berkeley are bracketed in this category, the hesitant use of 'seems' is understandable. A little later (p. 79), Cassirer has to admit that in Hobbes "the method of rationalism is still unmistakably present".

Where does language stand, then, in Locke's scheme of things? It has no place, initially, in the establishment of his epistemological system. The treatment of language, or rather words, to which the whole of Book III (about one-fifth of the whole work in compass) is devoted, is no more than an appendix. Locke admits this forthrightly in the often-quoted concluding paragraph of the preceding second Book:

> Having thus given an account of the original, sorts, and extent of our *Ideas*, with several other Considerations, about these (I know not whether I may say) Instruments, or Materials, of our Knowledge; the method I first proposed to my self, would now require, that I should immediately proceed to shew, what use the Understanding makes of them, and what Knowledge we have by them ... : but, upon a nearer approach, I find, that there is so close a connexion between *Ideas* and Words; and our abstract *Ideas*, and general Words, have so constant a relation one to another, that it is impossible to speak clearly and distinctly of our Knowledge, which all consists in Propositions, without considering, first, the Nature, Use and Signification of Language; which therefore must be the Business of the next Book. (II, 33.19)

Before proceeding to a brief account of Book III, it may be noted that while Locke, in speaking in these anticipatory remarks of the "close connexion and constant relation", acknowledges the view that knowledge is acquired through language, he nevertheless thinks of language in metanoetic terms, giving emphasis to its demonstrative use "to speak clearly and distinctly of our Knowledge". It will become plain that Locke developed his concept of language more clearly in the course of writing, but he never achieved, as Hobbes had done, a precise distinction between mark (*nota*) and sign (*signum*).[28]

The mature Locke, then, looks into his own "understanding", enters the lists against the so-called "innate speculative ideas"[29] of Descartes, and sets up his well-known theory of "simple" and "complex ideas", of "sensation" and "reflexion", of "modes", "substances" and "relations" (Books I and II). Then follows Book III, "Of Words or Language in General".

Locke heads the introductory chapter with a few general assertions:

Man [is] ... furnished ... with Language, which was to be the great Instrument,

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[28] It is, indeed, possible that Hobbes was aware of this difficulty when he said that at bottom the investigation of arguments (*inventio*) and demonstration were identical methods: "the method of demonstrating will be the same as that of investigating" (*De Corpore*, I, 6.12; 1839: I, 71). The expression "identical methods" of course implies a restriction, but the emphasis he lays on his very sharp distinction between mark and sign is somewhat weakened here, if only by implication.

[29] Used in the old mediaeval sense: Locke distinguishes "speculative and practical principles" (I, 2-3).

and common Tye of Society. *Man* therefore had by Nature his Organs so
fashioned, as to be *fit to frame articulate Sounds*, which we call Words. (III, 1.1)

The difference from Hobbes's strict schematization is obvious. Hobbes's
"mark" (*nota*) is given a precise function and forms the axis of his epistem-
ology. The mark is the instrument by which ideas are presented to the mind,
and man's vague notions become sharply defined scientific concepts or judg-
ments. Compare this with the treatment of the concept of the mark and
instrument in the popular philosophy of Locke. Locke uses the terms 'mark'
and 'sign' indiscriminately. In §3 the utility and the purpose of the word, "to
make general signs", comes under discussion. It is infeasible to provide each
discrete object with a special name; hence the need for "general Terms,
whereby one word was made to mark a multitude of particular existences".
Thought is thus clearly referred to language, but the theory tends again to-
wards a superficial concept of exteriorization or representation, and Hobbes's
view of the instrumental function of *ennoesis*, i.e. the formation of ideas, is once
more abandoned. In §4—a brief paragraph of eight lines—Locke dismisses
the familiar paradox of negative words: although words stand for ideas, men
use words for the absence of ideas:

> Besides these Names which stand for *Ideas*, there be other words which Men
> make use of, not to signify any *Idea*, but the want or absence of some *Ideas*
> simple or complex, or all *Ideas* together; such as are *Nihil* in Latin, and in
> English, *Ignorance* and *Barrenness*. All which negative or privative Words, cannot
> be said properly to belong to, or signify no *Ideas*: for then they would be
> perfectly insignificant Sounds; but they relate to positive *Ideas*, and signify their
> absence.

Thus language, it will be seen, conveys ideas, but certainly not objects which
lie outside the mind. This is all very well as far as it goes. Here the Middle
Ages had advanced further in critical discrimination! Paragraph 5 introduces
language as the proof of the empirical basis of Locke's epistemology, and
Locke adduces a long series of more or less abstract words which originally
mean "sensible ideas": "spirit" is 'breath', "angel" is 'messenger', etc., etc. His
conclusion (§6) is that "Language [is] subservient to Instruction and Know-
ledge"—i.e. their handmaiden. We find (1) that empiricism is confirmed by
etymology, and (2) that genera and species derive from language. But atten-
tion must be given to

> the right use of Words; the natural Advantages and Defects of Language; and
> the remedies that ought to be used, to avoid the inconveniences of obscurity or
> uncertainty in the signification of Words, without which, it is impossible to dis-
> course with any clearness, or order, concerning Knowledge: Which being

conversant about Propositions, and those most commonly universal ones, has greater connexion with words, than perhaps is suspected. (III, 1.6)

In Chapter 2 Locke has to incorporate language, conceived as a transfer of knowledge, into his empirical scheme, which allows knowledge to accrue only through sense-perceptions; this comes about because words are "sensible Signs". This does not mean, however, that the listener also acquires ideas from the speaker; instead, he matches the sounds he has heard to his own ideas: "But when he represents to himself other Men's *Ideas*, by some of his own, if he consent to give them the same Names that other Men do, 'tis still to his own *Ideas;* to *Ideas* that he has, and not to *Ideas* that he has not" (§2). Language, then, does not transfer ideas, but leads the listener to use the ideas which he has already formed for himself to represent those of the speaker. Language does no more than evoke ideas, i.e. similar sense-perceptions, from and in the listener. The line of transmission is shortened by "constant use" to such an extent that "the Names heard, almost as readily excite certain *Ideas,* as if the objects themselves, which are apt to produce them, did actually affect the Senses" (§6). In this way, says Locke, one can even imagine that the association between sound and object is a natural one, whereas it is, in fact, only an arbitrary one (§8).

Locke headed his third book "Of Words or Language in General". He could have omitted 'Language in General'. He is concerned with words, special words, or names. They serve knowledge, i.e. the correct conception of ideas. While Hobbes realizes that the truth of an utterance lies in the combination of words to form propositions, and of these again to form syllogisms, Locke does not go beyond a sterile comparison of discrete words with what he calls ideas, also discrete, which are catalogued according to the five organs of sense. Of course it is possible to find in this prolix popularizer of philosophy a declaration that truth lies in propositions, but ... for him this amounts to no more than an investigation into individual words. Hobbes's dogmatic view of the functional and instrumental use of language was angular and severe; Locke is an untidy, unsystematic and prolix thinker, whose practice is characterized by his remark, already quoted, on the very topic of the instrumentality of ideas: " ... about these (I know not whether I may say) Instruments or Materials of our Knowledge". Hobbes, on the other hand, knew precisely what he could and would say as a thinker, and what he would not.

Chapter 3 deals with general terms. Special names for all individuals are impossible, and therefore useless and unprofitable for knowledge. "Ideas" become "general ideas" by a process of abstraction, and in turn are represented by "general terms". This association is the outstanding achievement

of language, and this association makes the improvement and transmission of knowledge easier.

In Chapters 4 and 5 Locke establishes that words which represent "simple ideas" are undefinable. From the fact that the names of "mixed modes" are for the most part untranslatable (cf. III, 5.11), Locke derives a further proof of the purely intra-mental essence of universals. He considers this argument very important (III, 5.16). The name of a substance, likewise, does not depend as such on an extra-mental essence. We know the substance merely as the "abstract idea" of a genus. Language thus remains the free "Workmanship" of man: "what liberty *Adam* had at first to make any complex *Idea* of mixed modes by no other Pattern but his own Thoughts, the same have all Men ever since had" (III, 6.51).

As a result the only remaining achievement of language is the secondary ("subservient") assistance it provides in summarizing ideas, and hence in communication. But in examining its validity and accuracy Locke refers us to his categorization of ideas. The accuracy of "simple ideas" is assured by their uncomplicated origin. They are undefinable, but this fact is precisely a confirmation of their validity,[30] for definition is the replacement of one word by two others which indicate the ideas of which it is compounded, and thus the idea which has to be defined is compounded. And since it is the property of a "simple" idea not to be complex, there can be no thought of definition in this case.

But with all this we have not come a step closer to the correct use of language. Obviously the world of language and the world of ideas are so closely associated that criticism of language is equivalent to criticism of ideas. "Simple ideas" provide "certainty", and this diminishes the further one moves away from them. Substances are that much vaguer, and "mixed modes" are "perfectly arbitrary". And this is, "with very little difference, applicable also to relations"! But what does this imply for the "signification of their names"? Locke promises to give us an answer in the following chapters.

But we have to wait until Chapter 9 before Locke takes the bull by the horns.[31] After Chapter 5, devoted to "mixed modes and relations", Chapters

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[30] "Simple *Ideas,* as has been shewed, can only be got by Experience, from those Objects which are proper to produce in us those Perceptions" (III, 4.14). There are similar remarks *passim,* cf. III, 4.17: "The Names of simple *Ideas,* Substances, and mixed Modes, have also this difference; That those of mixed Modes stand for *Ideas* perfectly *arbitrary:* those *of Substances,* are not perfectly so; but *referr to a pattern, though with some latitude: and those of simple ideas are* perfectly taken from the existence of things and are *not arbitrary at all."*

[31] Was Locke aware of the impatience of his readers? The last paragraph of Chapter 5 is

6, 7 and 8 deal with the names of substances, with particles and with concrete terms.

Chapter 6 is devoted to Locke's celebrated critique of the concept of substance. The summary of §1 reads: "The common Names of Substances ... stand for sorts; the essence of each sort is the abstract idea"; and §9 is headed "Not the real Essence, which we know not." It is language which demands and supplies differentiation into sorts, and although Locke may be said to reserve judgment in his criticism, he is inclined to acknowledge the advantage and the necessity of language for making the differentiation, and thus to demonstrate its inaccuracy and inadequacy for practical reasoning.

Chapter 7 shows how, in the particles "consists the art of well speaking"; "they shew what Relation the Mind gives to its own Thoughts" (headings of §§2 and 7). This subjective freedom explains, according to Locke, why particles are so difficult to translate; he gives as an example some translations of Latin *sed* ('but'). This is the only place where Locke goes further than giving a lexical example. Leibniz, who consistently opposes Locke's basic principle that language is arbitrary in respect of reason, considers that the meanings of the particles are considerably less captious than Locke would have us believe. This is clear if only you take the trouble to paraphrase them. And Leibniz himself leads the way in this. No wonder, for particles are, as we shall see, of special importance in Leibniz's linguistic thought. He says:

> Gender has no place in philosophical grammar, but cases correspond to preposi-
> tions, and the preposition is often concealed and, as it were, absorbed in the
> noun; and other particles are concealed in verbal inflections. (ed. Gerhardt,
> 1890: V, 311) ... Besides, I would not have been provoked, Sir, if you had gone
> in rather greater detail into the actions of the mind which are shown to great
> effect in the use of particles. But since we have good cause to complete our en-
> quiry into words as quickly as possible and to return to things, I will not detain
> you here any longer, although I sincerely believe that languages are the best
> mirror of the human mind, and that a precise analysis of the meaning of words
> would reveal more clearly than anything else the workings of the understanding.
> (p. 313)[V]

In the final chapters (9-11), on the inadequacies of words, their misuse, and remedies for their misuse, Locke's criteria for the correct use of language are discussed under the heading: "Words are used for recording and communicating our Thoughts"; ... "the very nature of Words makes it almost unavoidable, for many of them to be doubtful and uncertain in their significa-

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entitled "Reason of my being so large on this subject".

tions" (heading and §1) The term 'recording' is reminiscent of Hobbes, but this is all. For Hobbes, truth lies in association (*connexio*) and context, for Locke in the special names. For Hobbes, language has an instrumental function as a process of thought; for Locke, its "recording" is no more than a static index to the store of memory; "any words will serve", and incompleteness can be banished by consistently using the same word for the same thing. Here Locke is actually anticipating his remedies.

There are two kinds of communicative use of language, "civil" for everyday occasions, and "philosophical", which is strictly theoretical. Lack of precision is not such a great defect in everyday conversation. Philosophical use, however, is concerned to give "the precise Notions of Things, and to express ... certain and undoubted Truths, which the Mind may rest upon ... in its search after true Knowledge" (III, 9.3). The charge of imperfection rests on four counts:

1. the complexity of the ideas indicated;
2. given that words represent ideas, not things, there is "no settled Standard, any where in Nature existing to rectify and adjust them by ..." (III, 9.5);
3. if there were such a standard, it would be "not easy to be known";
4. meaning and essence are not "exactly the same".

The first point is in fact a criticism of knowledge and a feeble complaint at the complexity of phenomena; Galileo and Hobbes were more confident about the second and third, and the fourth sounds like the old Occamist tenet by which a sign was a reproduction with a certain leeway, an inexact representation. In general this view of language is weak; weak in comparison with Locke's immediate predecessors and fellow-rationalists, weak in comparison with the advanced results which the earlier terministic thought had achieved in its theory of suppositions.

"Besides the Imperfection", begins Chapter 10, "that is naturally in Language ... there are several *wilful Faults and Neglects*". Since the remedies (Chapter 11) run parallel with the defects, we will pass over the latter and proceed at once to summarize the remedies. These are well-intended and somewhat vague recommendations. Locke has no reforming zeal: "I am not so vain to think"—Leibniz might indeed have thought so, but he was vain anyway —"that any one can pretend to attempt the perfect *Reforming* the *Languages* of the World, no not so much as of his own Country, without rendring himself ridiculous" (III, 11.2). The remedies are:

1. Do not use any word without an idea;
2. make sure it is "a clear idea";
3. use "propriety", or the current meaning;

4. Give an explanation if necessary by (a) pointing or drawing, or (b) by definition, or by both (a) and (b) together (§§8-13).

Definition, in particular, as we saw above, definition of *"mixed modes ... especially of moral Words"*, is necessary because it is *"the only way whereby the signification of the most of* them can be known with certainty" (§18). Two paragraphs earlier Locke had already said, "Upon this Ground it is that I am bold to think, that *Morality is capable of demonstration*, as well as Mathematicks". It is here that he reveals himself as an axiomatic rationalist. But he is a theoretician of the school of Descartes and Spinoza, for whom mathematical certainty required proof in the geometrical manner. Certainty is acquired by mathematical methods, and transmitted to others (i.e. as a metanoetic process) by mathematical reasoning. Locke aims to do the same, but he is like a warrior who has lost contact with his operational base. Wishing to extend the bounds of axiomatic rationalism, he is intent upon extending mathematical certainty into moral philosophy; but his supplies and reinforcements are not mathematically reliable. Acquisition of knowledge comes about for him, after all, no longer primarily through ratiocination (i.e. computation or calculation), but as a conflation of pre-rational sense-impressions, catalogued in accordance with the five organs of sense, to which reflection is subsequently applied. Gibson was right to see that Locke's actual ideal of knowledge was still the ideal of "scientific mathematical knowledge", but Locke saw no possibility of justifying his truly empirical epistemology on mathematical and rationalistic grounds. It was Leibniz who incorporated mathematical and theoretical reasoning logically into epistemology. Locke's epistemological acceptance of the theory of the *tabula rasa* made it doubly difficult for him to develop a theory which described the establishment of rational certainty in reasoning. In the end it is as though Locke considered that concepts were formed in the mind simultaneously with communication or demonstration and transmission to others. But in that case language still makes use of ideas perceived through the senses to establish rational knowledge, to establish logic, no matter how far it is claimed to be a representation of prior thought. This is so, but it is of course, entirely different from what we find in Hobbes.

It is practically certain that Locke did not foresee the consequences of incorporating language in his third book, an action which was of itself unforeseen. In any case—to the reader's surprise[32]—he also returned to the

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[32]   To Gibson's surprise as well: "How axiomatic this position is for his thought appears from the fact that, although it is of fundamental importance for the whole doctrine of the *Essay*, it is only expressly formulated, and then only incidentally, in its closing chapter." (1917: 13)

matter in the final chapter of the whole work.

The last chapter of the *Essay* is entitled "Of the Division of the Sciences". Locke follows the Stoics' division into three parts. This is nothing new— Bacon had already taken it into account. But when Locke sets the equator of logic, as it were, between the hemispheres of physics and ethics, we read:

> ... the Third Branch may be called, σημειωτική, or the *Doctrine of Signs*, the most usual whereof being Words, it is aptly enough termed also λογική, Logick; the business whereof, is to consider the Nature of Signs, the Mind makes use of for the understanding of Things, or conveying its Knowledge to others. For since the Things, the Mind contemplates, are none of them, besides it self, present to the Understanding, 'tis necessary that something else, as a Sign or Representation of the Thing it considers, should be present to it: And these are *Ideas*. And because the Scene of *Ideas* that makes one Man's Thoughts, cannot be laid open to the immediate View of another, nor laid up any where but in the Memory, a no very sure Repository: Therefore to communicate our Thoughts to one another, as well as record them for our own use, Signs of our *Ideas* are also necessary. Those which Men have found most convenient, and therefore generally make use of, are articulate Sounds. The Consideration then of *Ideas* and *Words*, as the great Instruments of Knowledge, makes no despicable part of their Contemplation, who would take a view of humane Knowledge in the whole Extent of it. And, perhaps, if they were distinctly weighed, and duly considered, they would afford us another Sort of Logick and Critick, than what we have been hitherto acquainted with. (IV, 21.4)

Locke, therefore, equated Logic and Semiotics. Why did Locke choose this nomenclature?[33] The linguistic thought of the Epicureans had similar principles, and its non-deterministic quality was in keeping with Locke's views. In general, Epicurean—and Stoic—theoretical systems were current at the time.[34] Locke does not explain his use of this term. But it is clear that in using it he also wishes to acknowledge the value of language in establishing knowledge.

This encomium of language is Locke's conclusion. It is not convincing. Having come to the end of a work which had expounded totally different thoughts, he now sets out to tell us that "ideas and words"—or words alone? —are "the great instruments of knowledge". To have any right to make such a declaration, Locke would have had to demonstrate something of the instru-

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[33] 'Semiotics' seems also to be—or to have been—a medical term. Locke was a physician (see Russel 1939). Cf. also the remarks on Epicurean views of language at the end of Chapter 2 of the present work.

[34] See Leibniz on "Two sets of naturalists who are fashionable today" (*Deux sortes de naturalistes qui sont en vogue aujourdhuy, etc.*, ed. Gerhardt, 1890: VII, 333).

mental use of language. The instrumental use of words is, however, no more for Locke than a representational quality of words: "it is necessary that something else, as a sign or representation of the thing it considers, should be present to it". Since it is realized here that words occur within the mind, they do so, in contradistinction to the imposing term "instrument", as nothing more than figures on the "scene of ideas", as elements in a "repository", i.e. as mental furniture (*ennoemata*), as in Bacon, not as instruments for forming ideas, as in Hobbes. Indeed, an investigation of language is supposed to "afford us another Sort of Logick and Critick, than what we have hitherto been acquainted with". But hitherto for whom? In the first place, presumably, for Locke himself.

Neither Locke nor Hobbes achieves a "distinctly weighed and duly considered" investigation of language. Both are generally regarded as empiricists,[35] but there is little sign of empirical investigation of language in either of them. There is not a trace of a starting-point in actual linguistic usage, of speaking and listening, of writing and reading, but a one-sided attention to the importance of language before, during and after knowledge. Hence their whole linguistic theory, looked at from a linguist's point of view, remains in the air —in rational air, that is, for this kind of rationalism is otherwise unable to deal with a phenomenon of mental activity. The criteria which are applied are cognitive. Nothing remains here of the ipsofunctional autonomy of language.

Locke's analysis of language was anything but language-based, and his evaluation of language is no different. Zobel[36] readily accepts the evaluation

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[35] True of Locke only in a secondary sense (see the observations of Gibson quoted above, *n.* 33). Hobbes is not an empiricist at all; nor is Bacon. The present study is concerned only with the opinions of these scholars about language, but it is not inapposite to note that the views of those who contest their empiricism are supported here. See Vollenhoven in *Oosthoek's Encyclopaedie*, s.v. 'Hobbes'.

[36] While Zobel—whose criticism of Locke's philosophy of language is itself dependent on Hönigswald's (1925) diagnosis of a basis in words (*Worthaftigkeit*)—takes issue with the primacy Locke gives to words (1928: 313), he considers that something of an independent attitude may be found in Locke, and naturally accepts Locke's final position. He says, quoting Hönigswald at several points: " 'The sense which is not considered by time is "reproduced" in time' [= Hönigswald 1925: 109]. That a sense which has no extension acquires form in extension is the inevitable fact of 'presence'. 'Presence' is both the principle of the original co-existence of sense and expression, and the bearer in general of mental definiteness. 'Just as the "thought" is available to experience, just as it must be realized in time in being experienced, so must the sense "become" the word' [= Hönigswald, p. 40]. The idea and the sign (the word) are therefore inseparable. *The sense is in origin conveyed by the word.* Even a claim that the thought cannot yet, or can no longer, be expressed, establishes the claim that it must be expressible in words. The same applies to Locke's requirement of wordless thinking. In the first place, anyone who responds to

of language in the final sections of the *Essay*. But although these final sections undoubtedly reveal a shift of evaluation in favour of language, it is so much a loosely attached appendix that it is impossible to try to interpret Locke's previous positions in this light. Later years have taken account of semiotics only on one occasion (in the work of J. H. Lambert); further, the empiricism of the work as a whole has been attacked as a welcome opportunity to escape from the mathematical rigour of the world of theoretical science.

It has been shown how Locke, at the end of his work, gave us a tripartite "division of the sciences": (1) Physical Science, (2) Ethical or Practical Science and (3) Logic or Σημειοτκή. This categorization was in itself by no means unfamiliar to the thinkers of the time. However, opinions were divided about the content, definition and status of these three classes of knowledge. Logic is situated like a central zone between two hemispheres, in opposition to, and as it were occupying the ground between the domains on the one hand of the "lower" theoretical physical sciences, which themselves embraced several disciplines, and of the "higher" ethical sciences on the other. The physical sciences normally deal with extension, materials and their motions, and biological studies; arithmetic becomes part of logic, and geometry sometimes shares this fate. The position of psychology itself is equivocal: the field of emotional reactions may be incorporated in any of the three main domains. Law, ethics in the narrower sense (i.e. morals), economics and sociology are the virtually constant components of the domain of practical life, while theology is assigned by some thinkers, though not by others, to this area. Art is often seen in close association with the emotional or psychological and is allocated with similar inconsistency. And what about language? Sometimes it suffers the lot which regularly befalls arithmetic: it loses its place as a free activity and is annexed by logic, depending on whether it is being examined by an axiomatic or a pragmatic thinker.

In fact, the differing evaluation of the two "hemispheres" leads to two versions of rationalism, to two epistemological systems: the axiomatic rationalist finds the certainty he is looking for in the theory of the so-called physical sciences, but he endeavours to extend his mathematical and/or mechanistic

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this requirement would necessarily respond most faithfully to the expression because of the clarity of the ideas he had gained. 'The definiteness of what had been thought, and consequently of thinking, is the constant effective incentive to look for adequate expressions' [= Hönigswald, p. 29]. But finally Locke's attitude to the paedagogy of what he regards as thought is conditioned by the presupposition that the basis of thought is words." (Zobel 1928: 28f.)

methods universally, into the realism of so-called ethics, the "free" practical sciences; the pragmatic rationalist, on the contrary, regards truth as bearing the marks of common sense, worldly knowledge and *savoir-faire*. Thus he opposes the expansionist policies of axiomatic rationalism, defensively to start with, but later on the offensive.

Gottfried Wilhelm Leibniz

The philosophy of Leibniz (1646-1716) constitutes a closely-knit system of theoretical science. What attitude does he adopt to language? Two attitudes at least, it would seem.

In the first place language is for him, as a philosopher, the instrument of reason, and he subjects it in various degrees of abstraction to logic. For while Descartes had expressly demanded a clear rational language once philosophical principles had been mastered, while Hobbes had adopted the function of language—even if only in its natural form as a mark—in his calculus of thought, and while Locke had tested language for its logical purity, all these approaches to the facts of language and abstractions from them are to be found again, refined and deepened, in Leibniz. But there is also a further view of language to be found in Leibniz, one which perhaps may not seem to tally with his logicalizing standpoint.

In the second place, Leibniz is indeed an eminent linguist, one who lets the facts speak for themselves without any doctrinaire preoccupations or philosophical structuring. Let us note the names of some of his writings: his *Brevis Designatio Meditationum de Originibus Gentium ductis potissimum ex Indicio Linguarum* ("Brief Account of Considerations, chiefly derived from the Evidence of Languages, concerning the Origins of Nations", 1710) offers a grouping of languages which, by the standards of the linguistics of his day, ranked with J. J. Scaliger's *Diatriba de Europaeorum Linguis* ("Discourse on the Languages of the Europeans") a century before. Leibniz rejects Hebrew as the original language, takes up the idea of preparing linguistic atlases, lays the foundations of an ambitious collection of linguistic data, and still is not afraid of detailed work—in an investigation of Frisian personal names, for example—and deploys an astonishing knowledge of facts in all kinds of linguistic questions.

On the one hand Leibniz was a philosopher of language who anticipated modern logical processes and subjected natural languages to severe criticism in the course of working out infallible systems of artificial languages; on the other hand he was a devoted investigator of natural languages. May he be considered to be both an axiomatic and a pragmatic rationalist? Couturat is

satisfied simply to mention Leibniz's studies in philology without taking any trouble to explain this paradox.[37] But when we examine Leibniz's philosophical system more deeply, it will be realized that the inconsistency is no more than an apparent one; and it is only in this light that we can understand his view of language as a consistent whole; for philosophy, science and life constitute a harmonic whole for Leibniz, if they do for anybody. Given this unity, there is no room for an opposition between critical rejection—or at least improvement—of natural language on the one hand, and the collection of data at their face value on the other.

Language is a mental construct (*noema*), i.e. it is subordinate to thought. This is how Descartes saw it, in the sense that it results from what has already been thought non-linguistically (i.e. is metanoetic); and so did Hobbes, in the sense that it is the instrument or means of thinking (i.e. is ennoetic). Leibniz combines and refines these positions; and we find language—or rather a system of symbols derived from natural language or more or less similar to natural language—functioning in his logic both as expression and as instrument of thought.

To establish a strictly scientific or philosophical language of concepts, Descartes had been willing to wait for a true philosophy to come into being. When Leibniz, barely fifty years later, it seems, had sight of the letter on this subject to Mersenne (see pp. 241-244 above) and had it copied, he made the following observation on the transcript:

> Meanwhile, although this language depends on true philosophy, it does *not depend on the perfection of philosophy.* That is to say, such a language may be established even if philosophy is *not perfect,* and to the extent that the knowledge of men increases, this language will also increase. Until then it will be a marvellous aid both for using what we know and for realizing our lack of knowledge and *discovering the means of acquiring knowledge,* but above all for *eradicating controversy* concerning matters which depend on reasoning. *For then reasoning and calculating will be the same thing.* (Couturat 1903: 27-28; emphasis supplied)[W]

In the footsteps of Descartes, but less opposed than Descartes had been

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[37] See Couturat 1901: 63ff. There is a fragment by Leibniz of 1678 entitled *Lingua generalis* ("Common Language"), and another fragment from the same year in which he refers to "living" languages, concerning which Couturat remarks: "But he soon became aware that the problem [of a universal language] is less simple than he first thought; and instead of creating a purely conventional language *a priori* and complete in all respects, he adopts an *a posteriori* method, less arbitrary, and less adventurous. He decides to make living languages his point of departure." Couturat goes on (1901: 65) to deal with Leibniz's linguistic investigation in an exhaustive footnote—but a footnote only.

to the common logic (*logique vulgaire*) of ancient syllogistic systems, and using arithmetical methods rather than the geometrical ones Descartes used in his proofs, Leibniz commends general mathematics as a completely consistent and binding method of thought. In this respect they are at one; they are at odds, however, in considering how linguistic (or, rather, symbolic) thinking is linked to abstract thought with the help of an artificial language. Descartes sees no more than a retrospective role for such an artificial language in establishing proof (*demonstratio*), but Leibniz also sees the possibility of using such a system of signs simultaneously as a discovery process (*pour inventer*) and as an (ennoetic) instrument of thought. Hobbes had done this, too; but he differs from Hobbes, for while Hobbes held that natural language was capable of performing this function, it is clear that Leibniz is thinking here exclusively of a system of artificial language.[38] Only then would thinking and calculating coincide and achieve Hobbes's ideal.[39] Finally, as though there were a reference in this marginal note to the third great thinker in these matters, it was just the object of "eradicating controversy concerning matters which depend on reasoning" that set Locke's thoughts about language in motion. So here we have to deal with a conflation, as it were, even if only an implicit one, of the attitudes of Descartes, Hobbes and Locke.

Leibniz is called the founder of symbolic logic. From his twentieth year

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[38] Though Leibniz does adopt Hobbes's view of the inventive use of natural language completely elsewhere, in his *Unvorgreifliche Gedanken betreffend die Ausübung und Verbesserung der deutschen Sprache* ("Unprejudiced Thoughts concerning the Use and Improvement of the German Language"), where he remarks: "In the use of language special attention must be given to the fact that words are not only the signs of thoughts, but also of things, and that signs are necessary to us, not only for conveying our views to others, but also *for facilitating our own thought*. For just as in great trading centres, and also in gaming, etc., we do not always pay out cash, but make use of notes of hand or counters until final settlement or payment, so reason likewise, especially when it has many things to consider, makes use of the images of things, i.e. it uses signs for them in order not to have to think the thing out again each time it recurs. Thus once reason has established the signs, it is subsequently often satisfied to use the word in place of the thing, not only in external speech, but also in *thinking and in internal monologue*. ... Mathematicians use the invention of the art of signs, of which algebra is no more than a part. By the use of these devices *things may be discovered today* which the Ancients could not approach; and yet the whole art lies in nothing but the use of well-applied signs. The Ancients made much of the Kabbala, and looked for secrets in words; and they would, indeed, find them in a well-organized language, in the service not only of mathematics, but also of all arts, sciences and businesses. The *Kabbala, or art of signs,* is therefore not only to be found in the Hebrew language, but *in every language,* and not in certain literal interpretations, but in *the proper understanding and use of words"* ([1697]1916: 26-27; emphasis supplied).

[39] On the extent to which Leibniz is to be considered a follower of Hobbes, Couturat (1901: 457ff.) differs from Tönnies. There is no need to take sides on this issue to see that Leibniz was in any case thinking of Hobbes at this point.

until the end of his life, he was occupied with the problems relating to the association between language (or symbol) and thought. He analysed old and new methods of thought alike, presented them mathematically and gave them meaning.[40] Concept, appraisal and syllogism, definition, axiom and deductive proof in the Euclidian mould—all these components of thought come under his eager scrutiny. And while it is not necessary to go into the internal development of Leibniz's thought on these questions, it will be useful to look into some of his leading ideas, to see what they imply for language and symbol.[41]

Leibniz's search for the ultimate certainties, his *Analysis*, leads him to the theoretical system of his *Alphabetum cogitationum* ("Alphabet of Thoughts"), which is a "catalogue of primitive thoughts, i.e. of those which we *cannot clarify further* by any definitions" (Couturat 1903: 430), or, in another formulation, a "catalogue of those things which are self-evident, and from the *combination* of which our ideas arise" (p. 435).[X] Thus the alphabet of ideas is the end and object of the *Analysis*, but at the same time the beginning and principle of the synthesis, of the *Ars combinatoria* ("Art of Combination").

Ramón Lull, who has been discussed above (pp. 56ff.), had thought out a system for combining ideas, which had been "perfected" shortly before Leibniz's time by Kircher (1601–1680). There were six classes of nine basic concepts, allotted to a mechanism of nine concentric rotating discs, which produced a mind-boggling number of combinations of ideas with which reason (*ratio*), or rather speech (*oratio*) performs virtuoso acts. Lull's object would certainly have seemed by no means unacceptable to Leibniz, if only Lull had employed nothing but philosophically proper basic principles: "if his fundamental terms unity, truth, goodness, magnitude, power, wisdom, will, quality, glory were not vague and therefore helped only *to speak, and by no means to discover the truth*" (Couturat 1903: 177).[Y]

Leibniz's *Ars combinatoria* is designed only to discover the truth; it is an art of discovery (*ars inveniendi*) for philosophy. Discovery becomes possible as a result of the strict structure of truths, which is of a geometrical, quantitative nature. Concepts are either simple (i.e. the concepts of the alphabet of ideas), or complex (i.e. combinations of simple concepts or previously compounded concepts). It is thus possible, as it were, to make family trees of concepts, in

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[40] Couturat (1903) reprints many pages showing all kinds of experiments with lines, figures and "ideographic" notations of syllogisms, conclusions and concepts.

[41] The most copious source of these enquiries, while the standard edition of Leibniz's works is incomplete, is to be found in the works of Couturat (1901, 1903).

which a concept may be assigned its precise place, and by means of which it is possible to discover new ideas for places in the diagram which are so far vacant. Subject and predicate represent a congruent structure, in accordance with the principle that the predicate is inherent in the subject (*praedicatum inest subjecto*). With the help of the classification of concepts in order of degree of complexity the number of possible predicates for any given subject can be established, and *vice versa*. Even definition in terms of the most closely related class (*genus proximum*) and distinctive quality (*differentia specifica*) matches this mathematical system; this is in its own right the discovery of thought *par excellence* (see Trendelenburg 1861: 378).

Leibniz was still young when he began on his analysis of the traditional system of syllogisms and deductive logic, for a syllogism is also a mathematical combination, i.e. a set of three propositions. He succeeds in interpreting them by means of the geometrical symbols of lines and circles. He investigates the number of possible conclusions, reducing them to basic formulae, and in so doing brings the deductive logic of syllogisms into his discovery system.

Leibniz was not content to provide basic ideas for his art of investigation by drawing on his own knowledge; he enriched it with definitions and refinements of concepts drawn from the works of leading scholars in all kinds of disciplines. These are preserved in the Hanover library, drawn up by Leibniz in long lists.

If, then, Leibniz saw a mathematical character in the structure of thought-processes and their mutual relationships, it now remained for him to devise, as a second stage, a method of applying this set of quantifiers in a homogeneous manner, a *Calculus Ratiocinator*, i.e. a calculus of reason. That is to say, he realized the initiative which Hobbes had not fully worked out, by means of expanding and applying arithmetical thinking—a specialized sort of thinking which had proved reliable in a specialized area of science—to the realm of axiomatic philosophical thinking in general. It constituted at the same time a supreme test of the validity of the general arithmetical symbolization which had been incorporated by the process of arithmeticizing thought processes.

The task of the logical calculus (*calculus logicus*) is to reach conclusions from an assembly of propositions by the art of combination, and Leibniz's brilliant intellect displays unabating activity in this central area of his symbolic logic.[42]

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[42]   Hobbes uses the term 'logistic' in the specialized sense required here [but it is rendered as 'symbolic logic' in view of the more general modern acceptation of 'logistics']. Leibniz's symbolic logic sank into obscurity both because of the fragmentary nature of its publication, and because it was outdone by Kant's transcendental logic. It must, however, be considered here, inasmuch

Now arithmetical operations, too, acquire a logical symbolic value in a subtle analysis and verification of syllogisms. In the same context Leibniz continues to work on the analysis and notation of judgment and definition. We can see that Leibniz moves, like a man possessed by a compulsive idea, from one system to another in his attempt to achieve consistent formulation and arithmetical notation, in continual dissatisfaction and self-criticism (see Couturat 1901: 323ff.).

This notation of the content and association of thoughts helps to make Leibniz's logic a symbolic system which becomes part of the broader concept of the universal character (*Characteristica Universalis*), the third basic theoretical principle of his logic, alongside combination and calculus.

It has already been noted that Leibniz denoted syllogistical relationships in terms of lines and circles. A copy of a letter is preserved, presumably addressed to Boineburg, which perhaps reveals Leibniz's earliest thoughts about the character, and in which a lexicon of signs is sketched indicating distinctions by means of circles, squares, triangles and other shapes (Couturat 1903: 29). However, all these visualizations admittedly remained without influence on the way thought operated. When Leibniz set out to develop his calculus, he called in the prime numbers, and he experimented with them as notations of primitive notions for a long time, admittedly with repeated changes of system. The analogy is obvious: prime numbers can no more be reduced to factors than primitive ideas to components. In the opposite direction, arithmetical "syntax" becomes applicable to the synthesis and analysis of thought-processes, or of relationships between thoughts. Leibniz is tireless in recommending the advantages of numerical symbols, *since logic can now operate just as "exactly" as calculation*, and even when he comes to calculate thoughts with letter-symbols in the light of the developing system of algebra, he does so explicitly by the use of letters in place of numbers.

Thus the use of characters not only enables pieces of knowledge (*connaissances*) to be listed and formalized, but also makes it possible to incorporate the calculus of thought in the system of logic itself by the use of one system of symbols or another, preferably that of numbers, this being done for the sake of precision. Leibniz was, however, fully convinced that his philosophical system was "proved". He now had to realize that, in purely operational terms, arithmetical symbolism had a "ceiling". For example, having used prime

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as it is characteristic of Leibniz's axiomatic stance, and for the views on symbol and language which it enshrined. Symbolic logic—with the same idiosyncratic views of language—was rediscovered in the nineteenth century.

numbers to characterize Entity as 2, Change as 5, Location as 11, Production as 29, he then conceived Movement as a combination of Change and Location, i.e. $5 \times 11 = 55$, so that an Entity which produces Movement is $2 \times 55 \times 29 = 3190$; but a Movement which produces an Entity is also 3190.[43] That Leibniz, in spite of everything, advanced so far with his symbolic logic is to be explained by the fact that he is ultimately dealing only with the *results* of thought,[44] with discrete, fossilized items of knowledge, with clots or crystals of thought, with ideas and notions as motionless rational configurations. Thought as a subjective process of thinking is far removed from his logic. To be sure his theory of perceptions gives some justification for an increase or decrease in the intensity of thought. But even this notion is watered down into degrees of more or less.

As for the matter of sequence in time of contingent facts, this is justified by the later Leibniz in logical terms by an analogical application of an originally arithmetical concept, the infinitesimal calculus (see Schmalenbach 1921, *passim*), the importance of which in his entire philosophical system cannot be overestimated. From the second half of the seventies on Leibniz gave an ever broader application to the analysis of infinity; and theoretical systems such as the law of continuity (*lex continui*), of truths of fact (*vérités de fait*), the principle of sufficient cause, and the concept of the monad are all closely associated with this. But Leibniz was unable to make infinitesimal calculus fruitful in the notation of his universal character. This is confined to proof by prime numbers or variants of it. Couturat is right to say (1901: 84):

> there is no doubt whatever that his most celebrated invention, that of the infinitesimal calculus, proceeds from his constant investigations into new and more general symbolic systems, and that in return it contributed towards reinforcing his opinion that a good system of characters was indispensable in the deductive sciences.[Z]

But in this remark lies an implicit statement that the infinitesimal calculus itself has no part in the universal character. Leibniz aimed to use his universal character to establish a system of signs applicable to general philosophy, and hoped to construct this as a separate product. Furthermore, the universal character was to serve as a symbol of the logical calculus, and this in turn as a technique of the art of combination and its alphabet of ideas.

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[43] Couturat (1901, ch. 8, on "Logical Calculation") inferred—largely implicit— dilemmas of this kind from changes in the system of notation. (Example from Stammler 1923: 174, *n.* 162.)

[44] "Arithmetic is something of a static system of the universe" (*Arithmetica est quaedam Statica universi*). Quoted by Couturat (1903: 111, *n.* 5), from Leibniz (ed. Gerhardt 1890: VII, 184).

In this context of absolutely finite concepts there is no room for the infinite. The alphabet of ideas constantly remains in the background of the universal character, but truths of fact, which could be established only by an approach through the infinite,[45] had no place in it.

Leibniz never entirely abandoned the prospect of a universal character, even though towards the end of his life he must have begun to despair of its realization. In a letter of 1697 (to Gilbert Burnett, quoted by Couturat, 1901: 117) he is still a resigned optimist: "It is true that these characters would presuppose a true philosophy, and it is only now that I would dare to construct them".[AA] Meanwhile the position Leibniz adopted seems to be not far removed from Descartes' well-considered reservations—first the true philosophy, then a universal language. In Book VI of his *Nouveaux Essais*[46] ("New Essays"), dealing with "universal propositions, their truth and their certainty" we find the description Leibniz gives of a universal character as a system of ideographical ideas "which would literally speak to the eyes, ... in which there would be images meaningful in their own right" (*qui parlerait véritablement aux yeux, ... où il y avait des figures signifiants par elles mêmes*). In this he remains faithful to the requirement that the character must be "real", i.e. a direct representation of things, not of words. But there is no trace here of the arithmetical notation he valued so highly; the geometrical figures in his *De Arte Combinatoria* ("On the Art of Combination") of 1666 had in fact gone further. In 1677 Leibniz had written: "If we possessed it in the form in which I imagine it, we should be able to reason in metaphysics and moral philosophy more or less as in geometry and analysis ...".[BB] This was at the time of his initial interest

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[45] Only in a few places does Leibniz speak out so clearly about the incompatiblity of truths of fact with impressions (*notiones*), like those of his Alphabet of Primordial Notions, as in the following passage in his essay *De Analysi Notionum et Veritatum* ("On the Analysis of Notions and Truths", 1686), which contains a concise answer to the question of the absence of the infinitesimal calculus from the symbolic system of the universal character: "All existential propositions are indeed true, but not necessary, for *they cannot be proved* unless an infinite *quantity* is introduced, or the matter is reduced to infinitudes which infinite existence involves, i.e. unless a complete notion of the individual is gained. Thus if I say, 'Peter denies', with reference to a specific time, at least the nature of that time is presupposed, and with it all those things existing at that time. If I say, 'Peter' [+] 'deny' infinitely, i.e. removing all considerations of time, whether it is true either that he would deny or that he will deny, it will on the other hand still remain necessary to demonstrate that the notion of Peter is a complete notion, and thus involves infinites; yet the infinitive entails that the conclusion *can never be completely demonstrated*, although the position will be reached that any difference obtained will become increasingly smaller" (Couturat 1903: 376ff.; emphasis supplied).

[46] Erdmann 1896: 356, and more fully in *Nouveaux Essais*, in Erdmann 1840: 194-418. The work, dated to 1703, was not published until the posthumous edition of 1765.

in differential calculus. Parallel to this ran his efforts to gain the collaboration of specialists for the compilation of an Encyclopaedia, which was intended to be a reservoir of human knowledge, scientific and "historical", and which was to provide the material for Leibniz's alphabet of ideas. But practical difficulties—he had little success in recruiting collaborators—and theoretical difficulties meant that neither the Encyclopaedia, nor the alphabet of ideas, nor the associated universal character ever came to fruition. This was partly because it was necessary to order the basic principles into a general science, but mainly because, as a result of his concern for the infinitesimal calculus, the "truths of fact" (*vérités de fait*), etc., Leibniz's theoretical horizon had progressed far beyond the static scheme of an alphabet of ideas.[47]

Before proceeding any further it may be useful to define the concepts of calculus and symbol (or character) more closely.[48]

What is counting? Counting is a form of analytical and defining thought —this is a tautology—the content of which is specified by a single aspect of reality, i.e. countability. Counting is thus a mode of thinking, one of many, the particular nature of which is limited by its particular content.

Calculation marks an advance on counting; the material situation remains the same, but the practitioner's mental activity of counting has now developed into an operational process of ordering and arranging, into thought which matches and measures. (Calculation is thought and remains thought, it is not arranging, matching, etc. There is naturally a process of ordering which implies and entails thought, but this activity is of another class and goes beyond thought.)

To give a simple case, let us for a moment bring "primitive man" on to the scene.[49]

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[47] It must be emphasized here, in connection with the last quotation, that there is a great difference between the characteristic notation of the separate academic disciplines of arithmetic, geometry and mechanics (in which figures and diagrams or algebraic signs constitute a set of symbolic instruments) on the one hand, and on the other the concept sketched here of a system of general characters in the service not of a single discipline but of logic in general; this would be a general symbolic language designed to underpin scientifically precise sovereign thought. Leibniz himself applies his encomia equally to both, and as a result the reader might overlook the fact that for Leibniz the former was an established fact, the latter a desideratum.

[48] For this exposition the following works were found useful: Frege 1884; Husserl 1891; Spaier 1927; Selz 1941; Voellmy 1949. Reference to this literature was suggested by Beth, whose *Geschiedenis der Logica* ("History of Logic", 1941) also proved invaluable.

[49] It is probably superfluous to say that I do not believe in the existence of a *homo alalus* (unspeaking man), and that the example does not refer to any definite prehistory, or even an ethnological fantasy. The intention is merely to provide a phenomenology of counting and calculation in connection with language. In the highly developed society which surrounds us, counting and

A primitive man, let us say, is building a hut, and needs four stones, and no more than four. You and I give one another a knowing look, for we realize that the primitive man has no word or sign for 'four'. He is aware of the concept, but has no word for it. (This does not mean absolutely that our primitive man is without language). As he wanders through forest and field, he finds nine stones lying at random close together. He examines them for shape and size, and he decides, leaving aside size, colour, nature, etc., that the number is adequate for the four corners of his house. (The number of his fingers need not be taken into account here.)

He goes back to find a mate to help him drag the stones away. Then it emerges that his neighbour also has the urge to build. Are there enough stones for him, too, over there? The first savage closes his eyes and visualizes, brings into his mind, represents to himself, makes a mental image of the disposition of the stones. This representation replaces, "stands for" observation. Is this representation a sign or a symbol as a result of its being a substitute? Hardly. At all events, he operates with thought, he comes to terms with his representation, in order to be able to answer his neighbour.

But suppose our savage is a less savage savage, and now operates with the relationship between the number of the stones and the number of his fingers, and has established equality or difference with reference to his fingers while standing by the stones. This representation replaces, stands for, on-site observation. When he now comes to consider whether his mate can find what he wants, he will not close his eyes, but look at his fingers, and look for the answer, using the medium of his fingers as an aid to remembering and thinking. Are his fingers now a sign for the distant stones? I do not think so. The specific number of nine fingers for nine stones, then? Now it no longer seems to me premature to speak of a 'sign' or a 'symbol'.[50] A symbol, because it is a "likeness", a μίμημα (an imitation). However it is done, whether with representation or with the fingers, this thinking, this operative form of thinking, is

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calculating are so greatly involved in complicated mental activities that we can hardly imagine a simple case outside such a society. The framework does not help the enquiry. Van Riessen (1949: 560) invokes a "native" with a "primitive technology" to a similar end. Examples of this kind prove nothing; their object is to present the real state of affairs to the writer and reader as closely as possible, or as van Riessen puts it: "I would be held guilty of exaggeration if I were to describe the features of the most primitive situation that can be imagined." 'Proving' is the combination of unproved premisses. The aim here is no more than the clarification of premisses.

[50]   In modern linguistics the term 'symbol' is very frequently used in the same sense as the term 'sign'. It is preferable not to do so here, and to speak of 'symbol' so long as there is a recognizable likeness between the form of the 'sign' and what it represents.

for certain calculation or calculus.

It seems legitimate to claim (1) that calculation is a limited form of thinking, limited in part by the character of the object under consideration, in this case the real aspect of number, (2) that calculation is not of itself scientific, there is also non-scientific calculation, and (3) that this non-scientific calculation may be carried out without the use of signs or symbols.

Let us now consider how this primitive calculation can be further developed and rise above its primitiveness.

Instead of operating with the similarities or differences in numbers he had observed between stones and fingers, our savage could have operated with an instrumentally established and imposed agreement between nine pebbles picked up and brought to the site, or with nine notches cut with his flint knife in a branch he could carry with him. Did this now constitute a sign? Let us ask the counter-question: could this be called language? The answer, I am sure, will be "No". What are we doing when we attempt to apply the qualification 'sign' or 'symbol'? We are attempting to establish a quality akin to language; for our concept of symbol or sign is derived from language. In forming the concept of sign and symbol man sets out from the data of experience and the fundamental idea of language. Our knowledge of the concepts of sign and symbol is posterior to the concept of language. What are they by nature? Is the symbol or sign, e.g. the nine notches in the savage's stick, a preliminary stage, an anterior stage of development tending towards language? This temporal construction can be ruled out, along with any evolutionary speculation projected into the sequential dimension of cosmic time. If it is correct to consider the nine notches to be language-like entities, they are then posterior to utterance, i.e. to the existence of the function of language. But in and through this language-like quality inherent in thinking, thought develops and expands further; thought raises itself to the making of signs—although in doing so thought remains itself—to a higher functional level, as it were, i.e. to the level of language.

The nine notches in question certainly do not constitute language, but are they, nevertheless, perhaps language-like, i.e. are they symbols, are they signs? We must bear in mind that we still have here a likeness, an imitation, a copy, between the nine-ness of the stones and the nine-ness of the notches. But that of the notches is imposed, while that of the fingers was found—though it is possible to see in this "finding" a form of "imposition". To my mind, it is only when "five" is interpreted by, e.g. 'hand', that is when the representation of number by number is in the process of decay, or in other words where the substitute is no longer a copy, but an analogy at

another level, that the substitute acquires linguistic character, that the sign emerges. Here the sign is a reflection not because it is similar, but because it is different. The analogous sign may draw on resemblance, or identity or reflection; perhaps it may be in contrast with its referent, but it cannot be explained by its referent. Numerals, for example, are signs, but in the series of Roman numerals for 'one', 'two', and 'three' the significant number (quantity) is incorporated in the sign, though the sign as such does not depend on the significant number. The reason is that we cannot regard these signs as symbols (cf. footnote 50).

Adopting now the current linguistic terminology which makes no distinction between "sign" and "symbol", we will now formulate some principles:

1. Symbols are in origin cogitative language-like units, but not linguistic entities, not language;
2. *It is incorrect to say that language is a symbolic function in this sense, for this would amount to putting the cart before the horse* (i.e. deriving the cause from the effect);

3. By "ciphering", i.e. using symbols, calculus facilitates thinking about number because its symbols are cogitative entities.

What is Leibniz's view of the inventive and demonstrative use of language and symbol, i.e. of its function as process of thought (*ennoesis*) and communication of thought (*metanoesis*)?

Leibniz believed that as a result of representing ideas by ciphers or letter-symbols in his character he had acquired an instrument by which ratiocination could operate entirely as an exact calculus. It did not escape him that this symbolism in the mind, so useful as an (ennoetic) instrument of thought, was equally useful as a communication of thought (a *metanoema*); useful when it lay before him in numerical or literal notation, of course, but even more so when this notation was transposed into sounds and words. He makes words of his conceptual numbers, causing them to become audible by replacing each number by a particular consonant, and adding a vowel to each consonant. If the figure in units, an *a* was added, if it was in tens, an *e*, if in hundreds, an *i*, etc. Thus, for example, 481 was *fa-me-bi*. The alternative readings *me-fa-bi* or *bi-me-fa* would be equally clear. In the years when this system of notation by sounds was being published Leibniz was also much occupied by various projects for artificial languages, which appeared with great frequency. (More will be said about these in the next chapter.) Leibniz is generally dissatisfied with the classifications of basic concepts which form the point of departure of these languages. They lack the profound philosophi-

cal foundation which he would wish to see used in these problems, especially in the conception of a combinatory system. So when, equally dissatisfied with the result of his own transference of idea-numbers into words, as described in detail, Leibniz set about investigating a rational grammar and an analysis of languages, this change of direction is completely justified by his deductive system, i.e. by his logic— indeed it is a direct consequence of it. Since, after all, a language of effable sounds may be constructed on a purely logical and arithmetical basis, then in the opposite direction, so Leibniz expects, an existent language may be filtered; and once the irrational elements have been eliminated, it may be re-established on logical and precise foundations of the same kind.

Leibniz, after all, remains faithful to the principle of exact, calculatory reasoning. By its rigorous exactitude it will succeed in bringing philosophical disputes to a conclusion, in adjudicating controversies. Thanks to this, it will be possible to challenge an opponent in matters of philosophical or scientific opinion, and say, "Let us figure this out" (*Calculons*). Logical errors are now excluded; truth will be visible and incontrovertible, for the use of the character makes reasoning an infallible process of combination, and an assured analysis of concepts exactly determined in terminology.

At the end of the seventies Leibniz realized that all that was needed to make his calculus of thought a piece of mental furniture—in other words to make his mathematically precise intra-mental reasoning available for the exchange of thoughts between individuals—was to apply the mathematical *method* of ratiocination to the communicative function of the mind. It is immaterial for reasoning itself whether the notation of the elements of thought is made by figures, algebraical letters, distinctive shapes or any form of ideographical symbol, or even of words in a natural language—a purified one, of course. "There is a certain relation or order in characters corresponding to that in things, especially if the characters are well invented" (*Est aliqua relatio seu ordo in characteribus, qui in rebus, imprimis si characteres sint bene inventi*). Any kind of character carries a specialized applicability to reasoning, and the elements of reasoning and the operation of reasoning are certainly not separate from one another. Numerical symbols, as Leibniz knew from his prime numbers, have operational peculiarities which are advantageous in the intra-mental calculation of ideas; but a verbal symbol derived from a natural language has the advantage in communicating thought, because it is more familiar. In principle both kinds of symbol are applicable to both functions, since the guarantee of truth lies not in the elements of reasoning and their notation, but in the

combined order which is appropriate to the things. For although the characters
are arbitrary, their use in association has a certain quality which is not arbi-
trary, i.e. a certain proportion. ... And this proportion or relation is the basis of
truth. (*De Connexione inter Res et Verba*, 1677)[CC]

A further observation may be made in conclusion: as this theory is deve-
loped from the instrumental use of a symbol in the mind, it also makes it
possible to establish fully the temporal priority of language as a component
of thought (*ennoesis*) over its function in the communication of thought (*meta-
noesis*). For since language is absorbed into the concept of symbol, the priority
of language as an instrument of thought is assured. As a result there arises the
paradoxical situation that there is a language—not perhaps a fully elaborated
one, but at any rate a language—which performs logical and instrumental
operations before it comes into existence. The incorporation of language into
thought, the incidental occurrence of which can by no means be denied, is,
however, subsequent to the use of language, to the use of language pure and
simple. And this is again something other than the expression of thought in
language, i.e. the formulation of previously conceived thoughts in a subse-
quently devised language, which also occurs. In this sense we may recognize
both *ennoesis* and *metanoesis;* in both cases thought makes use of language, which
is present, and then returns, so to speak, with the function of a structure of
thought. But these phenomena, i.e. the function of language as an instrument
or as an expression of thought, are, of course, not the initial stage of pro-
ducing language.

This logical insight of Leibniz's opens the way for the continuous and
repeated transition between the operational and the expressive functions of
language, its use as what Hobbes called respectively a "mark" and a "sign".
Characters in the narrow sense are best suited to the manipulation of
thought, and the words (*voces*) of the language to the expression of thought,
but the relation between them is in principle reciprocal. Of greater conse-
quence is the fact that this realization gives positive confirmation to the theo-
retical harmonization of systems of artificial symbols and natural language.
Reference may be made to the conclusions of the excursus on pp. 287-290:
a symbol is something thought out, the result of thinking, a *noema*. Symboliz-
ation in conjunction with the question of the nature of the object symbolized
constitutes the intellectualization, de-naturalizing, de-substantializing of natur-
al language, making it subject to alien rules. Is Leibniz consciously setting out
to invert the nature of language when he sets out to turn natural languages
into symbols, or does he consider it to be from the very start a thought or
concept? An attempt will be made to answer this question, but first it is

necessary to examine the way Leibniz reduces natural language to symbols
in his rational grammar and analysis of languages, and in doing so subordi-
nates it to logic.

In his search for a rational grammar[51] suitable to underpin his philoso-
phical language, Leibniz in the main consults Latin, in his day still the lan-
guage of scholarship, albeit in retreat. Leibniz, it must be emphatically asser-
ted, does not regard this analysis as a simplification, but as a logicalization.
Simplification by itself was employed by many a deviser of artificial languages
in Leibniz's day, but Leibniz had philosophical motives. He set up a logical
system of symbols, making use of effable and known elements. This symboliz-
ation—and the resultant logicalization—may be accompanied by simplific-
ation, but can in principle just as easily produce the opposite effect; and this
does, indeed, happen from time to time. That Leibniz was not thinking of a
simplified Latin is clear from the adoption of formal possibilities from modern
languages, e.g. from French, purely on logical grounds.

There is no room in a rational language for a variety of declensions and
conjugations;[52] Leibniz normalizes drastically in this area. Distinctions of gen-
der, number and person are redundant, or can be replaced by articles and
personal pronouns. French provides a model here. In connection with inflec-
tions, i.e. the cases of nouns and the moods of verbs, Leibniz points out that
the so-called particles serve the same purpose of expressing relationships; pre-
positions replace case-endings in nouns, and conjunctions make it unnecessary
to vary verbs for mood. In place of the inflections[53] of a synthetic language
like Latin (but with an exception in favour of the genitive case), Leibniz gives

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[51] The material on which the extracts which follow are based derives in the main from Cou-
turat 1903: 23-28. For treatment of this question, see also Couturat 1901, ch. 3.

[52] See (for comparison only) a remark by Langeveld (1934: 56f.), who develops some consider-
ations towards a theory of the rational and irrational use of language. After denying a rational
function for words which could equally well remain unspoken as well as being spoken— such as
might indicate emotional or volitional colouring—he continues: "We have an entirely different
form of irrational use of language in genders, concord, government, inflection with preceding or
following pronoun, plurals after numerals, etc. All this is irrational, since in this way groupings
are created in which the components are compelled to assume one form or another without this
providing any rational advantage."

[53] For the persistence of similar ideas, cf. Langeveld 1934. He denies a rational function to
words which "might just as well have been omitted as expressed", and continues (pp. 56f.): "We
see a completely different form of irrational linguistic practice in distinctions of gender, in
concord, government and inflection in the context of a pronoun, in plurals after numerals, etc.
Such usages are irrational, since they produce groups of words in which the components are
obliged to adopt one speciffic form or another without providing any rational benefit."

preference to the particles of an analytical language like French.

Let us pause for a moment to consider the effect of these principles on the verb: it is now deprived of what by tradition had been its most distinctive quality, viz. tense. Leibniz is well aware of what he is doing. Time is by no means a monopoly of the verb, in his view. *Amaturitio* (future loving) and *amavitio* (past loving) ought to be equally possible as *amatio* (present loving). The characteristic of the verb, according to Leibniz, is to constitute the proposition or judgment, that is, to predicate.

The first version of Leibniz's analysis yields the following scheme:

THE WORDS OF THE LANGUAGE

Substance: Components   *Form:* Relations

(1) Nouns: Substantives   (3) Particles: Prepositions
           (Pronouns)   Conjunctions
           Adjectives   Adverbs
(2) Verbs (without mood or tense)

It will be seen that whether Leibniz realizes his symbolization with configurations or numbers (the characters), or symbols of intrinsically linguistic origin, it is always the same basic system which is invoked, the scheme of his art of combination, components and relations.

The analysis of the components goes further. The noun substantive is broken down into being or thing (*ens* or *res*) + adjective, e.g. the single word *homo* ('man'; not sex-specific, cf. *homo sapiens*) = *ens humanum* ('human being'). The analysis of the verb is then accomplished by breaking the verb down into the so-called "verb substantive", the basic verb *esse* ('to be') + adjective; examples *aegrotare* = *esse aeger* ('to be ill'), *potitare* ('to tipple') = *esse potator* ('to be a drinker') = *esse ens potans* ('to be a drinking being'). The symbols of the elements of thought are thus reduced as far as possible in the direction of a nominal component: the verb = *esse* + adjective, substantive = *ens* + adjective. Clearly, there is a close affinity between these analyses and the view that every sentence is reducible to the propositional scheme of subject—copula—predicate.

Leibniz gave special attention to the analysis of the particles, the prepositions, conjunctions and adverbs of place and time. Qualitative adverbs are directly assigned to the adjectives: *valde potito* ("I drink excessively") = *ego sum magnus potator* ("I am a great drinker"). Or, to be more consistent than Leibniz himself at this point, *ego esse magnum ens potans* ("I [to] be a great drinking

being"). This special attention is not surprising, for the particles[54] represent "complex order", "application and connection" (*usus et connexio*), "proportion or relationship", which was always the "foundation of truth". In a very broad analysis of the particles Leibniz makes an attempt to derive all prepositions from relationships in place. And finally he draws a parallel between conjunctions and prepositions: "Prepositions link nouns, conjunctions link whole sentences" (*Praepositiones jungunt nomina, conjunctiones jungunt integras propositiones*). Adverbs of place and time are also subsumed under this concept of relationship.

The creation of a true philosophical language by means of detailed analysis of natural languages, on the filiation of which Leibniz gives an exhaustive account in his *Nouveaux Essais*, will, when successfully completed, coincide with the reconstruction of the structure of the original language, the language of Adam (*Lingua Adamica*), a term which Leibniz probably borrowed from Jacob Boehme. In this account he shows a command of his material which matches the highest achievements of his time (it is here that he makes his celebrated attack on 'Goropianizing').[55] Leibniz, indeed, calls this philosophical language the language of nature; each idea will receive a clear natural characterization, a logical portrait, in its name; and this will come about by way of a natural association of the kind Plato tried to establish in the *Cratylus*. However, this is not the place to enquire further into the details of Leibniz's sound symbolism. In any case, Leibniz set himself strict limits.

The rational grammar which Leibniz summons up by means of his analysis of languages—for besides Latin and French he brings other languages, ancient and modern, into his field of vision—is, as has been noted, the mirror-image of the structure of the art of combination, not in characters this time, but in linguistic symbols. In this image a lexicon of roots and primordial words is the analogue of the alphabet of primitive notions. This primary list of names will then exhaustively constitute a constant list of nouns, for, as we have seen, Leibniz has no room for the verb apart from the copular verb

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[54] It is these which constitute the form of a language, which determine its syntax, its manner and its features; they are the frames or moulds into which is poured the variable matter of discourse, as represented by the words. (Couturat 1901: 71)

[55] "It is well known how pride in the mother tongue turned into foolish boastfulness in Johannes Goropius Becanus, a citizen of Antwerp, who attempted in his *Origines Antwerpiae* (1569) to prove that the language of the Netherlands was the oldest in the world, and was spoken in Paradise by Adam. At all events *Duyts* ['Dutch'] is the same as *Douts*, contracted from *de oudste*, ['the oldest'], and all kinds of Old Testament names could easily be explained with the help of Dutch" (De Vooys 1931: 60). [*Translator's note: Duyts* is cognate with *Deutsch* ('German'), etymologically = 'vernacular'; hence the use of the same term in related languages.]

substantive *esse*. For example, *vivus, vivere, vivens* ('alive', 'to live', 'living'), etc., all derive, according to Leibniz, from the nominal root *vita* ('life').

The manipulation of mathematical methodology is also clearly revealed in Leibniz's treatment of the comparative proposition, which is, quite sensibly, laid out on the basis of the relationship between the whole and the parts. In this case, logicalization does not lead unequivocally in the direction of simplification.[56] Moreover, Leibniz regards comparison as generally applicable to elementary symbols; a capacity which results, naturally, from the reduction of the verb to a noun. But, apart from this, it is possible, "if a jest is permitted, to be excessively precise" (*si iocare libet: curissimare*); in the case of the pronoun, for example, *ipsissimus* ('him-very-self', i.e. 'himself in person').

How, finally, does Leibniz deal with the autonomy, the independence of language? We have already seen that Leibniz turns language into symbols, and in so doing logicalizes it. But he also does the same thing to some degree—no further in this case than rationalizing—with law, with social and moral philosophy. Indeed, he even embraces aesthetics and theology in the concept of theoretical and mathematical truth. These disciplines do, however, retain a distinctive character against the background of a logical denominator. Not so language. Leibniz accepts language lock, stock and barrel into his logic, into his *Organum* (instrument). For Leibniz, language is identical to thought, with the minimal concession to their occasional differences that language is the expression of thoughts. Thinking is thus internal, language external.

In the light of tradition this notion, it would seem, is nothing new; it was a component of the concept of *logos* in Classical Antiquity and the Middle Ages. The route by which Leibniz comes to this conclusion is, however, slightly different. And while Leibniz does not hesitate to point out this correspondence with "the ancients" (*les anciens*), "for by logic they understood, as you do, everything which relates to our words and to the explanation of our ideas" (Gerhardt 1890: V, 504)[DD]—then great minds think alike! Starting from the role of the cipher as symbol in calculation, Leibniz had made the symbol an instrument for generating thought in general, and of the logical calculus of his art of deduction. In return, his attempt to utilize this symbolic system for the demonstration of thought by vocalization had its counterpart in his attempt to represent natural language as the outward vocalization of inner thought processes. Thus he always remained within the ambit of the symbol,

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[56] Not examined here, but see the fragment (1890: B III.5) reprinted in Couturat 1903: 280.

at the expense of language. A certain shift of emphasis may, indeed, be discerned: in his early works Leibniz locates the centre of gravity of language in its use as an instrument of thought, in the later works in the post-ratiocinative representation of thought. Along this route, which was not the route of the Ancients, Leibniz had rationalized language, and not simply rationalized it, but rationalized it in a theoretical or axiomatic, specifically mathematical direction, in fact logicalized it.

It would not be inappropriate here to suggest a comparison with an equally possible but fundamentally different rationalization of language; i.e. a practical explanatory grammar like that found in the Port-Royal *Grammaire raisonnée* (see below, Chapter 10) In his *Grammaire rationelle* ("Rational Grammar"), Leibniz set out to 'correct' and 'rectify' (his own terms) the data provided by the facts of language, tracing language back to its assumed nature as a mathematically exact system of symbols. He does so as a judge who by strict contextual reasoning reveals the true underlying meaning, a meaning which has a rational content of the only kind he regards as valid, i.e. a theoretical and mathematical content. The Port-Royal *Grammaire Raisonnée* on the other hand —as will be seen in the treatment of practical theories of language in the next chapter—rationalizes (as the title of the work implies) and demands recognition of the rationality of a given language on the grounds of its acceptability in practice. It does so as an advocate who is assured of the rationality of the language in question as it is, and which can be justified as rational by the tribunal, not indeed of mathematical science, but by that of "sound" understanding. The difference is obvious.

But Leibniz himself did not constantly uphold his system of theoretical construction in matters of language, as he did, for example, in the area of free action (*praxis*), in ethics in the broader sense. Leibniz logicalizes in the full meaning of the word, that is to say, he turns language into logic, takes it and swallows it up (*engloutir* is his own term) in logic. Law and morals are protectorates, language is incorporated. Leibniz does this in so many words in his *Nouveaux Essais* ("New Essays"), written, as we know, as early as 1703, as a critical appendix to Locke's magnum opus, but not published until 1765.

In Book IV, Chapter 21, dealing with the "Division of the Sciences", Philalethes first recapitulates the views of Locke:

> Everything which can enter the sphere of human understanding is either the nature of the objects in themselves, or secondly man in his capacity as agent moving towards his end and especially towards his happiness, or thirdly the means of *gaining* and *communicating* knowledge. (Leibniz 1765: 489)[EE]

In other words we have:

> (1) physical or natural philosophy, (2) practical or moral philosophy, (3) logic or knowledge, for *logos* means 'word'. And we need signs for our ideas in order to *communicate* our thoughts *to one another*, as much as to *record* them for our own use. And these three kinds, natural philosophy, moral philosophy and logic, are like three great provinces in the world of the mind, each of them completely separate and distinct.[FF]

It is at the point of logic that Theophile (i.e. Leibniz) begins his criticism:

> However, there is a difficulty in this, for the science of reasoning, of judging, of discovering arguments appears to be very different from knowledge of the etymologies of words and the use of languages, which is something imprecise and arbitrary.[GG]

This is very telling. For here Leibniz is criticizing Locke for leaving something unsolved which has already been noted (above, pp. 279-280) as a paradox in Leibniz's own attitude to language, viz. the approach of the philosopher who subjects language to critical logicalization, and that of the linguist who values and investigates existing languages, between a Leibniz who schematizes and corrects languages and at least on occasions seems to reject them, and a Leibniz who collects objective facts of language, examines them and seems to accept them at face value. Or to put it in yet another way, between a Leibniz who for the sake of logic totally abandons the autonomous functioning of language in its own right, and a Leibniz who seems to acknowledge the illogicality and individual autonomy of language. Locke can certainly not solve this problem for Leibniz.

After Theophile-Leibniz, having left this difficulty unresolved, has made a few more objections to Philalethes-Locke, he then expounds in summary form his own theory of *dispositions*. There are three "dispositions"[57] or divisions of knowledge, and of the logical "division", he says:

> To these two divisions [theoretical and practical], we should join the third, in line with the terminology. This would be no more than a kind of index, either systematic, arranging terms according to specific predications common to all nations, or alphabetical, in accordance with the language accepted by scholars.[HH]

Leibniz, the harmonizer and conciliator, then concludes by stating, perhaps with some reservations, that his triadic division accords marvellously

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[57] It is not the place here, of course, to go into questions of general philosophy, such as that, for example, of the inconsistency between his monadology and the notion of "dispositions" developed here. On this point, see Russell 1900: 163ff.

with Locke's three sorts of sciences: "This old division works well, provided that it is understood as I have just explained in the case of the divisions, i.e., not as separate sciences, but as *variant arrangements of the same truths*".[11] Although Leibniz is obviously in a corner here, it is clear:

1. That he distinctly saw the inconsistency (*difficulté*) which leads one to speak of a "paradox" in his thought about language, i.e. the contrast, to put it as briefly as possible, between a fundamentally critical linguistic theory and logic on the one hand, and a respectful practical knowledge and use of language (etymologies and usage) on the other.
2. That he claims to be able to overcome this paradoxical difficulty with his prophetic visions, something that Locke could not do.

What does this imply? It implies that Leibniz was able to deal with the irrational residue (the indefinite and the arbitrary) by correcting out the facts of language with the support of his *Grammaire rationelle*. It has indeed been noted already that practical explanatory grammar (*Grammaire raisonnée*) claimed as regular what it knew, from a rational point of view, to be irregular, letting it stand, come what may, as acceptable; Leibniz's grammar cleared away what it regarded on axiomatic grounds as irregular. This presented Leibniz with no great difficulties from a historical diachronic point of view; the construction of an Adamic language, which he held to have been originally a purely logical system of symbols, provided the answer here. But how was he to deal from a synchronic point of view with language in its everyday manifestations? As language is identical to thought, there can be no suggestion of inherent and consistent logicalization, yet the outward trappings and the contemporaneous must be somehow transmuted into thought. But it was just the logic of these marginal phenomena, of these siftings, which had to be explained. And rightly so, for here logic comes up against the last defence of the autonomous function of language. The driving force of Leibniz's genius towards systematicity justifies the expectation that he will consistently achieve what he alludes to in his controversy with Locke, viz. a complete rationalization of language in its natural, objective manifestation—i.e. of language as received among the learned, not the babbling of infants or the incoherencies of the feeble-minded. This would amount almost to the subjection to extraneous logical rule of the last autonomous vestige of language. And by this the inconsistency between the symbolic philosophy of his logic and his narrowly philological activities would be resolved. For the man for whom every hour lost was a torment did not carry out his investigations into language as an amateurish pursuit— which, in his view, would have been

nonsensical—but as an activity within the framework of his view of the life and the world.

The basis of his "philology" is to be found in his epistemology, where we come across a very remarkable symbolical enlargement of the logical "statutes". To understand this it is necessary first to undertake an excursus on language and clarity.

Human actions may be distinguished by their meaning and their intent. The use of a cutting instrument on or against a human person can mean injury or murder, it may occur in a barber's shop, it may be a cultic action —e.g. circumcision among the Jews—it may be performed by a surgeon in an operating theatre. Looked at from a positivistic point of view[58] these actions are of identical form: cutting with a knife into or by a human being. But pragmetic knowledge variously distinguishes here with intuitive confidence between legal, social, religious and medical or technical implications: nobody regards the murderer as a surgeon, or the surgeon as a hairdresser, etc.

There are further implications in these intuitive certainties about the aspects of voluntary action. We do not judge the surgeon from a legal point of view, but we can distinguish between an appropriate and an inappropriate operation; murder is a wrongful action, a crime, in the eyes of the law, but beheading the murderer is an action which—likewise in the context of the law—is [in some societies—*translator*] considered proper.

The distinction made here between human actions by ascertaining the sphere of activity, determining the import and examining the range, also carries with it the application of a bivalent norm; it implies, albeit vaguely and indefinitely, an instance either of κατανομία, or consistency with the law of the relevant sphere, or of παρανομία, or conflict with such a law.

When simple understanding is required to account theoretically for its ultimate certainties, it is insufficient to ask for this account in the form of a definition. For by the term 'lawful' (or 'unlawful') an account of a juridical matter is confronted with a limiting idea, a transcendental concept beyond which it is impossible to go further, and which at best can be regarded as a species of the universal cosmic order.

Wherever linguistics is concerned with its basic content we find that the independence of its content from investigation is justified by the use of terms

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[58] Thus positivism made language into a series of physical movements, sound-waves (*Schallwellen*), and reduced linguistics to phonetics. The ruling factor in this was "natural law knowing no exceptions" (*ausnahmsloses Naturgesetz*).

like "autonomy" or "self-sufficiency". It is nevertheless very remarkable that
nowhere in the many theories of language is the further step taken of defining
the concept of "law" which these terms convey, even if only implicitly. Lin-
guistic rules in plenty have, for sure, been investigated and formulated, and
so, too, has the idea of the self-sufficiency of language,[59] but language has not
been considered as constituting a law in its own right. Yet many linguistic
theorists have felt an inconsistency, a rejection of rule in, for example, apply-
ing the yardstick of verifiability to such phenomena as question and
command. We may establish that there must be some universally valid basic
criterion wherever corrections and constructions lead to the application of
non-linguistic criteria to the manifestations of language; but nowhere is there
a trace of a positive innovative attempt to develop the notion of a fundamen-
tal norm which enshrines the essential nature of language *qua* language.

The sense and norm of a sphere of activity are as closely associated as
regularity and rule. In the context of public law we find the term 'justice'
used either to describe either a mode of conduct or a judicial act; but there
is no one term which is applicable in language. A consideration of the funda-
mental principles of language will yield a formulation other than 'lan-
guage'/"un-language" (on the lines of 'justice'/'injustice'). Let us consider
what term can be used to approach the idea of the norm in language.

There should be a pair of terms, preferably two contrasted terms. Lin-
guistic theory has had the uncomfortable feeling, ever since Plato tested ὀρ-
θότης (correctness) or ἀλήθεια (truth), and its opposite in the *Cratylus*, that
nothing can be achieved by applying the criteria of "appropriateness" or
"inappropriateness", "truth" or "untruth" to language. The linguistic philos-
ophy of Vossler and Croce tried to do it by making a contrast between
"beautiful" and "ugly", i.e. applying an aesthetic norm, and also failed.
Jespersen measured the excellence and progress of languages by the degree
to which they reduced distinctive forms in the interest of simplicity; this might
be called an 'economic' view of language. This was no more successful. Those
who consistently find a basis for language in expression or association do not
even set up a criterion, unless the behaviourists' appeal to the effectiveness of
the resulting action may be considered one.

The aim of all use of language, in my view, cannot be considered under
criteria more precise than "clear", "lucid", "plain", expressed in such norm-

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[59] For the positivists' view of language see the previous note. Wundt saw language as a psycho-
somatic expressive movement (*Ausdrucksbewegung*); for the behaviourist language is a pattern of
behaviour. In these descriptions of the nature of language specific aspects are generalized.

ative and contrastive pairs as "clear" *v.* "unclear", etc.[60] In expressing himself in language, man is looking for clarity, lucidity, plainness on or about a given point, for others, for himself, no more and no less. With this aim in mind he verbalizes or "words". He verbalizes anything and everything; he manipulates, treats, structures a situation, a state of affairs or its causes, all by means of language (see Reichling 1935: 145). In tending towards clarity, language and the use of language approach their goal, they realize their teleological purpose. Clear understanding or clear expression is the central aim, for the reader or listener as receiver and for the speaker or writer as producer. It is central; correctness, beauty, conciseness, etc., etc., remain on the periphery as secondary aims, but always in subordination to the principal aim of clarity.[61]

Language is one way among many in which the human being can, indeed must, approach reality. Human linguistic activity, verbalizing, "wording", is a free activity which proceeds by a law of appropriateness. A description of the basic categorial norm, of the functionally central criterion of language, by the term 'clarity' is, to my mind, not far from the mark. The criterion of clarity is categorially central, but other aims and criteria may also contribute or be applicable to the use of language. Where such secondary aims or criteria become predominant, however, language loses its nature or its substance to a greater or lesser extent, as a concomitant of this diversion from its central purpose. Consider, for example, forms of prayer in the language of religion, special terminology in the language of the law, the aesthetic use of language in poetry. If language is subjected to logical rules of correctness the situation is different; "natural" language can never be subjected to the processes of thought without being distorted. Consider so-called scientific language, definitions, syllogistic systems: in such cases extensive special conventions are always necessary. Mauthner and his associates are right in many ways to take issue with this. The inherent so-called metaphorical content of

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[60] What is suggested here will, I assume, seem to many readers a statement of the obvious; but making such a statement is sometimes useful. Only a 'phenomenology' of linguistic usage would attempt to prove that language does not fulfil its function until it makes clarity its aim. As the present work is a history, it is necessary to set this thought down in the form of an assertion; the necessity has arisen because a history has to be critical, and the reader is entitled to have a full appreciation of the author's point of view.

[61] Provided that language is functioning in its own sphere. If a poet is aiming at beauty, an initial lack of clarity may serve his purposes. In the interest of resisting the enemy, the question "Is there a Jew in your house?" would have been answered evasively or misleadingly. And yet the poet and the shelterer are not talking nonsense, but are dealing with the aim of linguistic clarity, even if their usage in these cases is not autonomous, but subservient to other criteria.

language alone exempts it from being forced into the strait-jacket of logical correctness. Logical thought can indeed set up a system of symbols as a product of the mind for a given purpose, but this must certainly exclude from the beginning any deixis or metaphor. A symbolic system of this kind would then be constructed within thought, though naturally by analogy with language. Such a symbolic system can be extremely useful within its set limits. Natural language, however, has no limits other than its own laws, and can, in principle, deal with everything in its own way. So can thought, for that matter. But not a symbolic system, for a symbolic system is not a language; it is a precisely established system, and for that very reason limited in its range of operation.

In order to establish what effect the symbolization—and consequently the logicalization—of language had on Leibniz's theory of knowledge, we must first examine the way he regards knowledge and the criterion of knowledge in his system as a whole. While the author of the system of pre-established harmony gives an account of this in many places, our main source of information is the very concise exposition of this point in the *Monadologie* of 1714 (ed. Erdmann, 1840: 702ff.).

The nature of the monads which make up Leibniz's universe is generally recognized as consisting in perceiving or representing. The content of this perception or representation is in principle identical for all monads, being the universe as a whole. At the point on the ladder of gradual transition to higher consciousness where reason emerges—as occurs in the human mind—minor perceptions (*petites perceptions*) become conscious awareness, or apperception. Sense perception, combined with memory, which Hobbes had expressly continued to regard as no more than factual knowledge (*prudentia*) as opposed to ratiocination, is for Leibniz uninterrupted, and therefore continuously linked with the theoretical discourse which emerges from it. Three-quarters of the operations of our mind, moreover, consist of no more than perceptions: "we are no more than empirical in three-quarters of our actions" (*nous ne sommes qu'empiriques dans les trois quarts de nos actions*, §28). In the following paragraphs Leibniz goes on to present his well-known distinction of the two principles of contradiction and of sufficient cause upon which the distinction between truths of reason (*vérités de raison*) and truths of fact (*vérités de fait*) is based. Each monad is a living perpetual mirror of the universe, but the varying point of view of each monad makes a difference. For this reason the monads view the one universe from different perspectives. Thus, in §60 we read: "*Monads are not limited by the object, but by variation of knowledge* of the object. They all reach out to the infinite, to the whole, but they are limited and distinguished by their

degrees of distinct perceptions".[JJ]

We see here how knowledge filters through a layer in which both the evidence of the senses and the product of reason, as well as symbols, are to be found associated and mingled with one another. In the term 'perceive' there is a certain emphasis on the evidence of the senses, and in the term 'represent', which elsewhere is synonymous, the emphasis falls on the communicative and symbolic. (Cassirer was to work wonders with these terms later on in his philosophy of language.) What might escape us meanwhile in the suggestion of Leibniz's theory of continuous transitions and of a reflecting monad—in which what is reflected is identical in all monads, sleeping, dreaming or waking, and in which the dullest perception forms part of an unbroken continuum rising to the most subtle judgment—is that we can find no elaboration, or even so much as a hint, of the question of truth or error. Leibniz begins his theory after truth has been established, rather than before. He makes distinctions which, as norms of knowledge, are pseudo-criteria. Variation within and between monads, and the basic determining factor of knowledge lie, not in the object—this is, indeed, identical, the universe—nor in the complete or incomplete conception of the object, but in the modification of knowledge of the object. Knowledge is presented to us by this theory almost implicitly as *a priori* true knowledge; and we have already, without noticing, passed over the question whether what has been considered may have been misunderstood. Reasoning is not susceptible to any criterion, but it gives in its own name an immanent guarantee of truth from the outset. This observation is based on what Schmalenbach (1921) has called Leibniz's fanaticism of pure logic.[62] Leibniz proposes an autarky of thought which operates

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[62] *Fanatismus der reinen Logik.* It is appropriate that Schmalenbach expresses criticism of Leibniz precisely in the context of his symbolic logic. Schmalenbach has no objection in principle to the position that thought is autonomous, but I do not accept the position as he understands it. The self-sufficiency of acquiring knowledge is, in Schmalenbach's view, an ideal, and his only complaint against Leibniz is that he "pays no attention to what has not been attained and cannot be attained. His project of a universal character and a combinatory system which sets out to make knowledge an exclusively internal activity of the intellect, with no actual reference to objects, is, as it stands, ... completely justified; but the one-sided and, in this area, unbounded determination with which Leibniz takes for granted the attainment or even the attainability of this idealized, but only presumed, state of knowledge, and undertakes to establish to the last detail what he has taken for granted—not only as general logic but also in respect of individual concrete results of scientific investigation—without taking the slightest note of the structural laws of current means of gaining knowledge and their constant requirement of interaction between thought and observation (inasmuch as the distinction between 'necessary' and 'accidental' truths is either no more than a preliminary study or ... a logical definition), and above all the hope, already translated into action, of being able at the present moment to use the combinatory

directly with truths by the promiscuous use of sense data and symbol, labelling them and fitting them into well-proportioned constructions; and this proportion or relation is the basis of truth (*et haec proportio sive relatio est fundamentum veritatis*); it finds its point of leverage centrally in the general nature of truth.[63]

What, then, are the modifications of knowledge which limit the monads and distinguish them from one another? Leibniz deals very generally with this distinction by speaking of the different points of view of the monads, as a result of which perspectives vary. He gives us more details about this in a very brief work of 1684, the *Meditationes de Cognitione, Veritate et Ideis* ("Thoughts on Cognition, Truth and Ideas"; ed. Gerhardt 1890, VII: 79ff.). He later refers frequently to this little work, and clearly remained true to its principles.

The *Meditationes* are designed to tackle the confrontations of true and false ideas (*controversiae de veris et falsis ideis*). Descartes' distinctions of 'clear' and 'distinct' are not enough for Leibniz, who therefore sets out here his views of the distinctions and criteria of ideas (*de discriminibus atque criteriis idearum*). There is no hair-splitting to safeguard us in advance from a change of view; Leibniz promises to solve the problem of true and false with distinctions and criteria. These must, then, be the criteria of true or false. Let us see how well this holds.

"A notion which is not adequate for making the object represented recognizable", begins Leibniz, "is obscure" (*Obscura est notio quae non sufficit ad rem repraesentatam agnoscendam*). Recollections in particular are often unclear and obscure. In contrast we have clear perception, which is differentiated into confused and distinct perception. Clear confused perception is sufficient to recognize the object represented, but not to enumerate its "marks" (*notae*) or

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system not only for the formal demonstration, the organization of perceived data, but also for the investigation and generation of knowledge, display ... a *fanaticism of pure logic*. ...This is an autonomy of logic which is assumed to have been achieved and has become self-sufficiently productive, in a way which was not possible until Leibniz made his *Analysis situs aus dem Gedanken der Metageometrien* ('Situational Analysis of the Idea of Metageometries'), in which the principle of construction becomes productive" (Schmalenbach 1921: 510-511). I do not accept Schmalenbach's view, but it is clear that we can adopt much of this criticism of Leibniz's presumption of 'truths'.

[63] Leibniz does not seem always to have accepted the immanence of logic. An untitled Latin essay from his pen (ed. Gerhardt, 1890: VII, 62-63 and reprinted by Couturat, 1903: 401-403) questions the transcendental Archimedean point (the term is Leibniz's own): "Some fixed point is required for the constitution of human knowledge, upon which we can safely rely and from which we can safely proceed. I consider that *this principle may be found in the underlying general nature of truths*" (emphasis supplied). The further development of this position, however, runs aground in the two-fold classification with which we have become familiar (cf. Cassirer 1906: II, 51-52).

distinctive features. ("Confused", in this context is, then, not so much 'mudd-led' as 'generalized'.) Clear distinct perception, on the other hand, has a full knowledge of the marks, and it enables a definition to be made, except in the case of a basic idea—a primitive notion from the alphabet of ideas—for a basic idea is, as such, undefinable. When a complex concept includes any-thing which is still confused, it is said to be inadequate; when analysis of the last detail is complete it is adequate. Does this happen in human experience? The concept of numbers is rather like this. Since we cannot think of everything simultaneously, our thinking, at least of complex ideas, is generally—"in fact", Leibniz claims more emphatically, "on almost all occasions" (*imo fere ubique*)— done symbolically, as in algebra and arithmetic, to save effort. The primitive notion here, too, is allotted a special position; knowledge of this is intuitive. This, then, is the central tenor of the *Medita-tiones*.

What Leibniz holds against Descartes, and must hold against him, is that Descartes' evidential criteria of truth, his 'clearly' and 'distinctly', lie outside truth, and are anterior to it, while for Leibniz these criteria are immanent in thought. Leibniz's sometimes biting criticism was collected by Couturat in Chapter 4 of his work, which deals with the universal character. Chapter 6, too, on "General Science", also goes in detail into this difference between Leibniz and Descartes. It is sufficient here to call attention to the existence of this thorough documentation; Leibniz rejected Descartes' contention on many occasions, *inter alia* by noting that untrue ideas can also be clear and distinct. Descartes' conception of preliminary confirmation is thus in Leibniz's eyes faulty. Truths constitute a system, an order, and the localization of ideas in this order of itself gives us a guarantee of truth: this is what Leibniz calls the perfect method and true analysis, and Descartes had by no means pos-sessed this:

> This other method is the Character itself, which provides the mind with a guideline and a material support, and ensures its regular and ordered deploy-ment ... by practical, mechanical rules comparable to the rules of calculation. ... Thus *it is the Character which, frustrating the wiles of evil genius, guarantees us against all errors of memory, and provides us with a mechanical and tangible criterion of truth.* (Couturat 1903: 95)[KK]

Discussion of Leibniz's views of language cannot pass without some criticism. In the first place, is this theory of criteria absurd in itself? Is it right to speak of clear and unclear thoughts, etc.? No doubt it is, but only in the way in which one may also speak of beautiful and ugly, of justifiable and unjustifi-

able, of amical and inimical thoughts. If we consider only clear and unclear
ideas, we see that the act of thinking does indeed reach forward; it stretches
ahead, tends towards "wording", towards conversion into language; and this
linguistic analogue within the cognitive process is certainly something real.
But this is not how Leibniz poses the question. For Leibniz, cognition is a
conglomerate activity of mathematical and systematic character, with per-
ceptual, logical and symbolic components. And according to his own title and
the content of his work, what he provides in his reflections on cognition, ideas
and truth are essentially criteria of thought. According to what was revealed
in the exposition above, we have to characterize these criteria as being in the
main not of logical but of linguistic nature. And that is why these criteria are
out of place here. Leibniz is consistent in his use of symbols, and we could
not expect anything else from the "swallowing" (*engloutissement*) described above
but to find the Red Riding Hood of language in one way or another inside
the wolf of logic. The incorporation of language in thought, then, comes
about for him at the price of the corruption of his principle of logical norms.

Against this it may be objected that Leibniz's principle of logical norms
did not form part of this immanent principle of criteria, and that the criterion
of contradiction was always presupposed. In reply, I would emphasize what
has already been noted about Leibniz's presumption of truths. In addition,
the older Leibniz, for whom the analysis of infinity became an ever more
broadly applied pattern of thought for his general philosophy, gave ever
greater place to the concept of approximation to truth; and the notion of
alternately increasing and decreasing approximations to truth in the ebb and
flow of perceptions and apperceptions found in this principle of symbolic,
logical criteria a code of law which provided the appropriate leeway. What
is more, the law of contradiction had itself already been reduced to an
immanent rule of proportionality on a mathematical model; and for this
reason this law could, without any disturbance, be welded into the symbolic
criteria of the *Meditationes.*

For Leibniz the idea itself is indeed in the deepest sense of the term a
symbol, and as such represents, by its perfectibility, the concept of the laws
of an ideal of knowledge based on scientific principles which was his ideal.
Ideas represent, i.e. symbolize the relationships which obtain between the
discrete components of reality. The relationship of the idea to what it repre-
sents is not that of a copy but rather that of a geographical map to a tract of
land, or at least that of an elliptical projection of a circle in a plane other
than that of the circle itself; the internal proportionality of the component

parts coincides perfectly. This notion is expounded in Leibniz's essay *Quid sit Idea?* ("What is an Idea?"; ed. Gerhardt 1890, VII: 263ff.) This is an attractive pamphlet, which once again presents to us simply and intelligibly the results of his symbolization, otherwise his principle of universal representation. The numerous quotations given from this source largely speak for themselves; and analysis of Leibniz's theory of language may be concluded at this point.

Let us first of all not forget the title of "What is an Idea?" Leibniz's answer to the question is "Something which is in our mind" (*aliquid, quod in mente nostra est*), but "it consists not in some act of thought, but in a faculty. ... An idea thus postulates some adjacent faculty or facility of thinking about a thing".[LL] The idea is thus a potentiality; we may have an idea, but we do not think it, or we do not think it yet. There must therefore be a way, a method, which leads to the thing. Then, "there must be something in me which does not so much lead to the thing as *express* it" (*necesse est aliquid in me, quod non tantum ad rem ducat, sed etiam eam exprimat*). 'Expressing' is a "formulation which corresponds to the forms of the thing to be expressed" (*habitudo, quae habitudinibus rei exprimendae respondet*). Then there follow as examples of the same nature "the design of a machine, stage sets, speech, written characters, the algebraic equation". Resemblance is not necessary, all that is required is a certain comparability. Those expressions which are derived from nature (*expressiones quae in natura fundantur*) do require a certain resemblance; but otherwise a certain connection may be found, as between the circle and the ellipse which represents it optically. Similarly the effect represents its cause, actions, a person's intention, and finally the world represents God. This is Leibniz's answer to the question "What is an Idea?"

And now let us draw some conclusions. In the statement, expressed as a familiar gnomic remark, "Language in captivity has captured logic" (*Lingua capta logicam cepit*) lies a summary description of the position which Leibniz's harmonization reached, in so far as it linked the functions of thought and language. He achieved a successful synthesis of these two spheres of activity, and the elimination of the antinomy between them which he had found in Locke. It is thus that the paradoxical relationship noted above (pp. 279-280, 298-299) between Leibniz the logician and Leibniz the linguist is resolved, admittedly at the price of the independence of both logic and of language. But it must be acknowledged that we are dealing in Leibniz with a radical and consistent treatment of language in terms of logic by means of symbolization, and consequently with a treatment of logic in terms of language of a kind to be found nowhere in the history of linguistic theory before him or

after him. As Leibniz's views have been presented in critical terms throughout, there is no need for elaborate conclusions here.

The place of Leibniz in the history of linguistic theory is marked by his three predecessors as axiomatic rationalists, Descartes, Hobbes and Locke. The summation and harmonization of their views of language by Leibniz has been shown in the course of the present enquiry, as also has the way this diplomat—diplomatic, too, in the affairs of the mind—tried to steal a march on an empiricism which was growing ever stronger, the final and most brilliant ploy of strict axiomatic rationalism in retreat.

How great was his influence, and how deeply did it penetrate? I incline to the view that no thinker had a greater and more profound influence than he did. Yet at the same time there is no other scholar of whose influence the course and direction is more difficult to trace. His bewilderingly voluminous correspondence with the principal figures of his day was, of course, probably the most important medium. Naturally it was in his homeland that his visionary views gained greatest currency. There is another factor which, in my view because perhaps because of its triviality, has been too little considered when the influence and exploitation of Leibniz's views are investigated: the flights of Leibniz's thought were too lofty in his own day, and long afterwards; he was too hard to understand. This is not surprising; he was perhaps the last thinker who mastered the whole compass of the sciences and made innovations in many. Thus the philosophy of his followers, for example that of Wolff, is in many respects a dilution of Leibniz's thought. And they were consigned to the sidelines by Kant. But the rediscovery of symbolic logic in the middle of the nineteenth century, and the impetus that this discipline has received in recent decades, make Leibniz's theories once again topical. Linguistic theory may insist that logical method has nothing to do with it; but, even if linguistic theory is not concerned with logical method, logical method is concerned with linguistic theory.[64] If linguistics wishes the nature,

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[64] If not in the first place in linguistic theory proper, then certainly in the concept of the symbol. My remarks (1950: 407): "It would be pursuing an ostrich policy not to be interested in logistics [i.e. symbolic logic] as a linguist" may have sounded rather alarming at the time, but there appeared almost simultaneously an article specifically concerned with linguistic theory and linguistics (Johansen 1950). This, too, following in the footsteps of Hjelmslev, insists that linguistic theory should take account of the theories of symbolic logic; the article is, moreover, written in a spirit of synthesizing. I have also noted earlier on (p. 79, *n*. 28) the view adopted by the Vienna circle, now mainly expressed in the U.S.A. See Morris (1946), whose bibliography gives a view of the numerous publications on language in the light of symbolic logic. Works of later date which should be noted in this context are: Black (1949), Langer (1948). Symbolic logic is not, moreover, entirely confined to the work of the Vienna circle. Beth (1944: 80) names C. S.

sense and basic principles of its own laws not to be predetermined from a side which is generally "well armoured", its principles of function and structure will have to take heed of the theories of logical symbolization.

I began by recalling the Stoic tripartition of the sciences used by Locke at the end of his *Essay*, in which he characterized the central zone, logic, as semiotics.

Leibniz regarded these three "provinces" as "dispositions" rather than as sciences. The central disposition (knowledge) seems to have been in advance in possession of truth. The monads reflect the universe in their combination of feeling, thinking and representing. The only difference is the degree of consciousness, and the measure of clarity serves principally to measure this. It takes the place of a genuine cognitive criterion of truth and falsehood by the use of distinctness and other qualities. The valuation of natural language comes in here. For what had been, so to speak, marginal phenomena in rational grammar are now no longer objectionable untruths or even inaccuracies, but mere lapses in perceptual precision, which are as such acceptable. Mathematical rigour has given way to linguistic flexibility. Lack of clarity is not incorrectness; all language, even in expressive and unconscious manifestations, is well-informed. Lovers of language like Herder could accept Leibniz, the axiomatic rationalist, unreservedly as a result of this solution. Nevertheless it remains the case that Leibniz still regarded language as in essence a function of knowledge, however much he cleared away the rules of logic.

<p style="text-align:center">*   *   *   *   *   *</p>

Axiomatic Rationalism — a Survey

To conclude this survey of the way the axiomatic rationalists regarded the rational function of language—or, in spite of all the differences in detail of their points of view, they regarded this function as paramount—an attempt at a visual representation is offered in the form of a table. The first column records the names of the philosophers, the second the form of language and use of language which in their view is answerable to the tribunal of reason, the third the function or functions they ascribe to language (a function which is not rejected but which receives little attention is placed in parentheses).

Peirce, Bertrand Russell, A. H. Whitehead, H. Scholz and himself as symbolic logicians working in opposition to the Vienna circle. Frege and Tarski have provided a semantic theory which certainly deserves the attention of linguists.

The fourth column indicates how they regarded these functions. Descartes sees demonstration in the geometrical mode alone. Hobbes contrasts the calculative (ennoetic) function of the mark (*nota*) as a component of thought with the sign; and it is the mark alone which has any importance. Locke does indeed speak of language as a "storehouse" or "repository", but does so with little of this function in mind; the important thing for him is a critically purified communication ("remedies"). But he also envisages the influence of communicative language on the thought of the listener, and it is for this reason that we can ascribe to him an ennoetic view of language. Leibniz is true to himself. He harmonizes the attitudes of his predecessors. We can in fact no longer use the terms *ennoesis* and *metanoesis* in his case, since these contain what might be called a residual concept of the separateness of language and thought. Leibniz rationalizes everything which is a sign, and his reason (*ratio*) is representation in total reciprocity. The initial stage of sense-perception, which Hobbes called *prudentia*, is for Leibniz every bit as much reason as the most acute apperception; they are linked in continuous transition as obscure perception and clear apperception.

DESCARTES			
artificial lg.		expression of notion [*meta-noema*]	individual, non-calculative ["geometrical"]
HOBBES			
natural lg.	component of thinking [*en-noesis*]	expression of thinking [*meta-noesis*]	oppositional, calculative
LOCKE			
critical lg.	(notion in the mind) [*en-noema*] ~	expression of notion [*meta-noema*]	mixed, non-calculative
LEIBNIZ			
artificial lg.	component of thinking [*en-noesis*] in	reciprocal	calculative
critical lg.	invention, AND expression of think-	~	~
natural lg.	ing [*meta-noesis*] in representation	continuous	non-calculative

This is a suitable place to conclude the account of the views of rationalist philosophers on language. It would be possible also to investigate the view of language propounded in Berkeley's monistic view of mind, but there is no need to go into this: the views of language expressed by the philosophers we have discussed were very influential, and we find their views—apart from those of Descartes—repeated again and again by the empiricists. The same cannot be said of Berkeley, who is discussed by Cassirer (1923: 79ff.).

AXIOMATIC RATIONALISM

Part II: Artificial Languages — Wilkins;
Wolff, Süssmilch, Lambert, Meiner

S O FAR we have been trying to identify and investigate the axiomatic
rationalists' view of language at the point where it was formulated, that
is to say, among the philosophers. However, a distinctively linguistic develop-
ment of these functional preconceptions is to be found in seventeenth-century
thought, even though the first impulse unmistakably came from philosophy.

In an instructive article on artificial languages by W. J. A. Manders (1949)
we find the names of well-known linguists—Schuchart for Volapük, Jespersen
for Esperanto and later Novial, and also Baudouin de Courtenay and others.
But not only these, for here we meet not only linguists but mathematicians
and logicians (e.g. Peano with his "Latin without inflections").[1] According to
Manders, the total number of projects may be confidently estimated at about
800, but more than half of these are of recent date, and "the earliest artificial
languages known to us date from the seventeenth century" (*De oudste ons bekende
kunsttalen stammen uit de zeventiende eeuw*). It is, indeed, no accident that this
happened in the seventeenth century.

We have seen how Descartes received a project for an artificial language
through Mersenne, how he reacted to it, and how he himself made the
project, as it were, the starting-point for a fresh project, a brain-child of
axiomatic rationalism, of *les philosophes*. Leibniz, too, was himself to remain de-
voted for the whole of his life to the notion of a universal character.

On Monday 13 April 1668 the President of the Council of the Royal
Society ordered that "the discourse presented by John Wilkins, D.D., Dean of
Ripon" should be printed. The work appeared under the title *An Essay towards*

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[1] *"Latino sine flexione."* Manders also makes the interesting remark that in the field of artificial
languages there is controversy between "schematists", who devise structures, and "naturalists",
who set out to reflect the phenomena of the real world.

a Real Character, and a Philosophical Language.

In his Epistle Dedicatory Wilkins (1614-1672) states that he believes his work to be "sufficient for ... the distinct expression of all things and notions that fall under discourse"—even if it is not perfect. The principal aim was the advancement of "the knowledge of Nature". *Dictionary-making*, in Wilkins's view, is actually a task for a group of scholars, being too much for an individual to undertake—since definitions, above all, were difficult. He draws attention to French and Italian precedents for working in a group. Such collaboration is merited "as things are better then words, *as real knowledge is beyond elegancy of speech*". This delivers the final blow to humanism. The support of an institution such as the Royal Society "may provoke, at least, the learned part of the World to take notice of it". Anybody who feels the "unhappy consequences" of the confusion of tongues will value its "remedy". Apart from international negotiations and the advancement of "all Natural knowledge", the extension of religion will gain from it, and

> this design will likewise contribute much to the clearing of some of our Modern differences in *Religion* by unmasking many wild errors ... ; which being philosophically unfolded, and rendered according to the general and natural importance of Words, will appear to be inconsistencies and contradictions. (1668: fol. *b* [1] *r*)

Wilkins is certain that

> the reducing of all things and notions, to such kind of Tables, as are here proposed (were it as compleatly done as it might be) would prove the shortest and plainest way for the attainment of real Knowledge, that hath been yet offered to the World. And I shall add further, that these very Tables (as now they are) do seem to me a much better and readier course, for the entring and training up of men in the knowledge of things, then any other way or Institution that I know of ... (fol. *b* [1] *v*)

In his Epistle to the Reader Wilkins states that previous authors "did generally mistake in their first foundations"; they operated "without reference to the nature of things" and "according to some particular Language" (fol. *b* [2] *r*); but he (Wilkins) is aiming at "the framing of such a *Natural Grammar*, as might be suited to the Philosophy of Speech, abstracting from those many unnecessary rules belonging to instituted Language" (fol. *b* [2] *v*).

The work comprises four parts: (1) Prolegomena; (2) Universal Philosophy; (3) Philosophical Grammar, and (4) A Real Character and a Philosophical Language. The very disposition of the text bespeaks a clear language from the outset. In the Prolegomena Wilkins speaks of

some things as *Praecognita*, concerning such Tongues and Letters as are already
in being, particularly concerning those various *defects* and *imperfections* in them,
which ought to be *supplyed* and *provided against*, in any such Language or Cha-
racter as is to be invented according to the rules of Art (1668: 1)

Here we can see a theoretical process of reasoning which sets out to place
knowledge under its control, subjects languages to its sway by means of a—
supposed—mathematical command of nature, and creates a brand-new lan-
guage of its own through the completeness of its power and assurance. It is
probably unnecessary to enumerate the many analogies in content and termi-
nology with the views of Descartes—not to mention Locke. A few details,
however, are worthy of note.

Part II, dealing with "Universal Philosophy", "which is the great founda-
tion" sets out the "frame" which expresses the order, dependence and rela-
tions "of all those things and notions, to which marks or names ought to be
assigned according to their respective natures" (p. 1). Wilkins provides a meta-
physical classification of reality in forty 'genuses'. There follow, for sub-clas-
sification within these classes: kinds, causes, diversities, differences, modes
(and relations), events, 'itions' (i.e. motions or rests). Then come "the several
Notions belonging to Grammar or Logick" under the heading "Of Discourse"
(p. 44). In some two hundred pages—still contained in Part II—Wilkins deals
with God, the elements, flora and fauna, the body, the predicaments of
quantity, quality and action, concluding (Chap. 11, pp. 263ff.) with the rela-
tions ("œconomical, civil, judiciary, naval, military, ecclesiastical"). Part III—
the "scientifical" part—provides the *"Natural Grammar* (which may likewise be
stiled Philosophical, Rational and Universal)". Scotus, Wilkins notes (meaning
presumably Thomas of Erfurt), had written about this in his *Grammatica
Speculativa*, as had Campanella and others. Scaliger and Vossius, too, had
"occasionally spoken of it" (p. 297). On the next page we find Wilkins's
"Doctrine of Words". This may have been the prototype of Leibniz's *Gram-
maire rationelle*.[2] All words are either *Integrals* (Nouns substantive and adjective
and Adverbs, or *Particles* (Pronouns, Interjections, Prepositions, Conjunctions).
As an analysis of "the true notion of the verb", we read (p. 303):

That part of speech, which by our Common Grammarians is stiled a *Verb*,
(whether Neuter, Active or Passive), ought to have no distinct place amongst
Integrals in a Philosophical Grammar; because it is really no other then an *Ad-
jective*, and the Copula *sum* affixed to it or conteined in it.

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[2] Leibniz gave a great deal of thought to this. Cf. Couturat 1903: 151, 184–5, 206, 282–3, 290,
390, 436.

Thus *Caleo* = *calidus sum* ("I am warm"); *calefio* = *calefactus sum* ("I become/am being made warm"); *calefacio* = *calefaciens sum* ("I make warm, am making warm"). On the copula, Wilkins states (p. 304):

> The word *Subject* I use, as the Logicians do, for all that which goes before the *Copula;* which if it consist of only one word, then it is the same which Grammarians call the *Nominative case.* By the word *Predicate,* I mean likewise all that which follows the Copula in the same sentence, where of the Adjective (if any such there be) immediately next after the Copula, is commonly incorporated with it in instituted Languages, and both together make up that which Grammarians call a *Verb.*

The account of inflection is as follows (p. 352):

> This is not *arbitrary,* as it is used in several Languages; much less should the rules to this purpose, which belong to the Latin, be applied to Vulgar Tongues, to which they are not suited (as many Grammarians use to do) but it ought to be founded upon the Philosophy of speech and such *Natural* grounds, as do necessarily belong to Language.

(One may compare Leibniz's logical step of appealing to French). In addition, number, singular and plural are "more Intrinsecal" [*sic*], but gender, on the other hand "less Intrinsical"; cases, likewise, are not "so essential"; the classical languages do, indeed, give great weight to them, but Hebrew does not; and modern languages also do not express them.

Part IV then turns to the new Character, in which the main division into Integrals and Particles provides the basis of two major types. Wilkins had distinguished forty genera. The basic figure is a horizontal line; to this smaller figures are appended to denote differences, etc. The particles constitute a separate system. Wilkins then demonstrates the Lord's Prayer in his new script; finally this script is translated into a new spoken language. The complete Lord's Prayer in fifty languages and also the philosophical language concludes the volume. It runs to some six hundred pages and 150 pages of tables, constituting a philosophical dictionary.

After what has been said already there is no need for further demonstration that Wilkins's "scientific language" is a representative of axiomatic rationalism. The influence of the work was profound,[3] profounder perhaps

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[3] Does the eighteenth-century practice of using the Paternoster as an example in linguistic treatises—the last one of comparable extent being that in the work of Adelung and Vater—derive from Wilkins? He is repeatedly cited by seventeenth- and eighteenth-century authors. My attention has been directed to a work by Jan van Vliet (Dordrecht 1684), which comprised the Paternoster "in twenty old German and Nordic languages" (*in XX Oude Duytsche en Noorder Taelen*).

than the history of linguistics has so far realized, or at any event taken into
account. It is remarkable, but very understandable, that the history of logic
is also concerned with Wilkins.

The work is much more of a linguistic study than could be shown in the
foregoing analysis; and even though the majority of professional scholars in
the field were inclined to "Alexandrian" undertakings, a study of this kind
made it clear that attention to questions of principle and function was not
dead. Yet the result was that linguistic autonomy was completely subjected
to the spirit of the age.

I have not noted any mention of Lull in Wilkins. It was a year after Wil-
kins's work appeared that the Jesuit Athanasius Kircher (1601-1680) produced
a new edition of Lull's *Ars Magna*. And in 1661, seven years before Wilkins's
work, George Dalgarno had published his *Ars Signorum vulgo character universalis
et lingua philosophica* ("Art of Signs, commonly called a Universal Character and
Philosophical Language"). Leibniz knew all three works, studied them atten-
tively and applied them.

It may be noted that Dalgarno distinguished seventeen basic concepts—
while Wilkins, as we have seen, distinguished forty—and he must have been
known to Wilkins.[4] The revival of Lullism should not surprise us. Wilkins him-
self was conscious of the relationship of his work to the *Grammatica Speculativa*
(see above). Wilkins did not develop, any more than the *Grammatica Speculativa*
had done, the use of language as a basis for the construction of valid rational
insights. The strange super-logicality of Lull, however, had revealed this ten-
dency, even if only vaguely, through his realistic view of language. Hobbes
had found, by analogy with mathematical symbols, that language had a func-
tion of ennoesis, i.e. as a component of rational thought; and Leibniz,
thinking this problem through in greater detail, found, via Kircher, a point
of contact with Lull on this question.

These, then, are some consequences of the axiomatic tradition for the
study of language. However, there also emerges at the same period a contrary
tendency, a counter-movement which begins in the individual sciences them-
selves, and with linguistics as one of them. I shall deal with this below.

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[4] Cassirer observes (1932: 68) that Wilkins "attempted to complete and perfect this system".
I have not, however, found any mention of Dalgarno in Wilkins, who appears to have been
taken to task subsequently for his failure to mention Dalgarno's work.

Christian Wolff

Christian Wolff (1679-1754),the philosopher to whose activities the chief credit goes for the spread of Leibniz's ideas, took up the Chair of Mathematics at Halle in 1706. Wolff's influence was such that he supplanted Melanchthon as "Teacher of Germany" (*Praeceptor Germaniae*) after the effects of Cartesianism had paved the way for such a development to take place. Wolff's System

> is the earliest form in which modern philosophy, based on new developments
> in research in mathematics and natural science, and new concepts in law and
> politics, took possession of university chairs. (Paulsen & Lehmann 1919: 540)[A]

If philosophy had hitherto been the handmaid of theology (*ancilla theologiae*), from now on—i.e. approximately from the 1730s—the roles were reversed. After Wolff, the dominant figure was Kant, who was succeeded in turn by Hegel. It is not inappropriate to note that, at least in official German academic philosophy, empiricism never stood a chance; but while reliance on authorities (so-called *Autoritätsglauben*) was eschewed, and only the results of independent inquiry were given credence, such inquiry was, in so far as it affected the natural sciences, based on reasoning rather than experiment.

Wolff's magnum opus, *Vernünfftige Gedancken von Gott, der Welt und der Seele des Menschen, auch allen Dingen überhaupt, den Liebhabern der Wahrheit mitgetheilt* ("Rational Thoughts on God, the World, and the Soul of Man, and also of All Things in general, communicated to Lovers of Truth"), which appeared in 1719, is a most exhaustive exposition of his metaphysics. His logic appeared in 1712 as *Vernünfftige Gedanken von den Kräfften des menschlichen Verstandes und ihrem richtigen Gebrauche in Erkäntniß der Wahrheit* ("Rational Thoughts—all his works are "rational thoughts"—on the Powers of Human Understanding and their Proper Use in the Discovery of Truth"). (Both texts are quoted from editions of 1733.) Logic is the introduction to all the sciences, which he divides into rational and empirical, with a subdivision in each case into theoretical and practical. Linguistics has no special place in this. (His "practical sciences" are morals, politics, economics combined with technology, and experimental physical science). Sense perceptions and empirical knowledge are described, and dismissed, as confused and imprecise; only pure thought is clear and distinct enough to provide rational and valid knowledge.

After dealing with concepts in Chapter 1, Wolff is ready in Chapter 2 to go into the use of words; and this is followed by two chapters, on sentences and judgments or syllogisms (*Schlüsse*) respectively. We have already reached

the mid-point of the book. We may note how the whole inventory of Leibnizian distinctions—'clear', 'distinct', etc., is applied; and Wolff's logic follows faithfully in the steps of Leibniz's principle of representation. However, there is one limited facet which is reduced almost to vanishing point, and that is the use of the sign ennoetically, i.e. as a component of thought. A problem arose here for Leibniz from Hobbes's theory of the *nota*, since he was thoroughly familiar with the creative use of the symbol from his own experience as a mathematical innovator. The genius of Leibniz had succeeded in reconciling the use of language in the structure of thought (*ennoesis*) with its use to represent thought (*metanoesis*). Wolff's deductive philosophy had already forgotten the birthpangs Leibniz's theory had suffered; language resides for Wolff solely in demonstrative thinking, as it had done for Descartes, and *mutatis mutandis* for Locke. Thus, although Wolff faithfully adopts Leibniz's logicalized linguistic criteria, all that remains of Leibniz's firmly-based system of representation is the watered-down statement that language is the expression of thoughts: "by means of words we are accustomed to make our thoughts known to others" (*durch die Wörter pflegen wir andern unsere Gedanken zu erkennen zu geben*, Wolff 1733b: 60). "Every word must have a meaning", but "the meaning of words is not always the first concern in speaking" At the extreme, the position may be reached "that men may speak with one another, and understand one another without any of them having any idea of what he is saying or hearing, since the subject of discourse is nothing". It follows that "words can have a meaning of which we have no conception" (p. 64). In paying attention to the use of words "we perceive the features by which the object of which we are speaking is distinguished from others" (p. 67).[B] In Chapter 7 he concludes: "thus science is no more than a skill in demonstrating" (*so ist die Wissenschaft nichts als eine Fertigkeit zu demonstriren*, p. 144). The final chapter instructs the readers how this skill is to be acquired in the practice of logic.

In the Preface to the second impression of his Metaphysics, nine years later than his Logic, Wolff declares:

> I have already noted elsewhere that despite the fact that metaphysical truths are of an entirely different nature, ... it is possible in no small degree to explain metaphysical concepts by means of examples from mathematics, and especially from algebra.[C]

Wolff goes on to give a few examples. He does not go beyond "explanation"; mathematics is no more than a branch of metaphysics: "thus metaphysics serves, in turn, to prove everything which is assumed in mathematics". Wolff

has, in fact, abandoned the universality of Leibniz's universal calculus (*mathesis universalis*); and while for Leibniz the theory of abstract reasoning had expanded into a general theory of analysis, for Wolff logic withdraws into its traditional limits, apart from adopting the Leibnizian theory of criteria.[5] But mathematics remains an abundant source of "explanation", since for Wolff, as for Leibniz, the ideal of thought remains an exact concept formed after the model of mathematical concepts.

On pp. 161 ff. (§§292 ff.) we find an exposition of general grammar:

> A sign is something from which I can recognize the presence or the arrival of another thing, that is, from which I can recognize either that something is actually present in a given place, or has been there, or will be there. For example: where smoke rises, there is fire.[D]

Wolff regards natural signs as associative: "when both objects (see §293) are constantly present together, or one constantly follows the other, one is always a sign of the other". We also associate objects arbitrarily. Thus an inn-sign is an arbitrary sign. Words, too, are of the same kind. This is illuminated by the way we learn our native language and foreign languages. Wolff retains a predilection for nouns (§300). There are substantival nouns, e.g. 'soul', 'virtue', and there are adjectival or "accidental" (*zufällig*) nouns, e.g. 'virtuous'. But all he gives in explanation of this is that "Virtue designates the thing which exists by reason of the soul" ([*daß*] *Tugend das durch die Seele bestehende Ding andeutet*) —and this is why the soul may be called virtuous. Wolff speaks rather airily of number and of pronouns. The verb (*Hauptwort* in his terminology) is introduced as follows: "Anything we can discern in an object which is not part of its essence consists either in its properties, or in its variations, or in its relation to other things".[E] He continues:

> In order to indicate the association of the essence of a thing with its properties and variations, or its relations to other things, we use the verb 'to be', which is therefore called the copula. ... Since all syllogisms are either the combination or the division of two concepts, the copula must be present on each occasion, in the second case [i.e. of 'division'] in conjunction with the word of negation. Such an *utterance* is also known as a *sentence*. But for the sake of brevity the copula has been *concealed* in the verbs, and must in most cases be understood from them. For I may say, for example, 'The iron melts' instead of 'The iron is melt-

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[5] Note, for example,that Leibniz's *alphabetum notionum primariarum* (alphabet of primary notions) is passed over in silence; the fate of other associated theoretical positions of Leibniz will be examined so far as is appropriate for the present study. Wolff's practice is not so much to reject as to attenuate. The reason for this would take us too far into philosophical questions.

ing'. (§309, p. 171)[F 6]

Wolff goes on to discuss adverbs, prepositions and interjections. All this comes from Leibniz's *Grammaire rationelle* (see pp. 294-296 above), but is treated uncritically, with a self-assured and superficial unawareness of any problematic content. For further treatment, Wolff refers (1733a: §315) to "general grammar and rhetoric; but I am content here to have shown no more than the basis of the various kinds of words, in so far as this is necessary for the better understanding of certain concerns of the mind".[G]

Having come so far, we might now expect to find some trace of Leibniz's most brilliant error, i.e. his universal symbolism, and his basic principle of the sign as being at once a part of thought (i.e. ennoetic), its instrument and its source, and we cannot help feeling a certain confusion when we read the following account: "It must, in fact, be noted that words are the basis of a special kind of knowledge which we call *figurative*. For we represent the object to ourselves either as it is, or by means of vocables or other signs." [H] Examples of such signs are arithmetical figures, algebraical, astronomical and chemical symbols, dance-steps—derived, it may be noted, from the French dancing-master Feuillet—musical notation and the figures of syllogisms. But there is a difference: in the case of chemical and astronomical symbols, for example, the criterion is *brevity;* in addition there are *secret* codes; figures for *clarity*, such as dance-steps. "It is here, too, that the signs used in the varieties of syllogism may be placed" (*Hieher gehören auch die Zeichen in der Lehre von den Arten der Schlüsse*), for they lead to clearer representation (§318, p. 176):

> Finally, certain signs are useful in invention, such as those used in *algebra*, and of which *numerals also to some extent* provide an example. And for this last purpose signs *have a great contribution to make*, being even more strictly bound to rules than those which are applicable to a certain discipline which I shall call the art of signs, but which I have so far had to include in what we are looking for.[17]

In §321 Wolff warns of the disadvantages of figurative knowledge; the use of "empty words" (*leere Wörter*). In §322 (p. 177) he discusses the value of words in syllogisms:

> Words and signs are especially useful in drawing conclusions. For since the main

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[6] *Translator's note:* Wolff's expressions *glüet* and *ist glüend* respectively mean 'glows' and 'is glowing'. The simple form is idiomatic in German; the form with *-ing* is idiomatic in English.

[7] Italics have been supplied in the quotations from Wolff in lieu of detailed critical comment or paraphrase. If the reader recalls what was said about Leibniz, he will understand the considerations involved.

object in drawing a conclusion is to distinguish between the properties attributed to an object or dissociated from it—its differences, its effects or its relationship to other objects, and the object itself—and to consider the relationship between them and the object; thus in making clear judgments of observational cognition it is necessary not only to represent truly the differences between the ideas which are either separated or conjoined, but also the workings of the mind in forming such judgments; and since words in turn demonstrate the association and dissociation of concepts; *then the differences between judgments and simple ideas are revealed with greater clarity—and as a result are more distinct—in symbolic than in observational cognition.*[J]

Wolff has a predilection for symbolic comprehension (§322, p. 178):

This is also the reason why, as soon as we form a general notion of a species of objects when we have seen, or otherwise perceived, one sample—or even when we have observed some distinct object or set out to form a judgment of it for ourselves—we move from observational cognition to symbolic cognition, *and speak to ourselves,* or at least think the appropriate words.[K]

But there is another possibility besides that of words. Now we come to the *Ars combinatoria* (Art of Combination) and the universal character (§324):

It is possible that a certain clarity and distinctness may be brought into symbolic *cognition,* and enable it to present to the eyes what is to be discerned in an object, and thus to distinguish it from other objects, with the result that, when complex *signs* which are equivalent to the objects are subsequently compared with one another, the relationship of the objects to one another may be perceived. Examples of this may be seen *in algebra* as currently practised by specialists, and in the names of the figures of syllogisms. But the *art of combining signs*—to give the process a name—has not as yet been *discovered,* nor has the *art of signs,* just as neither can be separated from the other if they are to be properly explained. For this reason, since there are at present very few who can form any conception of this art, and the sciences are by no means in such a state that their concepts can be completely separated from the perceptions of the senses and the imagination, and thus reduced to mere symbols *from the skilful combination of which all possible truth can be demonstrated,* we will not speak of it at this point. It appears from a letter which Leibniz wrote to Oldenburg in 1675, quoted by Wallis in Part III of his work (p. 621), that he had a conception of this art, where he speaks of an art of combination by means of characters which differ from a conventional art of combination: no doubt he came to this conclusion by way of algebra. In the *Berlin Miscellany,* too (p. 20), he shows clearly that he had a notion of this art, but the current imperfect state of the sciences forbade him to think of giving any example of it. He calls it a "general representation", and has voiced the opinion in a letter to Remond in France that if he were younger, had less to do and had other skilled people about him, he would be able to provide an example. Cf. *Collection of various pieces by Messrs Leibniz, Clarke,*

Newton, Vol. II, p. 130. However, in another letter to him, dated 14 March 1714 (p. 139), he regards the project as intrinsically difficult, and it is therefore not surprising that he did nothing about it, although he had thought of it by 1675.[L]

Leibniz's passion for truth failed him at this point. Wolff satisfied himself in a certain sense with the *status quo.* All the criticism which we have directed against Leibniz, against his system of synonyms, his mixture of norms, his fusion of the "legalities"—as Serrus called them—of language and thought, his reduction of the autonomous function of language to a subfunction of reasoning at the expense of both language and reasoning, could be repeated here. This may be left aside for the reasons already stated; the quotations given may be left to speak for themselves.

To the best of my knowledge Wolff did not make any serious attempts to achieve what Leibniz had left unfinished, but there certainly were some who continued to work on the lines which Leibniz had established. Among these is Lambert,[8] who continued with logicalization, and in whose work we find a rational theory of signs which is of importance for our investigation.

Johann Peter Süssmilch

Johann Peter Süssmilch (1707-1767) voiced the views of axiomatic rationalism on the issue of the origin of language, a current interest of the time. This is in a way surprising, for axiomatic rationalism is concerned rather with the nature than with the origin of language, or, to put it another way, axiomatic linguistics tends predominantly towards synchrony, while pragmatic linguistics, on the other hand, tends towards diachrony—or if this term sounds inappropriate, at any rate towards genetic speculation. Süssmilch, then, is exceptional among axiomatic rationalists in dealing with the question of the origin of language. As has been hinted on an earlier occasion, the theme is relevant to the present study only in so far as functional considerations have a part in it. This is absolutely the case in Süssmilch's *Versuch eines Beweises, daß die erste Sprache ihren Ursprung nicht vom Menschen, sondern allein vom Schöpfer erhalten habe* ("Attempt to demonstrate that the First Language received its Origin not from Man, but from the Creator Alone", 1766). It had been presented as a paper to the Berlin Academy twelve years before it appeared in print. Typical axiomatic views of function which can find support, if anywhere, only in synchronic observation are drawn on here as arguments for his proof of

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[8] The names of the logicians Segner, Ploucquet, Richeri, Holland are mentioned in the same breath as Lambert. See Boll & Reinhart 1948: 8.

divine origin.

Süssmilch also wrote on other subjects. His *magnum opus* treats of "The Demonstration of Divine Providence in the Changes arising in the Human Species as a result of Births, Deaths and Propagation" (*Die göttliche Ordnung in den Veränderungen des menschlichen Geschlechts aus der Geburt, dem Tode und der Fort-pflanzung desselben erwiesen*, 1741); and on the strength of this work, many times reprinted, Süssmilch is acknowledged as a pioneer in demography. As a Lutheran clergyman he was familiar with the Bible, and it is to be expected that in dealing with the question of origin he would appeal in the first place to what the Bible tells us about the first human being, the first couple and language: "And God said unto them ... " (Genesis 1.28); "And the LORD God commanded the man ... " (2.16), by which the man receives understanding; then the naming of the beasts (2.19); "And Adam said ... " (2.23); his speaking to Eve, and about her, his conversations with God, etc. But this is not Süss-milch's line of argument at all; he comes to his conclusions on completely different grounds:

> Now since neither imitation nor necessity can have been sufficient for the invention and improvement of language, while at the same time order and per-fection are to be found in language ... , and chance can by no means be assumed for the establishment of a language, there is no other solution than to have recourse to God as being the Creator; and Moses' account of the earliest history of the world agrees with this. (From the summary of contents, f. [*7] r)[M]

In essence his reasoning may be reduced to the following points: those who champion a human origin ascribe the ability to produce language to the un-derstanding. This presupposes great discrimination and profundity of thought. But man cannot attain to these without language; "which leads to the con-clusion that man, as the inventor of language, must have had the use of a language before language was invented" (f. [*5] r);[N] which is absurd. Therefore all that is left is a divine origin.

It is through language that man acquires "discrimination and profundity of thought"; and Süssmilch devoted the first half of his book (two sections, 124 pages) to emphasizing that the possession of language does indeed have this effect. In Part I Süssmilch demonstrates the perfection and order of lan-guage. It is highly suited to its purpose (the purpose being the communication of ideas), and it is "in particular so well adapted to the memory that even children can not only speak it and learn it easily, but also calculate [its rules]" (ibid.).[O] All languages possess in equal measure words for abstract and general concepts, which are indispensable for rational argumentation. Süssmilch the statistician also goes into arithmetic, and "the divine decimal system by which

the effort of the mind in making calculations is marvellously eased". In all languages, "similar words and modifications are distinguished by similar means". Every language, with its grammar and rules, may be compared "with an uncommonly handsome building, in which perfection and order, excellent proportions, outlines and symmetry may be discerned".

Hence, as Part II will show, language is the means *par excellence* "by the ready use of which man attains to reason" (cf. f. [*5] v).[P]

> By means of words as signs our innate quality of reason is brought into use and developed. Through this we come to distinctness of concepts, to abstract and general concepts, to the process of reasoning; through language man becomes rational, intelligent and master of the world. (f. [*5] v– [*6] r)[Q]

Wolff, according to Süssmilch, had discovered and established these principles. The observation of two cases, those of a child brought up among animals and a child dumb from birth, lend support to this view. "Everyday experience also confirms that the reason of man is proportionate to his skill in the use of language" (f. [*6] r).[R]

Having come thus far, the beginning of Part III, in which, by way of the *reductio ad absurdum* already described, the divine origin of language is deduced —having come thus far, let us ask our regular question: What functions does Süssmilch attribute to language? After what has already been cited we can at once ask the further question: From whom did he derive his views of linguistic function? This emerges clearly from the exhaustive analyses of axiomatic rationalist principles given above: it is simplified from Leibniz and Wolff to the position of Hobbes. Leibniz's *a priori* idealism had already been attenuated in Wolff, and there is no longer any trace of it here. Instead there is a discussion of how the mind attains to reason, to distinctness, to argumentation, by means of language (cf. f. [*6] r). In short, language is seen as an instrument of thought, as constructing scientifically tenable, rationally valid concepts. Hobbes's calculus has become very pale, but it is there, with marks "appropriate to the memory" and calculation (cf. quotation Q). His proof reaches its peak particularly in §§21-25, at the end of Section II, "in which it is proved that the use of language or other equivalent signs is necessary for the use of reason" (section heading, p. 33).[S] After an extensive appeal to Wolff, Süssmilch says (1766: 50):

> As supplementary support I will confirm this proof with the words of the celebrated Hobbes. This is what he has to say on this point: " ... it appears that Reason is not as Sense, and Memory, borne with us; nor gotten by Experience onely, as Prudence is; but attayned by Industry; first in apt Imposing of Names,

and secondly by getting a good and orderly Method in proceeding from ...
Names, to Assertions ... and so to Syllogismes which are the Connexions of one
Assertion to another ...

Children therefore are not endowed with Reason at all, till they have
attained the use of Speech: but are called Reasonable Creatures, for the pos-
sibility apparent of having the use of Reason in time to come." (The quotation,
which Süssmilch gives in Latin, comes from *Leviathan* (Hobbes [1651]1904: 23)[T]

In spite of Hobbes's reputation as an atheist, Süssmilch was enough of a
rationalist to accept wholeheartedly the theoretical stance of the axiomatic
rationalist Hobbes. Nevertheless, he is aware that Hobbes does not subscribe
to his own vision of the origin of language. This he states in his Introduction,
after citing with approval the first aporia of Rousseau's *Discours sur l'origine de
l'inégalité parmi les hommes*—of which more will be said later—where he goes on
to say of Hobbes (p. 13):

I could cite still more authors, but they have in effect said just the same as those
already mentioned. The celebrated Thomas Hobbes does, indeed, deny that
languages arose by convention or agreement; he also maintains that man has
by nature no more than the potentiality for reason, but not its use: nevertheless
he believes that languages could have been gradually formed out of necessity
and the social life of men.[U]

The impetus for Süssmilch to enter into the theme of the origin of lan-
guage actually came from a short work on the subject by the then President
of the Berlin Academy, the empiricist Maupertuis, whose views will be dis-
cussed later. Maupertuis, too, goes back to Hobbes; he and Süssmilch there-
fore cross swords within the same classification of language, since both accept
ennoesis, the incorporation of language in thought. However, they belong to
opposing parties, and this determines their tactics and their emphases.

In my discussion of Hobbes I have already expressed my attitude to the
view that the central function of language is the manipulation of thought.
When language is incorporated into thought, and its meanings function after
the fashion of counters or algebraical symbols, there is certainly no room for
the theoretical standpoint in which thought came first, and language after-
wards, the standpoint of many adherents of the so-called human origin of
language. But even in a system like that of Hobbes, in which language and
thought are interdependent, a case may be made for a human origin.

What makes a problem like the present one so difficult is that we are
confronted with very great errors in the formulation of the problem itself.
Language was, and still is, created day by day by man, in the sense that it is
for the most part expanded, mostly unconsciously, but sometimes consciously.

God created man, and he planted Adam in his garden as an opened, fully blooming flower, with his functional faculties largely developed, *including Adam's language.* We have no room for the attenuation of the dialogue of the first man with his Creator into an insubstantial, so-called divine influence. It was only the successors of the first human pair who *did* come into the world as non-speakers bereft of understanding. But the humanity present in children at birth included, *inter alia,* the ability to acquire the language of their parents. In the development of this and other potentialities a certain sequence may perhaps often be observed; and even to speak of the emergence of thinking from feeling, and of vocalization from thinking, let alone an attempt to base a diachronic theory of origins on such a sequence, encounters serious objection. If one may use a model, one might perhaps think of a comparison with a fan, of which all the folds may be opened, but where there is also a possibility that one or more folds remain more or less closed while those on either side are open. By virtue of the tasks decreed for him, man is called into existence by the Almighty as a creature with a given number of responsibilities which mark him out in contrast with all other creatures, as the bearer of the image of God, and as the ruler of creation. And the first human pair were from the outset able to receive language and make use of it. The first human pair received a language of distinctive character, comparable to the character which still distinguishes individual languages from one another. — But we can leave this issue aside for the present.

Süssmilch's deliberations concerning man's responsibility for creating language are vitiated because he subordinates this one task to the others, an inevitable effect of making language a component of thought, subjecting it to the alien rules of logic. It is a requirement of scientific thinking to think correctly about the task in hand; and, as far as language goes, that did not happen in the rationalistic tradition.

And thus the problem of the divine (or human) origin of language was tackled in the wrong way, and we are, *a fortiori,* not helped by a dialectic like that of Süssmilch.

Johann Heinrich Lambert

Johann Heinrich Lambert (1728-1777), philosopher, physiologist, astronomer and mathematician, who has been called "the most important predecessor of Kant in epistemology and cosmology" (Schmidt 1934, s.v. 'Lambert'; see also Eisenring 1943, esp. chapters 2 and 3), was a whole generation younger than Wolff. Wolff still had a well-grounded acquaintance with the writings of Leib-

niz, some available only in highly disparate sources; this, however, was far from true in the case of Lambert. Leibniz had, indeed, received fresh attention when his *Nouveaux Essais*, containing his criticism of Locke, were published in 1765, but Lambert was unable to take any account of this work in his own magnum opus, *Neues Organon oder Gedanken über die Erforschung und Bezeichnung des Wahren und dessen Unterscheidung vom Irrtum und Schein* ("A New Instrument, or Thoughts on the Investigation of Truth and its Distinction from Error and Illusion"), which had appeared the previous year. The first volume deals, as it were, with investigation, and consists of two chapters on "Principles of Thought" (*Dianoiologie*) and "Principles of Truth" (*Alethiologie*). The second volume, containing the so-called "Semiotics, or the Principles of Naming Thoughts and Things" and "Phenomenology, or Principles of Semblance" deals with what may be regarded as the giving of names.

What strikes one immediately is that the term "semiotics" recalls Locke's usage. It should be remembered that Locke had by no means originally intended to deal with language in the *Essay*, but that he had subsequently found himself constrained to devote the whole of Book III to it, and that at the end of his work, in the division of the sciences, he took the remarkable step of naming logic σημειωτική, i.e. "theory of signs". We may recall further that while Locke was an empiricist, he may be classified as a axiomatic rationalist, though along with those rationalists who were concerned with language (including *mutatis mutandis* Descartes) he was principally interested in the use of language to represent (prior) thought.[9] This is in distinction to Hobbes, who had contrasted the (ennoetic) *nota* or mark, which processed thought, with the (metanoetic) *signum* or sign, which recorded thought. Leibniz had reconciled the functional contrast, but the distinction was by no means eliminated, for the position of language as incorporated in thought was an integral component in the structure of his system of symbols. Lambert now expounds to us a system of semiotics, in the guise of providing a designation (*Bezeichnung*). This term, used as it is in opposition to investigation (*Erforschung*), is approximately equivalent to demonstration. Both the term "semiotics" and its place in Lambert's system thus lead us back to Locke. Lambert is, indeed, a Lockeian, at least in his views of language: the

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[9]   To put it more precisely, Locke was well aware of the role of language *in* and *before* thought; not, however, as an instrument of thought, but rather as an expression of a set of thoughts which had, in turn, been conveyed to our minds by others by demonstration. This is not unlike Bacon's view of the ennoema, that items of vocabulary can affect thought, rather than the view of ennoesis held by Hobbes and Leibniz, that language is incorporated in thought. See also the discussion of Locke, pp. 267-279 above.

basic question of his third part (Semiotics) is "whether language, in which man makes himself less understandable or more uncertain because of misunderstanding, vagueness or ambiguity, causes any other difficulties".[V] This is precisely the basic principle of Locke's view of language.

Lambert strongly emphasizes that his four disciplines are necessarily interdependent. Together they constitute the *Organon*. Bacon's "New Organ" has been noted above; the sense of the inclusion of language in the instrument is the same in Bacon and Lambert alike, i.e. it is subsumed under thought. Moreover, Lambert is well aware of the difference between the two lines of rationalist thought on this point of language:

> Great efforts have been made in systems of philosophy to contribute to these disciplines. They have, however, dealt only with what I have here called 'Dia-noiology', with the exception of what Locke says in his *Essay Concerning Human Understanding* on the use and abuse of words, where he examines the terms in greater detail. Wolff, on the other hand, whom we may credit with a more precise analysis of terms and methods, deals only summarily with the use of words in his two textbooks of philosophy, *and is, in any case, following an entirely different procedure.*[W]

In the "Dianoiology" he is closer to Wolff, in the first part of the "Alethiology" closer to Locke, although he became aware of this only after he had subsequently come to know Locke's writings. In the second part of the "Alethiology", which, significantly, comes after the Semiotics, he explicitly combines "Locke's simple concepts with Wolff's method" (*Lockens einfache Begriffe mit Wolfens Methode*).

The high significance Lambert assigned to his Semiotics is clear from the large amount of space devoted to it in his preface; and since all the typical features of the 200 pages or so of his Semiotics are clearly presented here, his remarks are reproduced *in extenso:*

> Many and varied aspects are to be found in Semiotics; indeed, if I am not mistaken, all those which may be imagined in respect of language and signs. In the first chapter I demonstrate the completely natural necessity of language for defining thoughts and objects; and having indicated in the course of doing this the property peculiar to scientific signs of enabling theoretical considerations concerning a sign to stand for theoretical considerstions concerning the things it represents, I examine every type of sign so far known to represent an object, examining them in the light of this property. At the same time I call attention more directly to those instances where signs of greater or less scientific import may be used. The remaining chapters are concerned in their entirety with language, making virtually no distinction between possible and real languages. In the course of this, enquiries are made into the arbitrary, natural, necessary,

and to some extent the scientific components of language, and into the differences between the metaphysical, characteristic and purely grammatical features of language. These considerations are applied impartially to literature, to criticism, to linguistics and philosophy, as each case requires. In particular every opportunity is taken to note those points where languages could have had greater metaphysical or characteristic qualities if they had evolved less casually. The observation that not all words are equally arbitrary is significant if languages are to be made more scientific, or even with the more limited aim of using them for scientific purposes. Assuming root words to be arbitrary, derived and compound words are already scientific in a characteristic way, and all metaphorical meanings are scientific in a metaphysical way. In a totally scientific language, however, the arbitrary nature of even the root words would disappear, both in respect of the objects described and in respect of the letters and their arrangement. But since natural languages are not so philosophical, the main purpose of the final chapter is to investigate the hypothetical component in the meanings of words, and in doing so, to see how meaning could be codified; this is necessary in the case of so-called nominal definitions, since the process cannot be continued *ad infinitum*. In this connection all the words of the language may be divided into three groups, of which the first requires no definition, because the object may be presented *in toto*, and therefore, word, concept and object can be directly associated with one another. The second class, which makes those of the first class metaphorical, makes use of identification not by definition, but by comparison. The third class comprises the words which need to be defined (in so far as words of the first two classes can be used to define them); and once words of this third class have been defined in this way they can themselves be used for the purpose of definition. It is self-evident that words of the third class can in turn become metaphorical, and in many cases are already metaphorical. These reflections are then applied in the chapter under consideration to the theory of disputes about words. It is known that a considerable part of differences of opinion, especially in the abstract sciences, amounts, when more closely examined, to no more than disputed terminology.

Since language is not only necessary in its own right and extremely widely distributed, but also inherent in every other kind of sign, it is not surprising that I have devoted only the first chapter of my Semiotics to the other kinds of sign, and have spread the consideration of language through the nine chapters which follow. For the other kinds of sign are much too special for me to be able to provide a separate theory for each, which is in any case for the most part already available, in music, choreography, arithmetic, algebra, for example. Language, on the other hand, remains the general arsenal of all our knowledge, and promiscuously comprises the true, the false and the apparent. It therefore merits separate examination in all its aspects.[X]

There is no need to go into further criticism of this "scientific" theoretician of language; his axiomatic stance is clear enough in his own account; but attention should be drawn once again to the remarkable consistency of

axiomatic rarionalism as a whole, in spite of minor divergences among its practitioners, such as those between the empiricist Locke and his non-empirical compeers. Wolff, and with him Leibniz and Locke all belong to the same camp. All that remains, in the matter of language, between the Locke of semiotics—not the Locke of Book III—and the Leibnizian tradition is a difference of emphasis. This difference is in turn reduced by the "logistician" Lambert.

All deductive rationalists agree that language should be measured by the standard of rational exactitude. This precision of thinking, or of ideas, is independent; and by virtue of precision it is not of a linguistic, but rather of a mathematical nature—in some exponents more and in others less. Such exactitude may be acquired within the mind with the help of language as an instrument or a heuristic process, or alternatively, by means of demonstration by others. Since, however, the axiomatic rationalist does not derive his concept of truth from language, he is confronted by discrepancies between his standard of truth and the thought-content of language. Instead of dealing here with a plurality, or rather with a duality of functions and norms, he maintains their singularity, this being a rationally precise criterion of truth and exactitude, mathematical and theoretical in nature; it has no linguistic input, but is universally applicable, and therefore applicable to language. To this criterion are then attached theoretical criticisms of language, where some scholars come to conclusions favourable, and others to conclusions unfavourable to language.

The tradition of axiomatic rationalism in dealing with the functions of language may thus be seen to be a single tradition; we have been able to follow this tradition, perhaps, admittedly, with seven-league boots.[10] Of the influential thinkers in this tradition there is one more figure to consider before Bopp, and that is Johann Werner Meiner.

Johann Werner Meiner

In his *Versuch einer an der menschlichen Sprache abgebildeten Vernunftlehre oder Philosophische und Allgemeine Sprachlehre* ("Sketch of a Logical System modelled on

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[10] It may be questioned whether our giant steps do, in fact, cover the most important stages in these developments. It is a great satisfaction to note that Jellinek, incomparably well-informed as a historian of linguistics, names (1913: I, 31) as the most prominent exponents of general grammar Wolff, Lambert, Meiner and Herder. Jellinek himself mentions the paragraphs in Wolff's *Metaphysics* dealing with general grammar, but goes only to §315; in my view he should have gone on to §324—as I did above—in order to reveal its quintessential quality.

Human Language, or a Philosophical and General Grammar", 1781), which became a classic in German universities, Johann Werner Meiner (1723-1789) contrasts two distinctive views of language, "harmonic" and "philosophical" grammar. For these two terms we may conveniently substitute "explanatory grammar" and "rational grammar" (cf. above, p. 299). Meiner's intention is clearly to provide a philosophical grammar, and his adherence to deductive procedures is apparent even in the strict antithesis he draws up for himself by saying, in true conformity with the Leibnizian tradition, that a philosophical grammar is always a harmonic one, but not *vice versa*. His reasoning is as follows:

First he tells us in his preface that after drawing up his philosophical grammar he subjected it to exhaustive examination, in the course of which he "meticulously investigated whether all its principles were adequately confirmed by usage" (*genau untersuchte, ob auch alle ihre Lehrsätze durch die Spracherfahrung hinlänglich bestätigt wurden*). This reveals Meiner's aims: first an *a priori* framework of ideas, then confirmation by the facts of language:

> ... according to the pattern which I have conceived of a philosophical grammar, all its principles must be derived from the manner and nature of our thought, just as I would deduce the rules by which I should judge various copies of one and the same painting from the construction of the original. For all languages are, indeed, nothing but so many copies of one and the same original, which is our thought. In consequence its principles must be found by way of meditation *a priori*, and definitely not *a posteriori;* and only when they have been discovered may they be compared with experience, and confirmed by it. This double process of reflection for discovering the rules of grammar constitutes the difference between a harmonic and a philosophical grammar. The two have in common the feature of containing principles and rules which are shared by several languages, but they differ from one another in that philosophical grammar derives its general rules from the universal structure of human thought, while harmonic grammar derives its rules from the mutual comparison of various languages, constituting those features in which they agree as rules, with no concern for the reason for this agreement. Therefore a philosophical grammar is always harmonic, and must be harmonic, but a harmonic grammar is not automatically philosophical. A harmonic grammar can only give the assurance that different languages have various properties in common, and are therefore subject to similar rules, but philosophical grammar informs us of the reason why these properties and rules must be held in common. (1781: iv)[Y]

Harmonic grammar acts like a man who compares paintings and observes similarities, but does no more; philosophical grammar, however, examines the underlying principle,

... the integrity of the original. First, I examine all the properties of the original, and when I have discovered the range of its properties, whether substantial or accidental, I collect the substantial ones and separate them from the accidental; and then I conclude that, if there are copies of this original all those [substantial] properties which I have found in the original must be present in the copies, provided that the copies have been faithfully made.[Z]

Here we have the possibility of a criticism of language, an almost inevitable result of the deductive approach to language looking round the corner. But here Leibniz's degrees of greater or lesser perfection offer a way out (p. vi):

Of course the copies could differ very greatly from one another in their degree of perfection, some resembling the original more closely, some less. I will therefore compare the copies with the original again, in order to see whether the qualities which I have already identified and analysed are all present in the copies; this is the method of philosophical grammar.[AA]

Meiner, however, shows traces of discomfort. No wonder, for, as will be expounded below, his axiomatic principles have been seriously diluted:

Both grammars can illustrate their rules and principles with examples from various languages; and so if anybody were to examine a philosophical grammar such as I have described here, and went no further than the examples I have given, he might easily confuse a philosophical grammar with a harmonic one, and as a result rate the former far below its true value. (p. vi)[BB]

What brings about this dilution and relaxation of the axiomatic rational view of language? We have already seen that the deductive strategy of Locke and Leibniz was constrained by the emergence of inductive method. But Leibniz had developed—though Locke had not done so—an elaborate system which concealed all inductive heresies, and the detailed analysis given above attempts to demonstrate this in so far as it affects language. The mathematical method of his metaphysics and epistemology was, however, too exalted and too difficult for his successors. His enthusiasm for human reasoning powers, and mastery of them, was admired and no doubt approached by his imitators, but never equalled. So Leibniz's innovative, strictly systematic thinking based on mathematical reasoning has become, to return again to Meiner, the generalized "mode of human thought". The relation of thought to language in Meiner follows the deductive pattern with which we are familiar. A harmonic grammar pure and simple would not be enough for Meiner (who restricts himself, incidentally, to five languages, Latin, Greek, Hebrew, French and German), whereas the method he was now following

gave great satisfaction; for having used it to seek out what I had to find in lan-

guages through a more exact analysis of human mental processes (the source of languages), and then, after making my comparisons, I found what I was looking for, to my great pleasure and often to my great surprise. (p. vii)[CC]

Meiner is again a thorough-going Leibnizian in the way he attains a positive criticism of language by the application of the pseudo-logical criteria of the degrees of clarity—criteria which were classified in the discussion of Leibniz (pp. 303, 307–308 above) as an importation from linguistics into logic. By this means he accounts for the differences between languages, *inter alia* the differences between both the "oriental" and the "occidental" languages. Meiner is of the opinion that he

> could draw correct conclusions about the more or less enlightened thought-processes of nations from the differences between their languages, which may ... simply be found in a greater or lesser degree of distinctness or definiteness, and could at the same time accept this philosophical analysis of languages as a history of human understanding. For, since language is an outward representation of our thoughts, it is always possible, from the increasing perfection of the language of a nation, to draw conclusions concerning the increasing perfection of the thinking powers which had preceded it. (p. viii)[DD]

And a few lines further on we find, printed in bold type, what for Meiner was obviously a most important assertion: "For any language in which we can find a significant increase in perfection, we can also attribute to the nations which speak it an enhanced degree of enlightened thinking".[EE]

Meiner's book consists of three parts.[11] The first is short, a few dozen pages, and treats what he calls "orthophony", and audible speech made visible, i.e., orthography. Part II, the most extensive of the three, deals with connections into which words and sentences enter with the concepts (*apperceptions*) and percepts (*perceptions*) of our mind (*mit den Begriffen und Vorstellungen unserer Seele*). Words associated with one concept may be monosyllabic or polysyllabic. A further examination of the physical content of words yields a distinction between simple root words and derived words, and compound "composite" words (consisting of two parts) and "decomposite" words (consisting of more

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[11] It is tempting to go further into the content of Meiner's work, even in a summary treatment, but this *magnum opus* would take us too far. We can, however, state that authors like Meiner practise a study and analysis of language from which the present day has much to learn, and this in spite of its functionally incorrect principles. An author like James Harris, for example, has far less to offer linguistics, although he often surprises us with his profound insights into function. We are thus confronted by the curious position that a philosophical grammar like that of Meiner deserves consideration as a practical grammar, while a "harmonic" grammar like Harris's has "philosophical" implications.

than two parts). The form of the words—or of the concepts which they denote—yields the division into substantives and predicational accidents, the latter when words depend on "differences between the objects of which they are the representations". But an independent object may be represented by a derivative word, and *vice versa*. Meiner is no more perturbed by this than, *mutatis mutandis*, was speculative grammar. In this case the denotation is dependent on "the way we look at" the object (*auf unserer Betrachtungsart*). Chapter 2, within this part, is, again, the most extensive. The model sentence is that which proceeds from subject to predicate: "Two kinds of word are required for the construction of a sentence: (I) those which denote dependent things and present them as dependent, there being two sorts of these, (A) verbs ...; (B) adjectives" (1781: 79ff.).[FF] Under (II) Meiner places substantives, which he subdivides into four groups: proper nouns, appellatives, terms for measurement and weight, and abstracts. Articles follow as a third class in a more or less unconnected appendix.

Verbs and adjectives are described as follows: "Verbs [...] denote something dependent and comprise within them[12] the propositional copula; adjectives, like verbs, denote something dependent, but do not, like verbs, include the propositional copula."[GG]

This second part also deals at length with the degrees of comparison. These were naturally of great significance in the mathematical and deductive view of language, as they had been for Leibniz. Meiner is highly satisfied with his own analysis, but we will not investigate these matters any further.

Part III deals with the construction of sentences. Here we find *inter alia* the question of word-order, including the problem of inversion, which was so actively discussed in the second half of the eighteenth century. On this point Meiner decrees that the governing word must always follow the governed, "so that the listener or reader is compelled to concentrate his attention until he comes to the governing word" (1781: 355, §9)[HH][13], but this rule has to be followed by a long list of exceptions.[14] Finally, Meiner's treatment of the parti-

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[12] This concept, as we shall see, underlies important conclusions in Bopp's structural analysis.

[13] From this requirement it is apparent that Meiner ultimately took little account of the differences between the languages from which he took his point of departure. Without further discussion he posits as the ideal structure of all languages just that quality which distinguishes French from German, the "anticipatory sequence" of German, as opposed to the "progressive sequence" of French. See Bally 1944: 199ff.

[14] Jellinek (1913: §§563-598) discusses this question as far as France and Germany are concerned, rightly regarding this controversy as symptomatic: "It is a consequence and a symptom of philosophical currents which brought with them a changed attitude to human thought.

ciple is worthy of note: he sees its use as being motivated by "brachylogy", or abbreviated speech. We may probably see here a tendency towards an "economizing" analysis of language of the kind practised by Horne Tooke, a tendency, moreover, which does not match a deductive approach to language, since the economies of abbreviation would, in the light of such views, lead to inaccuracy and imprecision.[15]

The general epistemological direction which Leibniz—and incidentally Locke—gave to the principles of mathematical and logical deductive processes is replaced in Meiner by mathematical metaphysics. For this reason the logicalizing exactitude of axiomatic principles is lost, being replaced by an approximation to psychologizing pragmatism. The confrontation of language with a rational system of the universe conceived *a priori* thus becomes an illusion; the "common cast of mind" is all that is left of Leibniz's mathematical view of the universe and ontology. Yet Meiner's analysis of harmonic grammar is valid in its own right and useful for our purposes.[16] Further, his incapsulation of "harmonic" grammar into philosophical grammar, as was indicated above, is extremely characteristic of his own Leibnizianism.

Axiomatic rationalism in its less rigorous form was not the only view of language current in Germany, but it seems to me to have been the dominant one. Adelung, however, was influenced by Court de Gébelin, and may well be accounted a pragmatist. With Hamann and Herder a totally different approach to language appears in Germany; though even here the influence of Leibniz may still be seen to some degree. But the debate with axiomatic rationalism, as in Süssmilch, is also apparent, and it remains to be seen how Bopp continues the rationalistic line.

In the place of the ideal man, the logical machine which generates and produces concepts, propositions and conclusions in a prescribed form, empirical man becomes the centre of attention, the man of flesh and blood, and his thinking interwoven by feelings and desires." (§575)

[15] As the second part of John Horne Tooke's (1796-1812) *Diversions of Purley* appeared only in 1805, and in view of his advanced ideas on language, it is preferable to assign him to the nineteenth century, which is outside the scope of this study. For Tooke, see Funke 1934: 85ff.

[16] This mutual criticism is further confirmation of the reality of the debate within rationalistic circles, the analysis of which provided the outline of this discussion.

CHAPTER 10

PRAGMATIC RATIONALISM

Introduction — Part I: Port-Royal, Shaftesbury, Harris, Monboddo —
Condillac — De Brosses

> *Whoever ... will study* Mathematics ... , *will become not only ... a more expert* Logician,
> ... *but a wiser Philosopher, and an acuter Reasoner, in all the possible subjects either of science*
> *or deliberation.*
>   *But when* Mathematics, *instead of being applied to this excellent purpose, are used not to*
> *exemplify* Logic, *but to supply its place; no wonder if* LOGIC *pass into contempt, and if*
> Mathematics, *instead of furthering science, become in fact an obstacle ...*
>   *And thus we see the use, nay the necessity of enlarging our literary views, lest even*
> Knowlege *itself should obstruct its own growth, and perform in some measure the part of*
> *ignorance and barbarity.*

THE OPINION quoted here comes from the preface to a grammar,
James Harris's *Hermes, or a Philosophical Inquiry concerning Universal Grammar*
(1751; 3rd ed. 1771). It constitutes a remarkable corroboration of my conten-
tion that a clear recognition and acceptance of the historical account of the
controversy between zealotry for theory and zealotry for practicality, between
deductive and pragmatic procedures, is indispensable not only for under-
standing the intellectual history of the seventeenth and eighteenth centuries
in general, but also the principles of linguistic theory implicit in it and
parallel to it. This aspect of the controversy, which is admittedly only one of
many, is also apparent to an observer of language.

While this controversy had too many objective manifestations to be com-
pletely overlooked in the history of linguistics, it does not receive due atten-
tion there. Jellinek is unusual in dealing with it briefly in the introduction to
his work (1913: 19–31),[1] and what is more he relied on original sources. He

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[1] Jellinek may be excused for not using this controversy as the basic structure of his work,
since his description of the external features of grammars—exclusively German ones, in any case
—could have yielded no material of relevance to axiomatic grammars, with their concern for
artificial languages, etc. The case is entirely different in a study of the theory of principles and

let the facts speak for themselves, and did not impose any preconceived notions on his data. For this period he notes two currents in linguistics:

> the general one with which the philosophical was soon to coincide, and the comparative, or ... "harmonic" one. The former sets out to establish what elements necessarily accrue to all languages as products of the human mind. ... Harmonic linguistics examines the mutual relationships of empirical linguistic data, and is essentially etymological and genealogical in character. (Jellinek 1913, I: 25ff.)[2 A]

The two currents identified by Jellinek are virtually the same as those here called axiomatic and pragmatic.[3] Jellinek, too, seems to have appreciated the way these two streams were at odds in their very principles, speaking of a confrontation between a study of language with a logico-metaphysical basis and one with a psychological basis. His characterization of what is here called "pragmatic" linguistic theory is as follows: " 'To account for the facts' was the slogan, and men were gratified when they were able to trace the individual instance to some general principle, with no concern for the area and time to which it was applicable" (Jellinek 1913, I: 27).[B] And with this acknowledgment of Jellinek's views, we can now give a brief factual introduction before turning, in subsequent pages, to trace the pragmatic tradition in the theory of linguistic functions.

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functions. Above all, the initiative in this field lay with the axiomatic rationalists; pragmatism is a reaction, and barely comprehensible from the standpoint of deductive principles.

[2] Jellinek also notes (1913, I: 30 n. 1) that there is no history of the philosophy of language in the sixteenth to eighteenth centuries, and no history of general grammar, a statement which shows that he realized that he had to take account of the general linguistic background in dealing with the history of German grammar.

[3] Jellinek is right to call attention in the second summary of §6 to the linguistic criticism which emerged in the seventeenth century. This, he declares, finds its clearest expression in the attempts to invent independent symbolic systems. He bases his findings not on Descartes or Locke, but on Leibniz, whose "criticism of Latin grammar, far in advance of his time, caused him to treat as unnecessary a number of features which in the general view were regarded as permanent requirements of the human mind". Jellinek is quite right, if he is of the opinion that Leibniz was the first to level criticism at the sacrosanct abode of Latinity; but "in advance of his time" normally implies making a discovery which was appreciated only later. Leibniz's innovation, the judgment of Latin on logical grounds, was not, mercifully, taken up by later ages. Jellinek notes in this connection a quotation by Benfey from Leibniz, "languages are created by some natural impulse of man, who fits sounds and gestures to the feelings and motions of his mind" (*linguae naturali quodam impetu natae hominum, sonos ad affectus motusque animi temperantium*), regarding these words as characteristic of a trend towards psychology in linguistic analysis. It is not clear to me whether Jellinek based his remarks here also on the paradox of Leibniz's views of language, and was attempting to give an explanation. In any case, Wilkins had anticipated Leibniz in the criticism of Latin.

Grammaires raisonnées

We have seen how axiomatic rationalism had established a trend based on mathematical and scientific principles, and how it did not stop at measuring physical objects by the criteria of this positive exactness, but imposed them also in the area of human activity. Being, as it were, outfaced by the claims of calculating scientists, the practitioners of law, economics, and even the practitioners of linguistics adopted the principle, which Jellinek had seen as central, of "accounting for the facts", that is, of emphasizing the rationality and verifiability of their disciplines. This cannot, however, be a mathematically exact rationality, for the human sense of law, for example, cannot be simply explained by mathematically exact or mathematically logical relationships. Instead, it becomes a rationality adapted to the relevant discipline, in the case of language a rationality of speech. It is here that we make the acquaintance of the pragmatic variety of philosophical grammars, not so much rational grammars, as "explanatory" grammars, ("grammaires raisonnées"), accounting for usage, defending and maintaining the rationality of language against the criticisms of the more axiomatic rationalists.

The first specimen of such a grammar, the grammar of Port-Royal, appeared as early as the middle of the seventeenth century. From then on the tradition continues in an ever-widening stream. The pragmatists took the lessons of the mathematicians to heart; and, spurred on by rivalry, their assurance in turn was gradually increased, even if it tended towards pedantic self-assurance. This is consistent with the way an initially defensive stance made way for an offensive one, for a counter-offensive which turned the tables and extended the principles of pragmatic linguistics to mathematics, the central area of the axiomatic movement. While Hobbes and Leibniz had maintained the priority of calculus over language, Condillac would finally claim the priority of language over calculus, i.e. that mathematics conforms to gestures, figures, characters and sounds, in other words to language. And what is Logic? Logic is the general grammar of all languages. This is a radical reversal: in place of determining language by logic and incorporating it into logic, as the axiomatic movement had done, we now have the opposite: logic determined by grammar, considered a direct variant of grammar and brought under its sway.

In the natural sciences, too, the uniquely satisfying nature of mathematical methods was called into question, and rightly so. This also left its mark in linguistic theory.

Since the Enlightenment was less concerned for precision and rigour, it

clearly made a closer approach to life than the theorists of axiomatic ration-
alism. The ultimate result of the scientific disciplines of this movement had
been the establishment of theoretically pure and logically organized artificial
languages; but now textual study, which had been in thrall to theory, came
into its own and awoke to independent importance as a result of the ideo-
logical positions of the pragmatists. Now that the shackles of mathematical
procedures had been broken, scholars became aware of all manner of non-
logical subfunctional associations of language; its aesthetic qualities, for in-
stance, were re-evaluated and viewed in a fresh combination with sensibility
and with the power of the emotions in general.

The resemblance between the insights and evaluations which thus arose
and the thinking of the humanists about linguistic matters may be said to
have favoured the move of this new philology towards pragmatism, largely as
a result of the humanistic tradition which had been preserved in classical
philology. The dispute between tradition and modernity (*"la querelle des anciens
et des modernes"*) naturally played its part here, at times complicating the situa-
tion to some extent, but in considering the problem in hand this controversy
among the classicists may be almost totally disregarded.

Given that Kant—and others, too, for it is all too easy to forget that Kant
was not the only one—set out to reconcile or synthesize this internal dispute
within rationalist circles, a dispute conducted, incidentally, in rationalist
terms; given, too, that this Kantian idealism was later attacked by Hamann
and Herder in their analyses of language, we are at once prompted to ask
whether the irrationalistic traits found in the works of the two last-named
scholars do not compel us to speak of language-dominated, or even language-
centred thought ('linguism' and 'lingualism'), as we did in the case of the
Humanists. The overvaluation of language by Herder and Hamann, indeed,
retains little trace of any conciliatory "accounting for the facts" of the
rationality of language; however, Herder's concept of "reflection" (*Besonnenheit*)
may allow us to trace a residual rationalism.

The adherents of the Bonn school and the Schlegels will provide further
aspects, *inter alia* a "biotic" interpretation of the functioning of language; and
it was from this intellectual climate that Bopp, the founder of modern lin-
guistics, turned away as a young man (a brief analysis of his views of function
will be found at the end of the present study).

The examination of the practical views of language which now follows will
be limited to the most important ones. It will discuss some general grammars
and works on the philosophy of language, chiefly French and English in
origin. The views of linguistic functions in the academic disciplines will be

illustrated from classical philology, since that was at the time still the principal linguistic study, and given that the Dutch school was pre-eminent in the study of the classics at the time, a further restriction is made, that of limiting our study to this school. The so-called pre-linguistic study of etymology is also to be found in the authors of general grammars, who may perhaps also be called philosophers of language. Some attention will be given to Herder and Hamann, who will be set apart from the others. Finally, the transition marked by Bopp will be discussed.

The small scope of this review, especially as is is applied to the eighteenth century, when the material available expands almost to infinity, requires some justification. Professional circles are well aware that there is no history of linguistic theories, of philosophies of language or pronouncements on linguistic principles, or whatever the study of the fundamentals of language may be called. The present study makes no claim to fill this gap, but it aims to contribute a small stone to the construction needed to complete such a work, namely the preliminary ordering of these theories, or rather the definition of the base-lines of the intrinsic historical ordering inherent in these theories.

The key lies in the analogy with the opposing front presented by the linguistic theory of axiomatic rationalism, especially that of Hobbes and Leibniz. It is only against this background that the views of the pragmatists show up clearly; in other words, it is only within the encyclopaedic framework delineated above, which became available to philosophers and scientists from about 1600, after Bacon had reclaimed it for the world of western culture and science, that the lines which were to characterize the development of the sciences from then on can be distinctly traced. It is thus a practical concern to consider whether this further description is more or less exhaustive—and this is certainly the case if the question of the historical framework and more particularly the question of the logicalization of language by way of the assimilation of signification to mathematical processes at the hands of axiomatic rationalism has been adequately analysed and elucidated above. A decision on this matter has been taken on practical grounds, in the interests of the greatest possible concision.

Of these pragmatic general grammars and similar works, the following will be briefly characterized:[4]

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[4] The dates are those of the first editions. Translations are mentioned as an indication of general interest in these questions in western Europe. Horne Tooke's work is considered to lie beyond the end of our period (1800), and Baumgarten's *Aesthetica* is not discussed, but it is mentioned here as a significant turning-point.

1660	*Grammaire générale et raisonnée de Port-Royal*	Arnauld & Lancelot
1711	*Characteristicks*	Shaftesbury
1711	*Principi di una scienza nuova*	Vico
1744	*Three Treatises*	Harris
1746	*Essai sur l'origine des connaissances humaines*	Condillac
1746	*Les beaux arts réduits à un seul principe*	Batteux
1750–58	*Aesthetica*	Baumgarten
1751	*Lettre sur les sourds et muets*	Diderot
1751	*Hermes*	Harris
1750–80	Publication of the *Encyclopédie*	
1755	*Discours sur l'origine et les fondements de l'inégalité parmi les hommes*	Rousseau
1754	*Traité des sensations*	Condillac
1754	*Remarques* [on the Port-Royal grammar]	Duclos
1756	*Réflexions philosophiques sur l'origine des langues*	Maupertuis
1756	*Dissertation sur les moyens dont les hommes se sont servis pour exprimer leurs idées*	Maupertuis
1762	*Lectures on the Theory of Language*	Priestley
1765	*Traité de la formation méchanique des langues*	de Brosses
1766	*Réflexions* [on the Port-Royal grammar]	Fromant
1767	*Considerations concerning the First Formation of Languages*	Adam Smith
1767	*Grammaire générale*	Beauzée
1772	*Abhandlung über den Ursprung der Sprache*	Herder
1773–95	*Of the Origin and Progress of Language*	Monboddo
1776	*Histoire naturelle de la Parole etc.*	Court de Gébelin
1777	German translation of de Brosses	
1782	*Essai sur l'origine des langues* [posthumous]	Rousseau
1784	German translation of Monboddo	
1786	*Diversions of Purley*, Part I	Horne Tooke
1798	*La langue des calculs* [posthumous]	Condillac
1799	*Principes de grammaire générale*	Silvestre de Sacy
1799	*Metakritik*	Herder
1805	*Diversions of Purley*, Part II	Horne Tooke

Port-Royal

Resistance to the expansionist trends of mathematical rationalism, notably that of Descartes, began to make itself felt as early as the middle of the seventeenth century, and this opposition, particularly in the environment of Port-Royal and the Jansenists, had implications for language.

It is generally emphasized that it was Port-Royal circles which were

primarily influential in introducing Cartesianism in France; and this, indeed, is the case. This came about as the result of a supposed resemblance between Descartes and Augustine. The history of philosophy has given little heed to the discrepancy between Port-Royal and Descartes, which manifested itself almost from the outset. The discrepancy was slight to start with, but in Pascal the split widens into a chasm. Pascal retains his respect for mathematical and theoretical discourse, to be sure, but this is not apparent in the areas which lie closest to his heart, i.e. morals and religion. Pascal does not, then, turn against rationalism as such. Indeed, it has been noted already that pragmatic rationalism took care not to throw out the rationalistic baby with the bathwater of axiomatic reasoning. Sound common sense now takes up the place of theoretical and scientific discourse. Pascal's "logic of the heart" (*logique du cœur*) merely rejects the presumption of mathematical reasoning and adopts a pragmatic mode. Even so, his ultimately sceptical attitude shows that this mode, too, was not completely successful.

Arnauld (1612-1694), Nicole, Lancelot (1615-1695), de Sacy, Pascal, Boileau, Racine and Bossuet are the figures who set the tone of this movement. They were all preoccupied by the practical aspect of reason. The *Grammaire* (1660) which emerged from the Port-Royal circle was described as an "art of speaking", and the *Logique* (1662) as an "art of thinking"; Arnauld, a leading and typical Jansenist, collaborated in both books. The Logic lays emphasis on non-scientific knowledge, and in the grammar which appeared two years earlier, which had no direct concern with thought itself, this practical tendency came to the fore, to the total exclusion of all reasoning in the mathematical mode. The *Grammaire raisonnée*, modest in compass, is described comprehensively as a

> General and Explanatory Grammar, comprising the Foundations of the art of Speaking, explained in clear and natural fashion. The reasons for what is common to all languages, and the principal differences which may be found between them, and some new observations on the French language.[5] C

Claude Lancelot, the second author, was a grammarian through and through. He wrote a primer of Latin, and another of Greek, based on "a new method of learning" (*une nouvelle méthode pour apprendre*), and in addition made a great contribution to the reputation of Port-Royal. He was also the author of an Italian and a Spanish grammar, besides writing the *Jardin des racines grecques*

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[5] Frequently re-edited and reprinted until well into the nineteenth century. The editions cited here are of 1810 and 1846, both published in Paris.

("Garden of Greek roots", 1657).[6] Lancelot is the great linguist of Port-Royal. His influence was widespread and enduring, although his work in fact made no fresh contribution, and was derivative from Scaliger, Scioppius, and above all Sanctius—not to mention Ramus.

In his preface, Lancelot states that in the course of his grammatical investigations he came "to look into the reasons for a number of things which are either common to all languages or peculiar to certain ones". He had presented his reflections to his friend Arnauld, who in his turn had imparted to Lancelot his "reflections on the true foundations of the art of speaking". This was how the book came into being.

"To speak is to express one's thoughts by means of signs which men have invented for this purpose, the most convenient of these signs being cries and articulate sounds".[D] To make sounds durable and visible the characters of writing were invented. Signs may be distinguished according to their nature (sounds and characters) and their meaning.

Part I of the book, on the nature of the signs, is the shortest. It deals with vowels, consonants, syllables, accent, letters, and a method of teaching reading. More important in the present context is Part II, "dealing with the principles and the reasons which support the various forms of the meaning of words".

Chapter 1 discusses how "the knowledge of that which occurs in our minds is necessary in order to understand the foundations of grammar, and that it is from this that the diversity of words which make up discourse depends".[E] This is in contrast to the views of the axiomatic rationalists, who require of a valid and true language that it should represent either a previously conceived hierarchy of concepts (or a metaphysical system accepted as true and valid), or else that it should function simultaneously and identically with the procedures of true thought, i.e. that it should calculate. There is nothing of the kind here. There is no application here of a criterion which

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[6]   Full title: *Jardin des racines grecques, mises en vers françois avec un traité des prépositions et autres particules indéclinables et un recueil alphabétique des mots français tirés de la langue grecque.* It was even more successful than the Greek grammar; after dozens of reprints, it appeared in a revised edition in 1774, and again in 1806, adopting roots from Valckenaer, van Lennep and Scheidius. There were at least 63 impressions by 1855. Even the influence of Bopp's new linguistics, from the 1860s on, seems to have made little difference, for a *Jardin* was published by Larousse as late as 1923. The text stresses the direct derivation of French from Greek. Egger (1869, I: 113) describes it as one of the greatest obstacles to progress in grammar, and it was not until Bailly's *Manuel pour l'étude des racines grecques et latines* appeared, also in 1869 (influenced by G. Curtius) that the dominance of the *Jardin* began to be broken. The concept of "roots" will be discussed below, in connection with de Brosses and others.

would tend towards the criticism of natural language, but, on the contrary, a continual attempt to legitimize language as it is, structuring the "principles and reasons" which putatively underlie the linguistic data on the model of the linguistic data themselves, thus constituting pseudo-postulates or fallacious representations. The uncritical acceptance of this special pleading and argumentation is apparent in the following sentence from Part II, chapter 1:

> And thus the most distinctive quality of the working of our minds is the way they enable us at one and the same time use them to consider the object of our thought and the manner of our thought, the principal object of which is to draw conclusions; but it is possible for us to introduce in addition *conjunctions, disjunctions,* and *other similar operations* of the mind, and all the other attitudinal factors, such as wishes, commands or questions.[F]

The Port-Royal grammar distinguishes "the words which signify the objects of our thoughts from those which denote the manner of our thoughts", and constructs upon this differentiation a theory of word-classes which uses the current definitions, though there later appears to be some difference of opinion about the allocation of the article and the preposition. The commentator Duclos considers these to belong to the second group.

From the many discussions of *grammaire raisonnée* Benfey (1869: 299) excerpts a passage characteristic of the considerations governing the explanation of its rational content. It comes from Book II, chapter 5, and deals with the differentiation of the adjective for gender. Agreement for gender was invented "to make language less prolix, and also to make it more elegant" (*pour rendre le discours moins diffus, et aussi pour l'embellir*). Man had observed the difference in sex in their species, and then "they deemed it fitting to vary these same nouns adjective ..." (*ils ont jugé à propos de varier les mêmes noms adjectifs*). As a result, once the difference in inflection had been made, and the adjectives applied to objects undifferentiated by sex, the substantives to which they referred were established as masculine or feminine, "sometimes by some kind of reasoning, ... sometimes, too, by mere whim and irrational habit". This does not mean that this is not yet another attempt to rationalize what the writers saw as irrational. The attempt failed. But all the same an explanation is made: it takes more than one challenge to defeat *grammaire raisonnée;* it can glimpse sense in the senseless, "a mere whim" (*un pur caprice*). The bitter seriousness of Pascal's paradox, meanwhile, is something completely different.

Port-Royal had its sights set upon a general grammar, "what is common to all languages", a legitimation of all forms of speaking. But the path chosen for this purpose, viz. the rational motivation of given linguistic phenomena in various languages, left open the possibility of not going back the whole way

to general foundations and principles, but rather of concluding the analysis as soon as the particular linguistic phenomena had produced a complex of rules which, though not completely general, nevertheless held good for the specific phenomena of one language. This limitation was occasioned by the fact that the pragmatic anti-mathematical movement was characterized by regression. The structure of reasoning erected in axiomatic rationalism could with some justification claim complete generality, since this reasoning was centred in a mathematically exact law of reason considered to be identical for all men, a law, moreover, which in the view of the practitioners of this school of thought was incontrovertibly verified by cognitive mastery of natural phenomena, above all those of movement. Pragmatism distanced itself from such an attitude from the very outset—only to set out with greater confidence its more limited rationality as a general rule.

It thus became clearly possible for pragmatic rationalism to set out as principles, special principles perhaps rather than generic ones, a complex of ideas which applied to only one language. When we recall the steady increase in national consciousness in the seventeenth and eighteenth centuries, we are unavoidably led to associate such a complex of ideas with the idea of nationhood. This association comes about in the notion of genius, which was, indeed nothing new—for it can be traced among the humanists—but which had not hitherto been expressed in this form (see Croce 1930: 215).

Leibniz had considered languages to be unconsciously wise in that universal human thought was represented in them; according to his theory, the general principles of this system of reasoning were determined in advance, and it was not essential to read off its detailed structure in any one language—this could at best be regarded as being confirmed by languages in general (compare the discussion of Meiner, above, p. 332-333) Pragmatism makes its discoveries and draws its conclusions about the character or genius of a nation through language, as it does through artistic expression and social developments, even though national character, in the view of this branch of rationalism, is to begin with no more than a set of rational ideas rather than an expression of national spirit.

In this development, then, we can see the continual dissociation of pragmatic thinking from the systematic thought of mathematical deduction. The character of Port-Royal general grammar as an apologia which sets out in the main to vindicate language as the bearer of a universally valid rationality, now begins gradually to give way to a positive attempt to make reason in its turn dance to the tune of practical considerations. All in all this was an effort which promised (and delivered) great gains in the awareness of function in the

fields of practical knowledge, including the field of language, but which also
had an inherent flaw which must not be left out of account, that is, that
however much the principles to be derived took their colour from the field to
which they applied, in this case the field of language, they nevertheless con-
tinued to be seen as general rational principles rather than purely linguistic
ones. It is the idea of national character, rather than the general idea of
language, which makes the first moves away from rationalism. But Port-Royal
is still greatly concerned with the idea of generality, and has not yet
developed the notion of national character.

 We may ask whether Port-Royal grammar is such nonsense as we might
think. It is not, of course, at fault in attempting to give reasons for the facts
of language, for science is a rational analytical activity which sets out to
provide insights, concepts and explanations. Its fault is that it once again
assigns to language the task of shadowing thought: language is explication
and signification of thought; this is all language does, no more and, sig-
nificantly, no less. There is no mention here of language as an autonomous
reaction to reality and activity within it. The law of language here is the same
as that of the thoughts it conveys. While the axiomatic school still verified the
correctness of these thoughts against a system of reality obtained by mathe-
matical methods, the pragmatists took over from them their positive
assurance, but could no longer supply the expertise to back it up. If speaking
reflects nothing more than reason it is fully justified. The pragmatist is no
longer concerned whether this thinking (*"penser"*) and therefore this speaking
(*"parler"*) was correct. Sound common sense—which is not mathe-
matical—knows what is what, and that is enough. Since language reflects the
content of sound common sense, it is *ipso facto* legitimized. There is even room
in a *grammaire raisonnée* for more varieties of rationality, all of which can be
included in the vague term of "thoughts", e.g for the sense of beauty, whether
associated with emotional states or not. Since the demand for the verification
of the content of knowledge through the application of a more or less exact
method is now beginning to give ground, and practical speech to dissociate
itself from calculation, and since the image of practical reason is drawn on
the model of language itself (cf. the remarks on conjunction and disjunction,
etc. quoted above, p. 345), the linguistics of pragmatic rationalism comes to
approximately the same point as language-based humanism, which did,
indeed, set out to let language exist in its own right, but nevertheless still in
fact derived the mental structures by which it attempted to account for the
nature of language from a dialectic in the guise of language. This tendency
is confirmed, as we shall see, in the later history of the pragmatic theory of
language.

Lord Shaftesbury

We will turn first to developments in England, and start with Shaftesbury. Anthony Ashley Cooper, Earl of Shaftesbury, had a short life (1671-1713) and wrote relatively little, but the little he wrote had a great influence on his contemporaries and successors. There is, in fact, no connected theory of language in his three-volume work *Characteristicks of Men, Manners, Opinions, Times* (1711);[7] his views are scattered in observations distributed throughout the work. The epigraph of the first essay in Part I may be considered the key to the tenor of Shaftesbury's contribution to pragmatic views of language. It is the well-known "what will prevent the happy man from speaking the truth?" (*Ridentem dicere verum, quid vetat*). The refined, elegant sophistication displayed here removes morals from the rigorously deterministic search for causes which had held the deductive thinking of Hobbes in thrall, and makes its own positive contribution by preaching a harmonic aesthetic mode of life which had no need of a systematic or theoretical justification:

> With his cry of "Back to nature, back to antiquity" Shaftesbury thus marks the transition from early humanism (that of Erasmus) to late humanism (that of Herder and Schiller). He also demands an aesthetic education of the young, i.e. an education based on natural reason, meaning by this an idealistic naturalism which derives its obligations from the nature of the personality. ... The basic feature of Shaftesbury's practical philosophy is his enthusiasm for the true, the good and the beautiful. ... Man feels himself to be linked to his fellow-men by a natural instinct. ... His ideal is the harmonic development of the personality, what the Greeks called the true and the beautiful, i.e. an aesthetic one. ... This aesthetic temperament also gives us the power to act virtuously. (Vorländer 1927: II, 171-2)[G]

This frequently translated work produced an enthusiasm for the ethical and aesthetic which was felt in the areas of voluntary action, and also among the scientific investigators of these areas, which include that of language. In many respects Harris, Diderot and Herder derive from him.

However, Shaftesbury did not go so far as to establish the principle of national characteristics.[8] An aesthetic approach may, indeed, be seen in his writings, but this does not entirely correspond to the language-orientated aesthet-

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[7] The distribution of his linguistic theories over the range of his works is matched by the criteria of his literary criticism. See Aldridge 1945: 46 ff.

[8] Harris did, however; but Shaftesbury's preferred expression is still "Genius of *Mankind*".

icism of the humanists. Shaftesbury has a spirit of refinement which passes through life taking aesthetic pleasures and indulging in courtly debate, while the humanists had a mission, and their paedagogical fervour and edifying ardour is informed by a moral standpoint far removed from the paedagogy and general demeanour of a scholar who had, after all, adopted the principles of felicity.

Shaftesbury's importance for the theory of linguistic functions lies predominantly in his fostering an aesthetic view of language which basically held that the main purpose of language was to express the spiritual beauty of the mind and convey it to others, but it was those successors of his who have already been named who were to associate his visions more decisively with language.

The positive content of Shaftesbury's view of language remains for the most part implicit, and even so, it is spread throughout the whole of his work. A continuous passage concerned with his view of language may, indeed, be noted, but this is couched in negative terms; it is clearly at variance with the views of the axiomatic school, and it is possible to see in it a confrontation with the likes of Wilkins.

In the essay "Advice to an Author", included in Part I of the *Characteristicks* (1711: 287ff.), Shaftesbury recounts in his characteristically informal manner that he had once made the acquaintance of a philosopher—"but as to *Moral Science*, he was a mere Novice"—who, being on one occasion imprisoned, fell to "solyloquy", and pondered all possible human sounds: "he tun'd his natural Pipes not after the manner of a musician ... but to fashion and form all sorts of articulate Voices ..., essaying it in all the several Dispositions and Configurations of his Throat and Mouth" (p. 288). With elegant mockery Shaftesbury leads him, by "bellowing, roaring, snarling, etc.", to discover the sounds of the letters, the a's, the o's, etc.:

> The Result of this profound Speculation and long Exercise of our Prisoner, was a *Philosophical Treatise*, which he compos'd when he was set at liberty. He esteem'd himself the only Master of Voice and Language on the account of this his *radical* Science, and *fundamental Knowledg* of Sounds. But whoever had taken him to improve their Voice, or teach 'em an agreeable or just manner of Accent or Delivery, wou'd, I believe, have found themselves considerably deluded. (p. 289)

In this caricature we may recognize Wilkins, who presents (1668: 378) thirty-four sketches designed to show how the organs of speech (identified at the foot of the page as "1. Epiglottis; 2. Larynx; 3. Aspera arteria; 4. Œsophagus") are used in producing the thirty-four individual sounds.

'Tis not [Shaftesbury continues] that I wou'd condemn as useless this specu-lative[9] Science of *Articulation*. It has its place, no doubt, among the other Sciences, and may serve to *Grammar*, as *Grammar* serves to *Rhetorick* and to other Arts of Speech and Writing. The Solidity of *Mathematicks*, and its Advantage to Mankind, is prov'd by many effects in those beneficial Arts and Sciences which depend on it: the *Astrologers*, *Horoscopers*, and other such, are pleas'd to honour themselves with the Title of *Mathematicians*. As for *Metaphysicks*, and that which in the Schools is taught for *Logick* or for *Ethicks*; I shall willingly allow it to pass for *Philosophy*, when by any real effects it is prov'd capable to refine our Spirits, improve our Understandings, or mend our Manners. But if the defining *material* and *immaterial Substances*, and distinguishing their *Propertys* and *Modes*, is recom-mended to us, as the right manner of proceeding in the Discovery of our own Natures, I shall be apt to suspect such a study as the more delusive and in-fatuating, on account of its magnificent Pretension. (1711: 289–290)

When the mathematician sticks to his own territory, he shows "modesty and good sense", for "the Study of Triangles and Circles interferes not with the study of *Minds*". But with his "pretensions", the philosopher of mathe-matics "goes beside the mark". Such philosophy

must be somewhat worse than mere Ignorance or Idiotism. The most ingenious way of becoming foolish, is *by a System*. (p. 290) ... But if their pretended Knowledg of the Machine of *this World*, and of *their own Frame* [one of Wilkins's characteristic terms], is able to produce nothing beneficial either to the one or to the other; I know not to what purpose such a Philosophy can serve, except only to shut the door against better Knowledg, and introduce Impertinence and Conceit with the best Countenance of Authority. (p. 291; Shaftesbury's italics)

This is his Advice to an author!

To sum up the analysis of Shaftesbury's view of language, it may be said that the passages quoted form part of a criticism of the philosophy of lan-guage maintained by axiomatic rationalists, men who feel themselves to be "inrich'd with *Science* above other Men". After Port-Royal's respectful justifi-cation of language, Shaftesbury's practical view of function therefore begins to go over to the attack. Against Wilkins, and *inter alia* against his physio-logical phonetics; against Hobbes and Descartes—and against Leibniz, too, if he knew his work —in short, against mathematical deductive principles in general. And he does so, as this extract shows, discerning with great clarity where the fault of *"these Gentlemen"* lies, i.e. in their mathematical and mecha-nistic analysis of the world and the mind.

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[9] Shaftesbury uses this term as Locke had done, in the mediaeval connotation of sensory perception, here that of the physiologists.

By his insistence on ethical value and beauty Shaftesbury frees language from its obligations to be the ambassador of exact thought, as in Descartes, let alone as its bookkeeper, as in Hobbes. Language has become dynamic expression, a largely independent collaborator of the moral and aesthetic spirit.

Although Croce's aestheticism, and more particularly the aestheticizing view of language which Vossler derived from Croce, can certainly find support in Shaftesbury (see Verburg 1942: 113ff.), a more direct influence on Croce came from Croce's compatriot, and Shaftesbury's contemporary Giovanni Battista Vico (1688-1744) Professor of Rhetoric at Naples. Vico is dependent on the pre-rationalist Renaissance figure Campanella (see above, pp. 204-208), and turns against the axiomatic rationalism inherent in Descartes' mathematical procedures. Vico propounds *inter alia* a typically pragmatic view of language, but as he remained a faithful Catholic and lived in the distant city of Naples, in an Italy dominated by the Counter-Reformation, and worked in isolation as a "solitary contemplative", he was for many years practically unknown in north-west European cultural circles. He did, indeed, gain some prominence in the early years of the nineteenth century, but that was mainly on account of his view of history. As an aesthetician and theorist of language he was given some prominence in the last quarter of the eighteenth century by Hamann, and more particularly by Herder (see von Gemmingen 1918). But influential though his ideas may have been, we are concerned here only with views of language which were propounded and became prominent in the seventeenth and eighteenth centuries, and we will therefore content ourselves with indicating briefly the place of his views in the framework of intellectual history.

Adam Smith and Joseph Priestley

The early eighteenth century presents a picture of incessant activity in the practical arts, in the area of the so-called humane sciences. This activity led to a strong intellectual approach to areas which not previously been subjected to it. Vico attempted to establish the study of history, and also of ethno-psychology, on new principles. It is, indeed, noticeable that Vico drew on the work of another innovator in the field of pragmatic studies, that of Grotius, the great Dutch jurist. Adam Smith (1723-1790) also deserves mention here, not for once as the founder of scientific economics, but for his importance for us in having published a work entitled *Considerations concerning the First Formation of Languages and the different Genius of Original and Compound Languages* (1767). The

question of linguistic origins[10] had already been explored in axiomatic circles, particularly through Hobbes's interest in causes. Smith attempts to answer it by an appeal to Locke's epistemological distinctions: "particular" or proper names came first, and only later were "common names" introduced by way of abstraction. Here, however, he parts company with the axiomatic views of Locke by not subjecting language to epistemological criteria; he does not examine language in the light of the information it gives, and he does not suggest "remedies". He accepts the parallelism of language and thought as an indisputable axiom; the purity and validity of the content of language raises no problems for him, either on the grounds that thought constructs language or on the grounds that language constitutes a demonstrative representation of thought. He does not operate from the notion that language presents thought-content, let alone draw any conclusions from such a position; and even the question of origin, according to the wording of the title one of the two principal themes of the essay, is actually pursued no further than the establishment of the priority of proper names.[11] We might sum up by saying that Smith restates Locke's position, but omits the very component which characterized Locke's axiomatic approach to language, viz. his criticism of language. The pragmatic French approach took a different direction in the question of linguistic origins, as we shall see, but this exploited Lancelot's theory of the root, defective as this may have been. Smith knew no Hebrew, on which, like other adherents of the theory of roots, he might have drawn; and thus his insights into structure remain limited to Indo-European models. Smith's linguistic work has been analysed by Funke[12], and reference to this secondary source will be sufficient, the more so as Smith's work was hardly known outside the British Isles (Jellinek 1913, I: 31).

The same reasons may be given for a merely cursory mention may be adduced in the case of Joseph Priestley (1733-1804), a natural scientist and adherent of associationism—like David Hartley (1705-1757), who had, indeed,

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[10] As already noted, the question of the origin of language—a theme which, as is well known, was hotly debated in the linguistic theory of the time—lies by its nature outside the scope of the present discussion, which is concerned with synchronic views of functions. This is not to say, however, that these discussions do not occasionally throw a certain light on the theory of functions, when we take into account the way speculations about the origin of language are set out.

[11] Incidentally, Smith assumes, admittedly with some hesitation, that the verb came into existence before the noun: "Verbs *must* necessarily have been coëval with the very first attempts towards the formation of language" (1767: 459).

[12] 1934: 24-31. Pages 21-24 are devoted to G. Sharpe, whose two studies on *The Origin, Construction, Division and Relation of Languages* and *The Original Power of Letters* appeared in 1751.

coined the term "association" for the links and relationships between the elements of mental activity. Priestley is well-known for eliminating the distinction between the mental and the corporeal in his physiological views of psychology; and a similar tendency towards materialism may be observed in linguistic matters in a younger contemporary of his, one, indeed, who had an international influence in linguistics, and will therefore be discussed more in greater detail in later pages. This is the French scholar de Brosses.[13] Priestley published *A Course of Lectures on the Theory of Language and Universal Grammar* in 1762. Funke (1934: 32-33) suggests convincingly that Priestley's division of words into two groups, words denoting entities and qualities (substantives or pronouns, and adjectives) on the one hand, and words denoting relationships (verbs, together with prepositions and conjunctions) on the other, derives from Hartley's associationism. This division of the material may seem at first sight to resemble Leibniz's views, but only on cursory examination. There is no trace here of reducing phenomena to a metaphysical structure; here, on the contrary, the writer sets out to give no more than an objective description of objective phenomena, and to base a classification on this alone. The importance of the question of the origin of language leads Priestley to take account of changes within languages. His attitude towards the Confusion of Tongues shows his approach to this question: the differentiation of languages would have come about even if the Tower of Babel had not been built. He attempts to find regularity in linguistic changes,[14] and looks for this both in cultural circumstances and the natural development of language;[15] mainly in the latter, however, for just as the plant takes root, blossoms and fades, so does language. His predominantly biotic interpretation of the nature of language,[16] moreover, allows Priestley to draw what from his point of view was the

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[13] An account of de Brosses's views is also—justifiably— incorporated in Funke's work, even though it is concerned specifically with the history of *English* linguistics.

[14] He is not original in this, nor does he claim to be. See Funke 1934: 34-35 on the influence of Johnson's *Dictionary of the English Language* (1755) on Priestley. De Brosses, however, did not publish his major work until three years later, though he had already written aricles for the *Encyclopédie*.

[15] The line of his argument is that when nations, e.g. the Jews, the Romans, the Greeks, experience a cultural rise, a period of prosperity or a decline, so does their language. There is perhaps a parallel here to the nineteenth-century views of Schleicher. It is impossible that nothing passed from Vico to Priestley and his contemporaries.

[16] Friedrich Schlegel was to revive the 'biotic' approach to language in connection with the theory of roots. It is noteworthy that Priestley also had a preference for inflectional languages— his model is Greek—as the most natural [*sic*], and regards the use of auxiliary words as a decline into abstraction. Schlegel had a similar preference, but went back beyond Greek, to Sanskrit.

correct conclusion, the exclusion of external influences and the rejection of conformity to rule.[17] This dependence on natural development excludes *a fortiori* any normative approach. Nevertheless, Priestley draws back from this corollary in his last Lectures. Obviously nature—in this case the intuitive notion of the normative character of language—is more potent than theory. A language *ought to* dispose of an extensive vocabulary; ambiguous words and constructions are *objectionable*. Many controversies are no more than mere linguistic misunderstandings. Priestley even goes so far as to commend the attempt to produce an artificial universal language, to wit that of Wilkins. In this way it would be possible to eliminate the *defects* of existent languages. Priestley does, however, have misgivings about Wilkins's principles and his starting-point, the division of concepts into classes; and this is not surprising, for here the gulf between the axiomatic and the pragmatic view of language opens in his path. And how is this to be crossed? This is, says Priestley, a task for the future.[18] There is, indeed, inconsistency in this renewed adoption of criticism of language, this time from the pragmatic point of view. The pragmatist saw language as rational in its own right, and invariably self-justifying. The reason for Priestley's inconsistency lies in the tacit reservations of even the most deterministic rationalist, that reason itself is exempt from natural law. This was true in the case of Priestley; he was predisposed to deterministic pragmatism. In his desire for language to be left at liberty he allowed his acceptance of natural forces to apply to it, although, as we have seen, he was not consistent in this. In his criticism of Wilkins he rejects the pedantry of the axiomatic school in respect of language, only himself to reduce language at the outset to a natural phenomenon, as a result of which its functional character as an obligation is abandoned. The implications of natural forces, as will be shown, were more consistently worked out by de Brosses, and Priestley's influence as a linguist is by no means comparable with that of de Brosses.

James Harris

On the other hand, the work of James Harris (1709-1786) was highly influential. Shaftesbury's brand of ethical aestheticism was known to him

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[17] On the similarity of this view to more recent ones see Wille 1935: 29ff.

[18] The establishment of an artificial language is by no means dependent in principle on a metaphysical table of categories. It is possible, as more recent developments have shown, to adopt a "compromise" between established languages as a basis.

perhaps by way of family relationship, for Shaftesbury was his uncle. As a
competent literary scholar and philosopher, he was able, thanks to a profound
knowledge of Greek and wide reading in classical authors, to kindle renewed
interest in antiquity. His *Three Treatises* of 1744 are important aesthetic studies,
while *Hermes or a Philosophical Inquiry concerning Universal Grammar* (1751) is a
significant contribution to linguistics; and this, at least, comes into considera-
tion here. It is cited here from the third edition of 1771, which he saw
through the press himself, expanding the footnotes. There was a fifth edition
in 1794. A German translation was published in 1788, and a French one in
1796. The *Treatises* had been translated into German as early as 1756, and
influenced Lessing and Herder. His influence on linguistic ideas was greater
in Germany than in France. This is explicable when we consider his clear
aversion to the "atheistic" Enlightenment in France, and the current of intel-
lectual attitudes in general, and in views of language in particular which
predominated in Germany, i.e. the mitigated axiomatic rationalism of Wolff,
Lambert and Meiner; for this form of axiomatic thought is very close to the
pragmatism of Harris; and, as already noted, Herder accepted Harris's ideas.

What is Harris's position in respect of his views of linguistic function?
Some indication is given in the epigraph of this chapter,[19] and the full context
of those remarks, from the preface to *Hermes*, is reproduced here:

> *A like evil to that of admiring only the authors of our own age, is that of admiring
> only the authors of one particular Science. ...*
>   *There are few Sciences more intrinsically valuable, than* MATHEMATICS. *It is hard
> indeed to say, to which they have more contributed, whether to the Utilities of Life, or to the
> sublimest parts of Science. They are the noblest Praxis of* LOGIC, *or* UNIVERSAL
> REASONING. *It is thro' them we may perceive, how the stated Forms of Syllogism are
> exemplified in one Subject, namely the Predicament of* QUANTITY. *By marking the force of
> these Forms, as they are applied here, we may be enabled to apply them of ourselves
> elsewhere. Nay farther still—by viewing the* MIND, *during its process in these
> syllogistic employments, we may come to know in part, what kind of Being it is; since*
> MIND, *like other Powers, can be only known from its* Operations. *Whoever therefore will
> study* Mathematics *in this view, will become not only by Mathematics in this a more expert
> Logician, and by Logic a more rational Mathematician, but a wiser Philosopher, and an
> acuter Reasoner, in all the possible subjects either of science or deliberation.*
>   *But when* MATHEMATICS, *instead of being applied to this excellent purpose, are used not
> to exemplify* LOGIC, *but to supply its place; no wonder if* LOGIC *pass into contempt, and
> if* MATHEMATICS, *instead of furthering science, become in fact an obstacle ... For when*

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[19] *Translator's note:* In the Dutch text, the passage is used in full as the epigraph of this chapter.
Harris's italicizations and capitalizations have been preserved only in connected passages.

men, knowing nothing of that Reasoning which is universal, *come to attach themselves for years* to a single Species, *a species wholly involved* in Lines and Numbers only; *they grow insensibly to believe these last as inseparable from all Reasoning, as the poor* Indians *thought every horseman to be inseparable from his horse.*

And thus we see the use, nay the necessity of enlarging our literary views, lest even Knowledge *itself should obstruct its own growth, and perform in some measure the part of ignorance and barbarity.* (1771: xii-xv)

Here Harris throws down the gauntlet before the mathematical philosophers. Apart from being opposed to the overvaluation of mathematical processes in axiomatic theories, he also breaks a lance against the spirit of modernity which despises the classics, and as a result of which, "in Philosophy, in Poetry, in every kind of subject whether serious or ludicrous, whether sacred or profane, we think perfection with ourselves and that it is superfluous to search farther" (pp. xi-xii). This spirit of modernity (*l'esprit du progrès*), had in fact been propagated in the soil of axiomatic rationalism; and Cartesianism had most expressly defied the authority of classical antiquity and proclaimed new certainties. It was with these two grievances against the 'modern' school that Harris enters into the linguistic theories of his *Inquiry.*

We have seen how axiomatic rationalism proceeded: that it began by setting up a theoretical structure in accordance with the mental processes which mathematicians had confirmed, or believed they had confirmed, from objective data. Language was then measured against the yardstick of the truths thus obtained. No natural language as such could withstand this scrutiny. Axiomatic theory therefore rejected it in the form in which it existed, suggested or tried out correction or reconstruction, as in Descartes, Wilkins and, *mutatis mutandis,* in Leibniz; alternatively, this theory reduced language to a device for recording technical data, as in Hobbes or *mutatis mutandis* Leibniz; natural language was either adequate if remedied, as it had been for Locke, or its imperfections were explained away by the establishment of a hierarchy of pseudo-logical degrees of clarity, as in Leibniz. Pragmatists, by contrast, aimed from the outset to justify the rationality and truth-content of language, and were not prepared to yield an inch to the criticisms of the axiomatic school. Pragmatism ties itself in knots, and in the process contorts the object of its tenderness; having demolished the mathematical rigour of the logical criterion, it sets out, in proposing other functions of language which are also rationally justifiable, to re-establish a criterion, and bases the gravamen of its advocacy on functional properties of language which in principle justify its autonomy. In other words, the pragmatic theory of language had opened its eyes, or reopened them, to various functional aspects of language to which

axiomatic theory paid little heed, or none at all—such aspects as the historical, social, economic, aesthetic, ethical, and also psychological and the physical ones; and since it was firmly linked to language as it is, to semasiology itself.

Harris, too, maintains the autonomy of language against Locke, Hobbes and others, and he does so by making use of classical philosophical structures.

Hermes [20] is a three-part work. Parts I and II are closely associated; they contain an analysis of language based on the clauses which make it up, dealing with its matter from the standpoint of a descriptive theory of meaning. Part III deals with the matter in another way; it distinguishes the material (sounds) and form (meanings) and goes on to give a characterization of certain individual languages.

Language is an "energy", Harris proclaims on pages 1–2: "SPEECH is the joint ENERGIE of our best and noblest Faculties, (that is to say, of our *Reason* and our *social Affection*"); and he goes on:

> SYNTHESIS, ... *by combining two Truths produces a third* ... in continued Demonstration, till we are led, as by a road, into the regions of SCIENCE ...
> ... *Synthesis,* which alone applies itself to our *Intellect* or *Reason,* and which to conduct according to Rule, constitutes the Art of LOGIC. (1771: 3f.)

The "rule" is not elaborated any further; it corresponds to the συμπλοκή ('interweaving') of Aristotle's *Categories* and *De Interpretatione,* and the theory of propositions based on axiomatic logic stands little chance. It is said of a man "that *he speaks his* MIND; i.e. as much as to say, that his Speech or Discourse is *a publishing of some Energie or Motion of his Soul"* (p. 15). Hence Harris distinguishes sentences into assertions and "sentences of volition" (interrogative, imperative, precative, optative), according to the "powers of the Soul", themselves seen as perception and volition. Harris derives this directly from Ammonius' commentary on *De Interpretatione,* but he omits the conclusion that the speaker benefits only from the faculty of knowing; and this alone is able to distinguish the true from the false, and nothing else can do this (*Sola etiam Enuntians a cognoscendi facultate proficiscitur. ... Itaque haec sola verum falsum capit: praeterea vero nulla*). "ALL SPEECH, every Whole, every Section, every Paragraph, every sentence, imply a certain *Meaning"* (p. 21). The "Rule of truth", or briefly "Truths" in sentences, receive no further mention. At the beginning he brings all manner of combinations of terms under this head; and although he incorporates

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[20] Although the *Treatises* make many pertinent observations about language, especially in aesthetic matters, this work is not considered here.

"Compositions, which are productive of the Pathetic and the Pleasant in all their kinds" as being "addressed to the *Imagination*, the *Affections*, and the *Sense*" under the heading of "Rhetoric" or "Poetry", Harris is careful not to deny them the content of truth or falsehood: *"Logic* may indeed subsist without RHETORIC or POETRY"—but the reverse is not true (pp. 4-6). Rhetorical and poetic language remains rational. This is characteristic of Harris's fundamental attitudes. It is only in Book III that the question of truth comes under discussion again, in the context of particular and general ideas. Here, too, he concludes, "a SENTENCE may be sketch'd in the following description—*a compound Quantity of Sound significant"* (pp. 19-20).

In Book I, chapter 3 Harris continues with his analysis of "the smallest Parts of Speech", i.e. "the Species of Words". Funke (1928: 16ff.) devotes some forty pages to an account of Harris, going into great detail about the classification of parts of speech which now follows;[21] but this is unnecessary for the present purposes. Harris's main classification is into (1) "Principals", subdivided into (a) substantives and (b) attributives, and (2) "Accessories", subdivided into definitives and connectives. (Harris places pronouns among the substantives; the attributives are (finite) verbs, together with participles and adjectives. Adverbs are attributives of the second rank. Among definitives Harris includes the article and such pronouns as *some, any* and *all.* The Accessories make up the content of Book II.)

A few observations are in order. Harris does not manage to avoid speculation about the verb substantive; but he does not adopt the artificial logical reduction which was taken to extremes by the axiomatic rationalists, after the manner of terminism. The verb 'to be' may be used absolutely, e.g. "B is", or with qualification, e.g. "B IS AN ANIMAL" (p. 89). In the latter case, "it is a mere assertion". 'To be' expresses "existence" and also defines "mutable or immutable", for example on the one hand *"This orange is ripe",* and on the other *"The Diameter* [sc. 'diagonal'] *of the Square is incommensurable with its side.* ... The opposition is not of *Time present* to *other Times,* but of *necessary Existence* to *all*

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[21]   A critique of the criticism of Funke, who was a follower, and indeed the champion of Marty, would take us too far. At places where Harris was unsuccessful—in keeping within the bounds of semasiology—Funke may, indeed, be seen giving praise to Harris. For example, where Harris makes a distinction between Substantives natural (e.g. *animal, oak*) and Substantives of our own making (e.g. *house, ship, watch*) (1928: 37), Funke (p. 19) remarks: "This distinction is not unimportant from a semasiological point of view; ... the economist speaks in such cases of 'utility value', and a semantic analysis would also have to take account of these relationships." A criticism of this kind could provide the beginnings of a criticism of the linguistic theory of Marty and Funke themselves.

temporary Existence whatever" (p. 92). Harris bases this on Boethius' commentary on *De Interpretatione*, and it may be asserted that, if it had not been for Harris's classicism, he would have given even less space in his work to such an analysis than he did, and he might, indeed, have overlooked it altogether. Harris's aim at all times is to give semasiological explanations, not logical ones. This applies to his distinction between verb, participle and adjective. Funke (1928: 26) observes justly:

> At all events he refrains from doing violence to the empirical linguistic data; and in this he is shown to advantage against both earlier and later authors, who have attempted to impose certain categorical schemes on language by force.[H]

But Harris's rationalism is a hindrance here, as can be seen in his view of interjections, which *"co-incide with no Part of Speech, but are either uttered alone, or else thrown into a Sentence, without altering its Form, either in Syntax or Signification"* (p. 289). —— What are they then?

> It may be answered: not so properly Parts of Speech, as adventitious Sounds; certain VOICES OF NATURE, rather than Voices of *Art*, expressing those Passions and natural Emotions, which spontaneously arise in the human Soul, upon the View or Narrative of interesting Events. (p. 290)

This view is implicit in Harris's premiss that language arose arbitrarily (*ad placitum*), as a regular and systematic artefact. There is no room in this for discharges of emotion. We are confronted with these questions in the final Book, the most significant one in the present context, dealing with the material (i.e. the sounds), and the form (i.e. the meaning) of language.

This application of the duality of form and material is clearly another revival of classical modes of thought. Funke, to be sure, realized (1928: 35) that Harris was applying this hypothesis not so much in a Platonic or an Aristotelian sense as in a neo-Platonic one. "The Matter, the common Subject of Language" is disposed of in a dozen pages (pp. 316-327). Harris's views on the physiology of sound are here restricted to a few general remarks about vowels and consonants, where the latter, in particular, are classed as "articulations". Harris comes into his own in chapter 3, "Upon the Form or peculiar Character of Language". We will follow his argument step by step. Harris accepts, as Aristotle had done, that language arose κάτα συνθήκην (by agreement). So,

> WHEN to any articulate Voice there accedes *by compact* a Meaning or Signification, such Voice by such accession is then called a WORD; and many Words, possessing their Significations (as it were) *under the same Compact* ... , unite in constituting A PARTICULAR LANGUAGE. (p. 328)

This may seem tantamount to calling "Language a kind of Picture of the Universe, where the Words are as the Figures of Images of all particulars", much as Leibniz had spoken of a *Speculum Universi*. But this is not so, for in that case

> whoever has natural faculties to know the Original [22] will by help of the same faculties know also its Imitations [glossed on p. 330 as 'pictures' or 'images']. But it by no means follows, that he who knows any Being, should know for that reason its *Greek* or *Latin* name. (p. 331)

The medium by which we show anybody anything may derive from a natural attribute, and if so, it is an imitation; or if it derives "from *Accidents* quite arbitrary, ... then it is a SYMBOL". Given that in the great majority of cases natural attributes are not sounds, "WORDS *must of necessity be* SYMBOLS" (p. 332). But symbols "are only known by Habit or Institution, while Imitations are recognised by a kind of natural Intuition". Why then, in spite of this, is there such a preference for the symbol? Harris replies that if our emotions were visible, as our features are, "the Art of Speech or Discourse" (p. 333) would be superfluous. But since "our Minds lie inveloped", we need *"a Medium which is corporeal"* to convey our feelings. For this reason signs, whether imitations or symbols, must be perceptible to the senses. But the eye cannot perceive sounds, nor can the ear perceive shapes or colours. Imitation must stay within the limits of the sense-perceptions. When we consider the intricacy, the difficulty, the clumsiness, and in the case of many objects, the sheer impossibility of imitation, we can see why symbols are given preference, declares Harris. "Simplicity, ease and speed" are each an advantage of symbols: "All objects may be typified by Symbols" (p. 335). This is the reason *"why there never was a Language, nor indeed can possibly be framed one, to express the Properties and real Essences of things,* as a Mirrour exhibits their Figures and their Colours" (p. 336).[23]

Of what are words symbols? Not of "particular beings" (p. 338). How, then, is a lexicographer to conduct his business? Individual objects are infinite in number, and a proportion of them must necessarily consist of "proper names" and be inexplicable. In addition, the individual is "passing and changing". Hence, even a "general proposition" must be impossible. "But if

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[22] Compare the concept of originality in the deductive thought of Meiner, discussed above, pp. 333f. Here the direction of the relationship is diametrically opposite.

[23] The artificial languages of Wilkins, Leibniz and others are, of course, not shown here to be impossible. Harris merely proves the impossibility of an imitative language. Leibniz required no more than a congruence, a *proportio*, between the "frame", the mathematical structure of reality and that of his artificial language. But the tendency towards imitation in Leibniz is only too apparent in his sound symbolism. And does not the monad *reflect* the world?

so, then is Language incapable of communicating *General Affirmative Truths*—If so, then of communicating *Demonstration*"; but this is something Harris will not permit language to do without: "WORDS ... must be SYMBOLS OF OUR IDEAS ... if SYMBOLS OF IDEAS, then of WHAT IDEAS? OF SENSIBLE IDEAS" (p. 340). But then all the problems of "particular beings" return, for *"Ideas*, which *Particulars* imprint, must needs be *infinite* and *mutable"*. Symbols can therefore be no more than symbols of *general ideas;* i.e. "SUCH AS ARE COMMON TO MANY INDIVIDUALS"; and when the matter is looked at in this light, it is clear that lexicographers can ensure that language can be "definite" and "steady", "expressive of general Truths". Very well; if this is so, then:

> Language may answer well enough the purpose of Philosophers, who reason
> about *general,* and *abstract* Subjects—but what becomes of the business of ordinary
> Life? Life we know is merged in a multitude of *Particulars,* where an Explanation
> by Language is as requisite, as in the highest Theorems. (p. 344)

It is precisely "the Arts"—in this case the art of language, which "respect the business of ordinary Life". But, "without them [sc. general terms], no art can be *rationally* explained". But this does not in fact satisfy the requirements of language: *"to the perfection and completion of* LANGUAGE, *it should be expressive of* PARTICULARS *as well as of* GENERALS" (p. 345), and for Harris "proper names", or articles or *"Definitives properly applied to general Terms"* serve this purpose. Thus he is able to conclude: "the Sum of all is, THAT WORDS ARE THE SYMBOLS OF IDEAS BOTH GENERAL AND PARTICULAR; YET OF THE GENERAL, PRIMARILY, ESSENTIALLY AND IMMEDIATELY; OF THE PARTICULAR, ONLY SECONDARILY, ACCIDENTALLY, AND MEDIATELY" (p. 348). It is as a result of this double function (Harris's term is 'double capacity') that language is in a position to interpret, or 'explain', both intellection (reasoned understanding) and sensation (perception).

In Chapter 4, which now follows, Harris develops in detail his feelings on the nature and the origin of general ideas. Sense perceptions are "indefinite, fleeting, transient" (p. 352). "Receptive power" is, however, assisted by "imagination or fancy" ('phansy', p. 356 *n.*), the "retentive power".[24] Since imagination congeals and freezes (the image is Harris's), the "higher powers" of 'Reasoning' and 'Intellection' come into play. The human mind sees

> what in MANY is ONE, what in things DISSIMILAR and DIFFERENT is SIMILAR
> and the SAME [*footnote:* a "connective Act of the Soul"] ...

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[24]   *Translator's note:* Harris appears here to conflate the earlier use of *imaginatio* and *phantasia.* Cf.
my remarks above (p. 215, *n.* 23).

> And thus we see the *Process by which we arrive at* GENERAL IDEAS; ... of these comprehensive and permanent ideas, the genuine perceptions of the mind, words are the symbols. ... Now it is of these COMPREHENSIVE and PERMANENT IDEAS, THE GENUINE PERCEPTIONS OF PURE MIND, that WORDS of all languages, however different, are the SYMBOLS. (pp. 362–368)

After the process of acquisition Harris goes on to the question of origin or source. His conclusions are, in brief, as follows: just as works of art begin as "intelligible forms" in the mind of the artist, so must the forms of the "works of nature", being clearly "made by design", lie as "exemplars, patterns, forms, ideas, immutable archetypes in ... a Mind" (pp. 376–380). Harris is alluding to "the Deity", though he is rather mysterious about this view.

Before going on to discuss the final chapter, it might be well to attempt to draw some conclusions from what has been noted so far.

It is clear that Harris is, above all, making use here of neo-Platonic hypotheses, as his quotations indicate; these are taken from Simplicius, Ammonius, Nicephorus Blemmides. General ideas are of *divine* origin, and it is this which guarantees their truth, and man's certainty. Harris continually argues against Hobbes and Locke (see, for example, p. 368, *note* f), and particularly against Locke's empiricism. Observe their accounts of the order of things, warns Harris (pp. 392 ff.). The first things which impress "the Metaphysicians" are "the sensible world" and "sensible ideas":

> Then out of sensible Ideas, by a kind of lapping and pruning, are made *Ideas intelligible, whether specific or general.* Thus should they admit that MIND was coeval with BODY, yet *till* BODY *gave it Ideas,* and awakened its dormant Powers, it could at best have been nothing more, *than a sort of dead Capacity; for* INNATE IDEAS it *could not possibly have any.* ...[25]
>
> But the *intellectual* Scheme, which never forgets Deity, postpones every thing *corporeal* to the *primary mental Cause.* It is here it looks for the origin of *intelligible* Ideas, even of those, which exist in *human* Capacities. (pp. 392–393)

Harris is a non-empirical pragmatist who—let us not forget in the midst of all these philosophical arguments—is writing a universal grammar. Port-Royal had sought to legitimize language by pointing out its general rationality, but in vague terms, and without any indication of any firmer foundation. Harris is much more certain of his case, but, after all, he came a century later. The truth and validity of language are now maintained by philosophical arguments, and these, as we have seen, with an invocation of classical patterns of philosophical thought. Language is based on truths, and conveys

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[25] There is not the slightest hint in Harris of any dependence on Descartes' writings.

truths, though these are not the ones provided by the modern metaphysics of physical or mathematical science, but those which had been implanted in the "human mind" from the beginning of time as "general ideas", as universal scientific and practical notions. Against this truth content Harris is able to assess language with assurance. We continue to *understand* the ancient Greeks and Romans across the centuries, and what language conveys of their thought remains in general valid for us. Realism and Humanism both provide Harris with schemes of thought which allow him to defend the rationality of language from the criticism of axiomatic thinkers:

> *If there be* A KNOWLEGE more accurate than SENSATION, there must be *certain objects of such Knowledge* MORE TRUE THAN OBJECT OF SENSE. ... And *how* are they to be discovered? Not by *experimental Philosophy* it is plain; ... nor even by the more refined and rational speculation of *Mathematics*.)[26]

No, indeed, for "they reside in our own MINDS" (pp. 371f., *n*.). Thus language exists for Harris in its own right. Yet he nevertheless vindicates its rational validity; and so, while he is indeed a pragmatist, he is nevertheless at heart a thorough rationalist.

After Harris had demonstrated that "common identic ideas" came from the "Mind divine", and finished with two quotations—from Lucretius and Virgil—in which the corporeal nature (*corporea natura*) of the soul is contrasted with its celestial origin (*caelestis origo*), he began the final chapter of Book III as follows (1751: 403f.):

> ORIGINAL TRUTH, having the most intimate connection with the *supreme Intelligence*, may be said (as it were) to shine with unchangeable splendor, enlightening throughout the Universe every possible Subject, by nature susceptible of its benign influence.

Here if anywhere it is clear that he is using neo-Platonic thought to establish the *a priori* truth of pragmatic procedures, as applied, in this case, to language.

The extent to which this contrast—i.e. the contrast between, on the one hand, the axiomatic bias of reasoning in mathematics and the physical sciences, where certainty derives from theoretical method, and on the other hand innovative practical knowledge and truth—repeatedly dominated Har-

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[26] As a (neo-)Platonist, Harris had great respect for mathematics, but he rejected it as a universal calculus of thought (see the quotation from his preface, pp. 355f. above). Mathematics does not provide universal truth, but itself derives from universal truth, "for this [sc. mathematics], at its very commencement, takes such object [sc. the general ideas] for granted" (1741: 372, *n*.). Still less does Harris acknowledge any concept of symbols which match thought precisely.

ris's thinking, is shown in an extensive footnote on pp. 403f. It might in fact be expected that he is sharpest in his criticism of the empiricism of Locke, and, otherwise, in view of his own express adoption of the term 'innate ideas' that he had Cartesian sympathies. In this note he inveighs against axiomatic rationalism in general, and here the views not only of Hobbes and Descartes, but also of Locke may be recognized; but he also makes an affectionate genu-flection towards the Platonism of Cudworth and the Cambridge School.[27] In his criticism of the axiomatic rationalists' view of truth as a "factitious thing", with which he then contrasts is "original truth" of the "identic common ideas" (p. 399), the tenuousness and vagueness of his own concept of truth must have caused Harris some misgivings. In so far as he rejects the "making" or construction of a system of truths in advance, and refuses to go beyond language in questions of meaning, he must inevitably come to the point of fixing immanent general truths immanently in language, or lan-guages. The concept of genius, which we have noted in his immediate source, Shaftesbury, serves to this end: there is now, after all, a "Difference of Ideas, both in particular Men and in whole Nations". Harris elaborates a charac-terization of English—praised for its "copiousness" (p. 409), based though this is on loanwords, of the Oriental languages—"the tumid and bombast" (p. 411) of these languages derives from despotism and slavery in these societies, of Latin —politics, history and popular eloquence determined what kind of nation the Romans were, of Greek—and here comes the highest encomium:

> They were the politest, the bravest (the most heroic) and the wisest of men. In the short space of little more than a Century, they became such Statesmen, Warriors, Orators, Historians, Physicians, Poets, Critics, Painters, Sculptors, Architects, and (last of all) Philosophers, that one can hardly help considering

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[27] "Those Philosophers, whose Ideas of *Being* and *Knowlege* are derived from *Body* and *Sensation*, have a short method to explain the nature of TRUTH. It is a *factitious* thing, made by every man for himself [? Hobbes]... According to this Hypothesis, there are many Truths, which have been, and are no longer; others, that will be, and have not been yet; and multitudes, that possibly may never exist at all.

But there are other Reasoners [presumably Cudworth and the like], who must surely have had very different notions; those I mean, who represent TRUTH not the *last*, but the *first* of Beings; who call it *immutable, eternal, omnipresent*, Attributes, that all indicate something more than human. To these it must appear somewhat strange, how men should imagine, that a crude account of method [the Cartesian school] *how they perceive* Truth, was to pass for an account of *Truth itself*, as if to describe the road to *London*, could be called a Description of the Metropolis.

For my own part, when I read the detail about Sensation and Reflection [in Locke], and am taught the process at large how my Ideas are all generated, I seem to view the human Soul in the light of a Crucible, where Truths are produced by a kind of logical Chemistry". (Conjectures in square brackets by P. A.V.)

THAT GOLDEN PERIOD, as a Providential Event in honour of human Nature.
  NOW THE LANGUAGE OF THESE GREEKS was truly like themselves, it was
conformable to their transcendent and universal Genius (pp. 416–418). ...
  AND thus is THE GREEK TONGUE, *from its Propriety and Universality, made for
all that is great, and all that is beautiful, in every Subject, and under every Form of writing.*
(pp. 424f.)

The work concludes with a typical encomium of practical knowledge: "In truth, each man's Understanding, when ripened and mature, is a composite of natural Capacity, and of superinduced Habit." And as we might forget that, for all his humanistic aestheticism, Harris is both a pragmatist and a rationalist, the last clauses will disabuse us: "AND so much at present as to GENERAL IDEAS; *how we acquire them; whence they are derived; what is their Nature; and what their connection with Language.* So much likewise as to the Subject of this Treatise, UNIVERSAL GRAMMAR" (p. 427).

I conclude with a few more lines of critical appreciation. In investigating the concept of function I have used as an indicator the criteria the authors apply to language. For no science can exist without criticism—in the sense of applying standards—not even a science of language which gives credit to the practices of language. Now Harris's work concludes by ascribing a language-immanent optimum to a given natural language, viz. Greek. The reason for this lies in the vague assertion that Greek is the most philosophical, the most poetic, etc., of all languages. In his review of the unsuccessful rivals other criteria are mentioned, such as "copiousness", which English possesses in good measure; but in "elegance", "regularity", and "analogy" it falls short. At the beginning of his characterization Harris states that he proposes to observe, "since the *Symbol* must of course correspond to its *Archetype,* how the *wisest* Nations, having the *most* and *best Ideas,* will consequently have the *best and most copious Languages...*" (pp. 407f.). On the previous page he had remarked:

  Partial views, the Imperfections of Sense; Inattention, Idleness, the turbulence
  of Passions, Education, local Sentiments, Opinions, and Belief, conspire in many
  instances to furnish us with Ideas, some *too general,* some *too partial,* and (what is
  worse than all this) with many that are *erroneous,* and contrary to Truth.

But this means that language is deprived of its basis: for where, in this case, is the final criterion, the truth? Axiomatic rationalism retains its priorities of exact standards (compare Leibniz's adoption of grades of clarity in his system), though in this case remoteness from language goes to the extreme. On the other hand, Harris's pragmatic criteria are closer to language, though they are still rationalistic in character, with a measure of aesthetic modification in places. Pragmatic knowledge and skill is apparent here, too,

as a basic trait; and "regularity" and "analogy" must be borne in mind.

Harris's aim, like that of all pragmatic apologists for language, is to fend off criticism based on deductive logic. Language is, indeed, rational, but not rational in the axiomatic manner, i.e. accountable to a mathematical and metaphysical order of being. Language, in his view, reflects ideas which are alive in us and emanate from the divine mind. But even then, although languages correspond for him as a pragmatist to a general rationality, he still has to account for the differences between languages. Axiomatic rationalists did not account for it, but rather rejected it, apart from Leibniz, of course, for he did, indeed, proclaim a rational grammar (*grammaire rationelle*), but had seen a possibility of reconciling this with a positive evaluation of the different languages. Harris did not succeed in doing this: the general truths he introduced as legitimation of language are outweighed by the notion of national character, which is given the task of legitimizing the individuality of each language. But the concept of national character is nothing more or less than the hypostatization of the peculiarities of an individual language, and can therefore hardly serve as a criterion of the features by which languages are differentiated. The different quality of one language as compared with another is accounted for in the very concept of national character. There is only one way out of this difficulty, that one language is chosen as the highest, as the ideal; and this is what Harris does. He chooses Greek, and does so on the grounds of linguistic and extralinguistic qualities. We shall see something similar later in Diderot, but applied in this case, to the French language.

Lord Monboddo

Harris had avoided the question of glottogony; Smith had approached it, but without getting further than demonstrating the priority of simple ideas, after the manner of Locke. While Smith's brief essay in linguistic theory was not well-known to international scholars, the comprehensive work of his contemporary James Burnet(t), Lord Monboddo (1714-1799), *Of the Origin and Progress of Language* (1773-92), did have a much greater international influence, and a German translation, made at the instance of Herder, was published at Riga in 1784. In this work the question of origin stands at the forefront.

Harris and Monboddo were friends; Monboddo was only five years Harris's junior, yet his work did not begin to appear until twenty years after *Hermes*. Although, like Harris, he was a classicist, he does allow in many respects a broadening of the horizons of linguistics. He was like de Brosses in having some acquaintance with Sanskrit (see Benfey 1869: 350-1), and in

addition he uses Huron, for example, and other American languages in his examples.

Monboddo goes further in opposition to axiomatic linguistic theory than Harris did, and as a result the defensive tone of Harris is replaced by a more positive projection of his ideas.

Otto Funke (1934: 54-84)[28] has already given a detailed analysis of the general principles of Monboddo's work, and the present study is concerned solely with his views on the functions of language, so there are two reasons for brevity here.

Harris had legitimized language, vindicating its validity by reference to the ideas which the "divine mind" had projected into the "human mind". Monboddo was, of course, a pupil of Harris, but he was also a pupil of Reid. The Scottish School preached the primacy of purely human "common sense". Monboddo achieves something of a blend of these two standpoints:

> I most firmly believe, that there is a *governing mind* in the universe, *immaterial, eternal,* and *unchangeable;* that our minds are of a nature congenial to this supreme mind; and that there is in us, even at birth, a portion of those *celestial seeds.* (1773: I, 129)

There follows the quotation from Virgil with which Harris had concluded his fourth Book, "The energy of those seeds is fiery and their origin celestial" (*Igneus est ollis vigor et coelestis origo semibus ...*). "The *particle of the divinity* within us ... is then so immersed in matter, and *imbruted,* if I may so speak, that it cannot exert that power of *self-motion* which is peculiar to its nature" (p. 130). But in the end this power is released, so that "every man is the architect of his own ideas, and creates a little intellectual world within his own mind" (p. 147). This microcosm has, however, nothing to do with Leibniz's reflecting monad, nor does it derive its content by abstraction from the material world, a view expressed by Locke and the sensualists which Monboddo derides; instead, man forms his ideas individually and creatively. In this last view Monboddo inclines towards the "common sense" theory (see Windelband &

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[28] Although he had in earlier pages dealt even more exhaustively with Harris (see the discussion of Harris above) and as it were rehabilitated him, I have not been deterred from treating Harris independently, and in several places from a totally different point of view; I had too many reservations, chiefly on account of the way Funke assigned Harris to his historical context, but also because of his characterization of Harris's basic principles, to be able to base my assessment on Funke's. The position is somewhat different in the case of Monboddo: I find Funke's careful analysis, or rather description, of Monboddo's work much more acceptable. A great deal of Monboddo's many-sided, but not strictly organized work may be left aside in the investigation of functions.

Heimsoeth 1948: 386). According to Harris, general ideas are always decreed for us by an act of God in more or less complete form, and common to all creatures, but according to Monboddo they are spontaneously constructed, so that the process of construction is thus more subjective and individual for him than it is for Harris. And it is here that we come to the heart of Monboddo's concept of function. An understanding which shapes, a *ratio formans*, not an understanding which is already shaped, a *ratio formata*, is the driving force of language. He does, indeed, consider reason to be the source of language, but in doing so takes over enough from Harris, viz. the divine origin of reason, to give transcendental support to the validity and truth-content of language; but above all, writing some twenty years after Harris, he once again adopts a less defensive stance than Harris had done, and his work amounts to a positive attempt to establish the fundamental principles of language, its origin and development.

Monboddo begins Book I by indicating that language is not natural to man (φύσει). He attempts to establish this by the character of the ideas which language expresses, and also by the nature of articulation. That he takes thirteen chapters to deal with the ideas, and only one to deal with articulation, does not detract from this emphasis on articulation. Monboddo is still encumbered with the heritage of Harris, who had seen meaning as form, and sound as substance. Monboddo's active concept of form cannot remain within the bounds of Harris's form (i.e. meaning), for the physical side of language—the sound-system (i.e. articulation)—is clearly something formed.

Monboddo's treatment of ideas and his polemic against Locke will not be discussed here; but one typical view must be noted. Monboddo agrees whole-heartedly that the forming spirit is active in Locke's "reflection"; but what, then, of Locke's ideas of sensation? The mind intervenes to give form even in these earliest perceptions:

> It might be doubted whether this faculty, as well as others, was not from nature. But the account I have given of human nature shews clearly, that it is almost wholly composed of artificial habits; and that even the perceptions of sense, which one should think were natural, if any thing belonging to us was so, are, for the greater part, the result of acquired habit. In *seeing*, for example, we *naturally* perceive no distance, and see the object inverted, double, and of no greater magnitude than the pictures upon the bottom of our eye. (p. 151)

Even at this early stage, then, the mind is shaping experience.

Book II of the first volume shows that, once abstract ideas have been formed and articulation has been established, a certain degree of social development (the "political stage") must be attained before language can be inven-

ted; and this, once again, is a product of the forming action of the under-
standing. There are thus three phases, or as many artefacts, which precede
the invention of language, which therefore must be considered a secondary
artefact. Before these arts, these skills and accomplishments, lies an animal-
like inchoate state in the intellectual, material and social spheres. The second
period begins with the power of the mind to give shapes. Gestures, unarticul-
ated sounds and even primitive onomatopoeia are therefore, in Monboddo's
view, not part of language, but prelinguistic stages of development towards
language.

If the formative understanding is in this way the creator of language, and
determines its basic function, then the further criteria applied by Monboddo
to language consistently derive from this initial function. The degree of
structural formedness, that is, in his view, of civilization, provides the critical
parameters; and, since Greek has such a wealth of forms and structural
refinement, it therefore represents the highest achievement. Languages are
rational structures, constructed consciously on aesthetic and formal principles
by men, or nations, of genius. (They could also, in his view, have been
created independently in varions locations.) Herder notes, in his preface to
the German translation of Monboddo: "... his first attempts to compare with
one another various languages of different nations at different stages of
cultural development, will always be considered preparatory works of a
master" (Monboddo 1784: I, f. a 5 r).[1]

This formative energy is, in Monboddo's view, also aesthetic accomplish-
ment. (Herder, too, had been drawn to Harris on account of this view.)
However, Monboddo does not allow the emotional component, that pet
theme of the Romantics, to proceed beyond the primitive stage of prelin-
guistic communication. In Book III, Chapters 3 and 4, we read that the series
of sounds upon which articulation operated were cries which "expressed", as
Monboddo puts it a little later, "some appetite, desire, or inclination ... before
language was invented" (1773: I, 135).

> Then names would be invented of such and such events as they were conversant
> with. This increase of words would make more articulation necessary. And thus
> the language would grow by degrees, ... till at last the languages became too
> cumbersome for use; and then art was obliged to interpose, and form a
> language according to rule and method. (pp. 325f.)

He denies that roots are the primitive components of language. Monboddo
sees roots, so to speak, as supports for constructions, and these can have no
place in the unstructured prelinguistic primitive phase.

Radical words in a formed *language* may be said, in one sense, to be the first words of the language, and are accordingly called *primitives*. But such words are far from being the first invented words: for the barbarous languages having no composition or derivation, can have no roots ... . And in general, it is in vain to seek for any thing like art in the truly primitive languages; which being produced by the necessities of life, and used only to serve those necessities, had at first no rule or analogy of any kind. ... (pp. 397f.)

Part II consists of four books, three in Vol. II, dealing in turn with the "Analysis of the Formal Part of Language" (on parts of speech), the "Analysis of the Material Part of Language" (on accent, articulation and quantity), on the "Composition of Language" (on syntax). The fourth book, occupying the whole of Vol. III, is "On Style".

Here Monboddo is writing a general grammar, deriving his examples not only from Indo-European and Semitic languages, but also from those of North and South America. The higher the level of structural complexity he identifies in a language, the higher the culture to which he assigns it. Harris had already described a language as a system; Monboddo discusses inflections, derivational and compositional rules in detail, making a consistent analysis of systematic organization.[29]

How does Monboddo envisage the function of language? Let us begin by asserting that Monboddo's great achievement lay in subjecting the formative element in language to special investigation, and that he did so with a quality of observation which was highly creditable for his time. But how does he regard this formative element of language? The ability to give form and the awareness of form constitute the innovative qualities of language; and these are the product of its rational quality: reason calls language into being according to a conscious plan of classification; reason *is* language, because it classifies. My earlier discussion of the linguistic theories of the pragmatic rationalists has consistently shown that the principle of accounting for the facts ("giving the reason", *rationem reddere*) reveals that language has qualities, or rather operations, which strongly suggest that it is rational. In spite of his positive attitude, Monboddo himself was not exempt from this preoccupation,

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[29]   Funke (1934: 73) is right to observe that Monboddo requires (1) clear and distinct expression of concepts; a language of this kind must organize the infinity of objects in a fully-developed classification system; (2) linguistic expression must be as compact as possible, hence have a synthetic structure (inflection, composition, derivation); (3) the relationship of words must be visible in linguistic expression; there must therefore be a syntax which makes the structure of ideas apparent; (4) finally it must have aesthetically attractive sounds and cadences, characterized by a balanced interchange between vowel and consonant sounds.

which had been laid upon the apologists of language by the lasting contro-
versy with the axiomatic rationalists. He does not regard the formative quality
of language as a linguistic sub-function, something subordinate to language,
or, to put it another way, an autonomous function in the semantic field; in
his view language is, rather, a formative principle (*ratio formans*), an expression
of an ability to formalize which he regards as consciously established,
organized arrangement and classification. The principal cause of this
misapprehension lies in the fact that Monboddo did not institute any formal
synchronic investigation of function, but posited a diachronic and genetic
theory of origin. For him language must in some way emerge from thought;
this idea is the obsession of all rationalists when they consider the question
of origin. Pragmatic linguistic theory does, indeed, diverge at this point from
the axiomatic view of thought as a mathematically exact process, and this is
a gain for pragmatism. But then an inherent factor of language—in
Monboddo's case articulation and formal regularity—is separated out and
transmuted into a cardinal principle and fundamental law of thought.
Arranging data is, to be sure, one of the things language does—it also
structures situations; compare, for example, Reichling's views—but
arrangement is not the main activity of language, and *a fortiori*, the arrange-
ment given by language is not a rationally planned or rationally imposed
objective. The essential characteristic (νόμος) of an autonomous linguistic
function does not lie here, and the autonomous criteria of language cannot
be derived from its degree of formal regularity. Monboddo then comes to a
halt—in part as a result of the parallel he draws between the formativity of
language and degree of civilisation—as may be seen for example in his
observations on Garanic, a language of Paraguay. Vol. I, Book III, Chapter
9 is headed (p. 371), *inter alia*, an "Account of Languages that are not
barbarous spoken by Barbarous Nations;—such as that of the Garani,—of the
Algonkins,—of the Goths,—of the Albinaquois. — This last too artificial".
Monboddo identifies all manner of formational virtues and complexities of
inflection, derivation, composition and syntax in these languages. Of the
Garani he says (pp. 380-381):

> for there is a people that they call *Garani*, in the country of Paraguay in South
> America, of whose language I have seen a Spanish dictionary and grammar,
> printed at Madrid in 1639, written by a Jesuit and dedicated to the Virgin
> Mary. It is very accurate, and the work of a learned grammarian, and from the
> account he gives of this language, it is a regular-formed language, as much as
> any which is now spoken in Europe, and preferable to them all in this respect,
> that it has declension of nouns by inflection, and conjugations of verbs, likewise

expressing by flection the tenses, numbers, persons, and voices. And they have
a peculiarity in the first persons plural of their nouns ... a first person plural
inclusive, that is, including both the person who speaks, and the person to whom
he speaks; and another *exclusive*, excluding the person to whom you speak. ...
This is accuracy of thinking which shews them to be far advanced in the
grammatical art, and makes me to have the same conjecture concerning them
that I mentioned with respect to the Galibi. For I think it impossible that those
who have made so little progress in the other arts of life, should have invented
so complete a language; and as they could not have learned it from any of the
nations presently in their neighbourhood, I think it very probable that, some
time or other, by one of the many changes and revolutions that have happened
in this earth, they have been connected with some more civilized nation, from
whom they have learned to speak.

Monboddo makes remarks of a similar nature on the other languages men-
tioned here.

Monboddo is struggling here with a paradox; on the one hand he is per-
suaded that there must be a connection between the "barbarous" cultural
condition of these peoples and their languages, but on the other hand the
criterion of formal complexity which he adduces causes him to rate the lan-
guages of these peoples much higher than their culture.

The formal richness of so-called primitive languages is a familiar problem
of which many aspects are obscure (see Kainz 1943: II, 90-164). The fact that
those very languages which are called primitive can have bewilderingly elabo-
rate accidence may be said to be generally realized; it is no longer possible
to escape this fact, as it was for Monboddo. Kainz describes it in psycho-
logical terms as "plasticity", and speaks of an "exceedingly difficult and multi-
farious system of forms", of the "inconsistent structural rules (*abweichende Bauge-
setze*) of these languages", of a special "inner form in the strict sense, i.e. the
individual manner it reduces the world to concepts (*begriffliche Bewältigung der
Welt*) and of the linguistic classification of the semantic contents to be
expressed" (pp. 163f.). But the problem of this primitive superfluity of forms
remains.

We may observe the gradual emergence and development of functional
potentialities in children. (I do not, however, posit a parallelism between
phylogenetic and ontogenetic development.) Here an attachment to the func-
tional substratum is revealed; the thoughts of children are for a long time
bound to an association of the tangible and the psychological, and the first
efforts at ordering are dissociated with difficulty from thinking about a situa-

tion. Similarly, childish, and "primitive"[30] early use of a language remains bound to the formative substratum of that language.[31] The child, after all, strives from the outset to gain clarity, for the very reason that he can use language to shape something to his purposes, because he uses, manipulates and incorporates language in a given situation, applies and adapts language to the situation, to the chain of cause and effect, so that it is a constructional mechanism [*in-stru-mentum*] by which he can establish the order he envisages, can control and structure the situation. In my view there is here at least some prospect of solving the problem of the abundance of forms in so-called primitive languages. Conceptualization, the process by which language as an autonomous new aim dissociates itself from the world and becomes in principle independent of it, is nevertheless such a similar process that the whole technique of conceptualization remains obvious in the formal organization of meaning.[32]

To return to Monboddo: he certainly identified and, one might say, isolated formative activity as the operative principle of language. However, he misinterpreted this activity as a means of understanding the world (*noesis*), as a deliberately planned and regular classification, and conceived this rationalizing activity, from the standpoint of a pragmatic rationalist, as a criterion of language.

Yet Monboddo, like de Brosses, and above all Rousseau, is, as we shall see, a transitional figure. From Monboddo it is but a step to Kant[33] and Wilhelm von Humboldt, and also to Herder and Hamann.

Monboddo sees languages exclusively as artefacts, that is, as rational products of culture. In his concept of "art" (*ars*) he combines technical formative skill, and aesthetic artistic potential. There is little trace in his work

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[30] It is not necessary to adopt an evolutionary standpoint to be able to speak of the "primitive", for history provides instances of nations which have lapsed into primitiveness.

[31] For the use of the terms 'formative' and 'arrangement', 'ordering', see Verburg 1951: 31ff.

[32] This aphoristic view can, no doubt, be dismissed as speculative, but I refer to the previous note; further discussion of this point is not, however, germane to the present work.

[33] Streitberg's article on Kant and linguistics (1910) gave lasting currency to the view that Kant gave no special significance to language, though his follower Humboldt did. It is strange that Kant should have been unconcerned, coming as he did in the middle of three centuries during which systems of philosophical theory had had undue influence on language, and practically no philosopher of standing had refrained from discussing language. There must be some explanation for Kant's undoubted silence. He does, indeed, make use of an analogy withthe use by man of expression in speech, when he deals with the differentiation of the arts in Pt. I of the *Critique of Judgment* (§51), but the extent of this observation is small. It seems likely that an analysis of his "Transcendental Dialectic" might yield some more material, but this is not discussed here.

of the pragmatists' efforts to legitimize language. The insight that language is a product of formation, and that this fact emerges from its formal structure,[34] provides him with a criterion; language, as the product of a self-sufficient autonomous formative spirit, is its own justification. There are striking parallels here[35] with Kant's formative spirit.[36] For all their differences there appear to be sufficient grounds for accounting Monboddo as a proto-idealist. In Monboddo's basic theoretical system of "formative reason" (*ratio formans*) there lies a possibility of reconciling pragmatic and axiomatic rationalism, which Kant achieved in philosophy.

Besides being no more than a step from Kant, it was only one step to Herder, who was responsible for introducing Monboddo to German cultural circles. Herder, and also Hamann, will be examined in a later chapter.

Shaftesbury, Harris and Monboddo have led us for a time to Great Britain, where Locke's residual axiomatic rationalism, verging on empiricism, had given an impetus to pragmatism. We now return to the home of the first explicatory grammar (*grammaire raisonnée*).

Étienne Bonnot de Condillac

The weak spot in the defences of axiomatic rationalism did not, after all, go unnoticed in France. When Étienne Bonnot de Condillac (1715-1780) began his campaign against the systems (*les systèmes*), he did so under the banner of Locke's empiricism. But this soon turned into a frontal and radical attack against axiomatic rationalism as a whole. The lines of pragmatic opposition in Britain and France come together in some senses in this most highly philosophical man of the Enlightenment, this "philosopher of revolution". Condillac is extremely important in linguistic theory, both for the nature of his views, and for their influence.

What Condillac did in matters linguistic was to inaugurate and carry through a regular counter-offensive against axiomatic principles, doing so by employing axiomatic theoretical systems and methods. He turned the artillery he had captured against its previous owners. He did this, for example, in the

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[34] There is a direct line from Monboddo via Humboldt and de Saussure to Baudouin de Courtenay and Troubetzkoy, and modern views of the function of form.

[35] Monboddo does not associate formative spirit with national idiosyncray,or with the humane or Greek ideals which he also manifests. The views may be found in pragmatists and idealists alike, and even in Romanticists.

[36] The explicit introduction of "symbolic forms" into the formal apparatus of the human mind derives from Cassirer's neo-Kantianism.

case of Hobbes's physiological psychology. Hobbes had proclaimed this in the context of an ontology based on mechanistic and axiomatic principles; Condillac freed it from this framework and taught it as a physiology with a general basis in sense-perceptions, in the course of which, *inter alia*, he opposed the theory of sense-impressions inherent in Locke's empiricism.

His theory of language stands in even greater opposition to that of Hobbes and Leibniz. To understand this, it is necessary to recall how Hobbes's theory of language and signs had come about. Galileo had determined precisely the nature of physical phenomena and their motions by calculation and measurement, i.e. by operating with mathematical symbols. Hobbes had regarded these means of gaining knowledge (ennoetic instruments) as guarantees of rational certainty in general, defining language in accordance with this concept of mathematical symbolism and restricting language to it; he associated the origin of language with the way the mathematical symbol is codified in the mind. Hence language, in its function as a note (*nota*) within the mind, was the universal means of thought *par excellence;* thinking is identified by virtue of language with calculation. How Hobbes subsumed language in mathematically precise reasoning has been shown above. Of the four great creators of axiomatic rational systems Hobbes has the most rigorous view of language, perhaps because he provides the greatest incitement to contradiction. Leibniz retained the rigour, but in his greatest synthesis he harmonized Hobbes's view of language as an instrument of thought (*ennoesis*) reciprocating with the view of language as a factor in the communication of thought (*metanoesis*), doing so as a tactical manoeuvre aimed at silencing the pragmatic objections. In addition, Hobbes and Leibniz were the most rigorous expansionists; in particular, they annexed moral and political philosophy, together with law—those practical concerns which the seventeenth century had brought to the highest degree of development—into mathematically-based scientific reasoning.

Condillac was not satisfied with driving axiomatic metaphysics from practical concerns,[37] he even pursued it into its own territory, physical science. In the Introduction to his *Essai sur l'origine des connoissances humaines, ouvrage où l'on*

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[37] See Condillac 1771: 42 (and *passim*): "If philosophers had limited their activities to matters of pure speculation we would be spared the trouble of criticizing their conduct. ... But there is no point in expecting them to be any wiser when they set out to contemplate practical matters. Abstract principles are an abundant source of paradoxes, and paradoxes are all the more interesting for being related to matters of wider practice. What abuses this method has inevitably introduced into moral and political philosophy as a result!"

réduit à un seul principe tout ce qui concerne l'entendement humain ("Essay on the Origin of Human Knowledge, in which everything which concerns the Human Understanding is reduced to a Single Principle", 1746), Condillac makes the claim that the science "which contributes most to making the mind perceptive, exact and broad, and should, as a result, prepare it for the study of all the others, is metaphysics" (1746: iii).[J] But it has been greatly neglected in France. There are two kinds of metaphysics:

> One is ambitious, and sets out to penetrate all mysteries: nature, the essence of being, the most recondite matters; these are what flatters it and what it sets out to reveal. The other is more modest, and tempers its enquiries to the weakness of the human mind; and being in equal measure unconcerned about what might elude it and eager to seize on what it can capture, it is able to keep to the bounds imposed upon it. The first kind makes nature into a kind of illusion which goes away as soon as it does so itself; the second, aiming to do no more than to see things as they in fact are, is as simple as truth itself. (1746: vii) [K]

The "philosophes"—Destutt de Tracy and other followers of Condillac, are later given the name of "idéologues"—are particularly concerned with the former sort. This applies above all to Descartes, Malebranche, Leibniz (and Wolff);[38] Locke falls out of consideration here—though for the rest of the book he finds little favour—and in the Introduction itself, Condillac reproaches him for discovering the role of language only as an afterthought. Of the followers of Leibniz, Condillac notes that they regard the human mind as "a living mirror of the universe, and they flatter themselves with being able to explain its essence, its nature and all its properties, thanks to the power they ascribe to it of representing everything in existence." [L] Condillac's aim is also to study the human mind, not, however,

> ... to discover its nature, but to know its workings, to observe with what art they combine, and how we can guide them in order to acquire all the knowledge we are capable of receiving (p. xii). ... To develop my principle I have been obliged not only to follow the operations of the mind in all their progressions, but also to enquire how we have become accustomed to signs of all kinds, and how we have to make use of them. (p. xv)[M]

With this in mind Condillac divides his work into two parts, viz. (1) Of the materials of our knowledge, and in particular of the operations of the mind

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[38] Condillac here opposes the axiomatic view of the constitution of thought by language (*ennoesis*), especially as found in the two last-named. Perhaps Hobbes, writing as he did in English and Latin, was less well-known.

(*Des matériaux de nos connoissances; et particulièrement des opérations de l'ame*), and (2) On language and method (*Du langage et de la méthode*). The author outlines the nature of the second part in his introduction, as follows:

> I began with the language of movements (*langage d'action*). It will be seen how it has produced all the arts which are proper for the expression of our ideas; the art of gesture, the dance, words, declamation, the art of setting it down, that of mime, music, poetry, eloquence, writing, and the different characters of languages. This history of language will show the circumstances in which signs were created, and it will reveal their true meaning, teach us to prevent their misuse, and leave no doubt, I believe, of the origin of our ideas. (p. xvi)[N]

This is the manifesto of Condillac's linguistic theory, a complete philosophy. On p. xv he makes an observation which strikes at the heart of axiomatic rationalism: "the novelty of a system has almost always been sufficient to ensure its success" (*la nouveauté d'un systême a presque toujours été suffisante pour en assurer le succès*). The discovery of mathematical reason had indeed been such a novelty, but the novelty had by now worn off.

Condillac's works, which span half a century, reveal a development in his thought of which he is fully conscious. In 1771, for example, he admits that he had been insufficiently explicit in his *Essai* of 1746 about the workings of the mind (*opérations de l'ame*); but the development entails no substantial changes in his views on language. In 1775 he published a Grammar, an "art of speaking" (*art de parler*), as he expressly called it, and in 1781 a Logic, an "art of thinking" (*art de penser*). He collected his ideas on language together in "The Language of Calculations" (*La Langue des Calculs*), which appeared posthumously at Paris in 1798. This may be accepted as a definitive statement of his views, for he says as much himself at the outset: "Every language is an analytical method; and every analytical method is a language. These two truths, as simple as they are new, have been demonstrated, the former in my Grammar, the latter in my Logic."[O] How his contemporaries viewed his work appears from an opinion expressed some decades after his death: "The glory falls to Condillac of having been the first to say that the art of thinking, the art of writing and the art of reasoning are one and the same thing" (Lonjuinais, in Court de Gébelin 1816: xl).[P]

What is the content of Condillac's linguistic thought? Human mental activity may be summed up as "sensations" or "transformations of sensations". In this context Condillac speaks of perception, awareness, attention and reminiscence. The connection of ideas (*liaison des idées*) leads to the formation of a mental image, consideration and memory (*imagination, contemplation, mémoire*). These three achieve full deployment by

the use of signs. The use of these signs by degrees provided greater practice for the operations of the mind, and in turn, those operations which had the greatest use perfected the signs, and made their use more familiar. ... As soon as the memory is formed, and it lies within our powers to bring mental images to bear, the signs which memory recalls, and the ideas which the mental images evoke, begin to withdraw the mind from its former dependence on all the objects which acted upon it. (Condillac 1746: II, 8) ᵠ

So begins the process of development which brings reflection into being, with its operations of distinguishing, abstracting, comparing, combining and analysing. The human mind attains its highest rational capacities in a continuous process of development from sensations. The function of language coincides with reflection. This sounds somewhat reminiscent of Hobbes, and Condillac's continuous process seems to correspond to Leibniz's process of perception and apperception; there are, however, significant differences. Hobbes called in language to convert invalid ideas, imaginings and fancies into rational and valid concepts (Hobbes's terminology in this area is not consistent); Leibniz ascribed "sign-like" properties to perceptions; these were from the outset representational in their own right, and a notion attained a greater (or lesser) validity on a scale of clarity. Condillac saw language as emerging gradually in the developmental process of sensations; language, therefore, is neither introduced into thought from outside (as it is in Hobbes); nor does it merge from the beginning with the nature of the idea (as it does in Leibniz). Condillac incorporates language into a theory of the origin of the intellect, which he sees as beginning with sense-perceptions. This diachronic and genetic view is different from anything we have seen in Hobbes and Leibniz. Even Leibniz's reduction to a structure of thought corresponding to the language of Adam does not depend on development, let alone on a theory of evolution; for it is in fact synchronic and static. However, the views of Hobbes and Leibniz on language do correspond in one respect to those of Condillac: they all see language as primarily ennoetic, i.e. as a component of thought; language enhances the structure of thought, or the thinking process, and does so within the mind: thus it plays its part in inventive thinking. Even so it constitutes no more than a part, not the whole of the demonstration of the communication.

How do reflection, and the language inherent in reflection, structure truth? By comparison of ideas, using the method of analysing and combinating ideas. It is possible to isolate the components of complex thoughts only by signs, by language. In the course of this analysis, and as a result of it, language develops from a language of movement (*langage*

d'action—this is more or less a language of expressive gestures, see *Essai*, Book II, chapter 1), ultimately to the language of infinitesimal calculus. The elaboration of this scale is to be found in *La Langue des Calculs*, but let us confine our attention for the time being to the *Essai*, this time to Book II. After it has produced language, reason, having started as sensation, develops in and with language. Condillac deals in turn with the Articulation of Sounds, Prosody, the Art of Gesture, Music, Declamation, Poetry, and then Words, the Meaning of Words, Inversions, Writing, the Fable (what is meant is an instructive narrative), Parable, Enigma, Metaphor. It is impossible to give even an approximate picture of the amazing riches of thought which are concealed by these chapter headings, but it can be observed that the human mind gains access to truth by means of language. Language stands at the summit; it is the summit; reasoning is integrated in and through language. The ideal of reason is based, not on a mathematical and theoretical model, but on a pragmatic linguistic one. The further aims of such practical concerns as beauty, justice, morality and economics do not represent a higher stage in the development of the mind, but are accessible from the level of language, are inherent in language, are themselves language, albeit in innumerable modifications, so to speak. Language is the "top storey".

In Chapter 15 Condillac speaks of the Genius of Languages. Social structure, and to a greater degree, climate, determine national character, and national character in turn determines language. It is not, however, climate which causes the progress of arts and sciences, but language (1746: II, 201):

> if it is recalled that the deployment of mental images and memory depends entirely on the connection of ideas, and that this in turn is produced by the relationship and analogy of signs, it will be realized that the fewer the analogous expressions a language possesses, the less is it able to aid the memory and images in the mind. (p. 203)[R]

This is true of all languages, including that of geometry: Newton would not have advanced so far as he did, if the signs upon which he depended had not been so well developed. French had for a long time offered little encouragement to mental development; if Corneille had been living in those times, he would have been unable to show any signs of his talent.

Thus once the art of thinking has progressed to the height of language, it holds the key to the guiding principles of science and the arts, both practical (e.g. politics and the fine arts) and physical (physics, mechanics—but see Chapter 14 at the end of his *Traité des Systèmes* for both these groups).

The same also applies, then, to physics, the operational base, the citadel,

of theoretical deductive thought in the mathematical mode, the area *par excellence* in which rationalists had sought the verification of their methods since the time of Galileo, and from which they had drawn their confidence, a confidence based on an exact objective knowledge acquired by the application of mathematical symbols in calculation and measurement. Indeed, in his attempt to regain ground, the pragmatist Condillac attacks this science; the very route by which Hobbes, Leibniz and others had entered the citadel now becomes the sally-port for a counterattack by the pragmatists. Axiomatic rationalism had entered along this route by way of parallelism, co-ordination, the assimilation of the various systems, or at any rate varieties, of signs. But since one of these varieties in consequence determined the general type, this one virtually subsumed the others. The mathematical symbol had been set up by axiomatic rationalism as the model sign. As we have seen, this is a verbalized thought (νόημα), not a word; i.e. a noeme, not a glosseme, in other words, a unit of thought, not a unit of language. For this reason the subsumption of language under symbol had come about by way of rationalization, sometimes indeed by way of logicalization, at the price of losing autonomy and independent function. It was, indeed, necessary in the case of complete incorporation of language into thought, as in Leibniz, to enlarge the statutes of logic; but this had only made the incorporation of language more easily justifiable.

And how does Condillac set out on his way? He, too, assimilates the various sorts of signs, but this time at a pragmatic level. Gestures, sounds, numerals, letters, the symbols of infinitesimal calculus are idioms, are dialects of language in general (*langage*), are so many tongues (*langues*)—does this, then, assimilate them to the concept of a natural practical language, or subsume them under such a concept? That was no doubt Condillac's aim; but it is not what he achieved. We possess another detailed posthumous study in which Condillac presses the attack as far as possible into enemy territory, and strikes at the heart of his adversaries. Hobbes had proclaimed that reasoning, that is to say, the rational use of language, is calculation. Now, a century and a half later, Condillac proclaims the direct opposite: "Calculation is a language". Not "Language is mathematics, but mathematics—the ewe lamb of axiomatic rationalism—is language".

Before discussing this posthumous work, *La Langue des Calculs*, a brief note is in order. Will such a subsumption of the symbolic thought of arithmetic be acceptable in a vindication of the autonomy of the human faculty of language of the kind we are looking for? The answer is No; for the subsumption is incorrect. In dealing with Leibniz *et al.* (above, pp. 234f.), I classified the sys-

tem of mathematical symbols as an artefact of thought (a noeme) designed to be used in the search for cognitive accuracy; the nature and function of this symbol is cogitative, i.e. limited to mental processes. To be sure, there is something linguistic about the symbolic character of this noeme; the mental range of this thought-construct reaches out towards language, and in this sense the noeme undoubtedly has an inherent linguistic component. But the meaning, the function, the objective and the norm of the symbol and its intended use are non-linguistic. Therefore it is a misrepresentation of the nature of the symbol, *qua* arithmetical symbol, to subsume it under language. This is what Condillac does. But why would Condillac do so with such a strong semblance of justification? Since his concept of language does not do justice to natural language, but is entirely based on reason, it cannot be said that to be practical (i.e. empirically based); but it is pragmatic (i.e. it deals with its data *ad hoc*). We must not forget for a moment that while pragmatic rationalism provided a series of valuable insights into the functions of language, it remained a form of rationalism. This will shortly become clear in the case of Condillac, in fact, by asking again the key question: What does he regard as the central function peculiar to language, what does he take to be its aim and object? This is the moment of truth. And this is a question which a pragmatist must ask, since, after all, he takes the sphere of action as his point of departure.

The claim that "Every language is an analytical method; every analytical method is a language" has already been noted. This would be enough to indicate Condillac's rationalism, but we need to know more. What does the pragmatist Condillac understand by "analytical"?

> The first expressions of the language of movement are given by nature, since they are a consequence of our organic constitution; but once the first ones have been given, analogy creates the others, and in doing so extends the language, so that it gradually becomes suitable for expressing all our ideas, of whatever kind they are. (p. 2)[8]

"Analogy creates the others" is the key phrase here. As soon as language comes out of its swaddling-clothes, the mind develops the power of abstracting and comparing:

> Analogy is, properly speaking, a relationship of resemblance. When a people makes a bad choice of analogies, it makes a language for itself which has no precision and no discrimination, because such a people disfigures its thought by images which do not resemble the thought, or which vilify it. Its language does discredit to itself, for the same reason that a speaker of a well-constructed language speaks badly if he does not seize upon the analogy which would provide

the proper term. (p. 4)

> *Analogy:* this is the point to which the whole art of reasoning is reduced, as is the whole art of speaking; and in this one word we can see how we can improve ourselves through the discoveries of others, and how we can make discoveries for ourselves. Children learn the language of their fathers only because they realize its analogies in early life; they conduct themselves naturally according to this method, which is much more accessible to them than any other. (p. 7)[T]

What is the source of this concept of analogy? It is certainly not the concept the Alexandrian grammarians traced from a textual environment. (It has a character which is poles apart from that of classical Antiquity, and from the leading role it played in the linguistic armoury of the eighteenth-century Dutch Graecists, as will be seen in due course.) The point of origin is experimental natural history in Holland, especially that of Boerhaave and 's Gravesande.

I have already described how axiomatic rationalism arose from delight in —and overvaluation of—the results achieved by those sciences which applied arithmetical and geometrical principles; a further consequence was a mechanistic metaphysical system and world-view. But natural science prevailed, and increasing weight was given to experiment and observation alongside mathematical calculation, to the evidence of the senses alongside mathematical construction, to comparative induction alongside abstract deduction, to the approximation of probability alongside exclusive precise certainty, to acceptance of knowing how things work alongside the aim of achieving a definition of their essence. Important figures in this development were Newton, Swammerdam, van Leeuwenhoek and Christian Huygens. Huygens notes in his *Traite de la Lumiere* (1690) in somewhat self-justifying terms, distinctly reminiscent of the hesitancy of Port-Royal:

> There will be found here some demonstrations of this kind, which do not provide an assurance as great as those of geometry, and which, indeed, differ greatly from them, since while geometers prove their propositions by assured and incontestable principles, principles are justified here by the conclusions which are drawn from them. ... It is, however, possible to approach a degree of probability in such cases which frequently falls little short of being self-evident.[U]

Locke, who may be regarded as taking a defeatist view of axiomatic rationalism—and whose sojourn in Holland is documented—then gave empiricism a foothold in general philosophy. In 1701, Boerhave, newly appointed as a lecturer, gave his inaugural address on Hippocrates, whom he regarded as the ideal man of medicine because he associated observation with reasoning (see Gerretzen 1940: 1-12, from whom the next remarks are also derived). He

proclaimed the inductive procedure even more clearly in his rectorial oration "On assured comparison in physical matters" (*De Comparando Certo in Physicis*, 1715). In 1717 's Gravesande discussed the inductive method specifically in his oration "On Evidence" (*De Evidentia*); while it does not provide mathematical certainty, he says, it does provide moral—we can happily take this to mean "practical"—evidence. As the so-called "auxiliaries" of this evidence he names Sense, Testimony and Analogy. How analogy provided the methodological principles of linguistic scholarship in Holland also will be examined at the appropriate time. For now the important fact is that a "reliable witness", the Frenchman P. Brunet, has shown (1926) the profound influence which the Enlightenment received from these very Dutch natural scientists and their methodology. Having already provided theoretical rationalism with convincing arguments, the investigation of nature performs the same task for the benefit of pragmatism. It may well be understood how welcome support from this quarter must have been for the pragmatists, for it provided "moral" certainty; having no mathematical certainty, it was confirmed by nature. Among the first beneficiaries is Condillac, in his *Traité des Sensations* of 1754 (see Gerretzen 1940: 258-9). When we realise that his writings spanned nearly half a century, and that his posthumous work of 1798 still makes use emphatically—indeed, even more emphatically than at the beginning—of analogy as his central method, it becomes important for the understanding of Condillac to give even more attention to this component of his thought, now that we know its provenance.

Analogy, in Condillac's own definition, is a "relationship of resemblance". Between what two objects? Condillac certainly does not compare the facts of language with a metaphysical structure of existence lying outside language; his comparison remains immanent: "The world of human ideas is completely isolated within itself, and truth obtains only for the comparisons expressed within thought by signs" (Windelband & Heimsoeth 1948: V, 8).[V] Analogy is the maxim and the guide of a method which aims to provide "a structure of equivalences between contents of perceptions, in accordance with the principle that 'the same is the same'" (ibid.).[W] But resemblance, being no more than probability, inevitably left Condillac dissatisfied, for resemblance or similitude could be satisfied only by perfect parity or likeness. It is remarkable that this involuntary conclusion is in fact to be found in Condillac's writings, and in his views on language at that. Algebra is the language which has scaled the greatest heights:

It is not a matter of speaking as others do; it is necessary to speak in accordance

with the greatest analogy in order to arrive at the greatest precision; and those who created this language [sc. algebra] recognized that it is the simplicity of its style which gives it all its elegance, a truth little known in our common languages. Since algebra is a language made by analogy, the analogy which makes the language also makes the methods; or rather, the method of discovery is nothing but analogy itself. ... Mathematics is a thoroughly explored science, and its language is algebra. Let us see how analogy causes us to speak in this science, and then we shall know how analogy will cause us to speak in the others. This is what I propose. The mathematics which I discuss in the present study is therefore to be regarded as a matter subordinate to a much greater object. My aim is to reveal how the precision which is believed to be the exclusive property of mathematics can be given to all the sciences. (Condillac 1798: 6–7)[X]

In this way mathematics itself becomes an ideal language, and thus the ideal of other sciences. And this discloses the nature of pragmatic rationalism well and truly—if a thing is ideal, it is a law. The functional sense of language for Condillac is not autonomous practical realistic clarity, but rationalistic precision, exactitude. His concept of language is the ad-hoc (pragmatic) application of external rule, not autonomous practical self-determination.

It looks as though Condillac had ventured too far forward, and as though, so to speak, he fell, a few moments before gaining the final victory, in the very act of planting his flag on the castle he had captured. It is even possible to regard Leibniz and Condillac as similar figures, differing, however, in that one is the mirror-image, rather than the portrait, of the other. Leibniz graciously forgives natural languages for being in may respects unclear; even a single dissonance establishes the harmony of the whole. Condillac, however, glories in the fact that reasoning based on the evidence of the senses can attain the highest perfection when it is transmuted into language, and that it is analogy that provides the most complete perfection in the language of algebra. They are both rationalists, but they approach language from opposite sides.

It is entirely consistent of Condillac to reject the arbitrariness of language:

Languages are not a collection of expressions assembled by chance, or used because an agreement has been made to use them. If the use of each word implies a convention, convention implies a reason which led to the adoption of each word; and analogy, which makes the rules, and without which mutual understanding would be impossible, will not permit an absolutely arbitrary choice. But if we believe we are making a choice when different analogies lead to different expressions, we are wrong; for the more we believe ourselves to be masters of choice, the more arbitrarily do we choose, and the worse we choose. (1798: 1–2)[Y]

But it is analogy "which makes the rules"!

At this point we may leave our study of Condillac, a pragmatic thinker on
linguistic matters, endowed with a wealth of ideas and a perception of logical
relations unmatched by any in his circle. Descartes, the greatest of the French
axiomatic rationalists, set the tone in the seventeenth century; Condillac, an
equally great pragmatist, dominates the eighteenth century; indeed, his in-
fluence extends to the nineteenth century. His followers are the so-called
"idéologues". His prophet is Destutt de Tracy, "idéologue, legislator and
paedagogue, grammarian and logician, economist and moralist", whose gen-
eral grammar appeared in 1803. It would take us beyond the time-limit
imposed on the present study to pursue this line any further. But if we reflect
that it was not until the 1860s that Bopp's grammar found a foothold in
France, we can realise why the ideologues' views on language flourished
unchallenged (see Picavet 1891).

Charles de Brosses

Language refers to something else, directs attention outside itself. For early
axiomatic rationalism this "something else" was a static complex of truths,
which language was believed, or was made, to parallel. In the axiomatic
school Hobbes was furthest removed from this static parallelism by virtue of
his insistent emphasis on the incorporation of language in thought as an
instrument of thinking; and his acceptance of causality was in addition one
of the first moves in the direction of the emphasis on prime causes (*primae
causae*) which was at the time coming to the fore. But there is no trace in him
of any concern for a diachronic process of development in language; his view
of language is non-genetic. Locke's derivation of complex ideas from simple
ideas provides a reduction, albeit an epistemological one rather than a lin-
guistic one, which is already something more of an enquiry into origins.

    In the eighteenth century the question of origin was then asked with ever-
increasing intensity in all branches of knowledge—and answered with all
manner of constructions, based on all manner of analogical grounds of proba-
bility; these, too, set forth initially with just as little sense of the diachronic.
Men sought for the origin of law and state, of society—and of language and
thought. Axiomatic rationalism had been constrained to distinguish natural
language from pure thought, qualifying language as thought dressed in a kind
of outer garment; and Hobbes avoided this externality as far as possible by
regarding language as a formative component of thought rather than its dress.

But in general the axiomatic school avoided any theoretical position which might suggest a fundamental estrangement between the material of language and the ideal of thought, and also any view which might upset the unity of language itself. The question of the origin of language, although not associated with a diachronic view, and the question of the externality of language, whether regarded as more or as less material, did not arouse the interest of the axiomatic school.

In an attempt to justify the rational validity of language, Harris's pragmatism had postulated an element of truth immanent *a priori* in language, and to this end brought the distinction between form and material out of its classical quarters. Here form was meaning, and it was in the form that the rationale of language lay; its material was the actual sound. But while Harris was still not thinking in genetic terms, Monboddo and Condillac were. Monboddo set up a theory of language in cultural phases, and spirited away the dichotomy which Harris had seen as a threat, *inter alia*, by a commendable inconsistency: he introduced a new—and better—concept of form co-existing with formlessness, i.e. the articulation of the (material) sounds. Condillac still stood by meaning, and outlined the way in which language emerges as a higher phase of thought from the phase of sensation. But as he also repeatedly states that sensations derive from what is accessible to the senses, it is not surprising—especially as a similar direction was taken more generally in philosophy by the Encyclopédistes—that in harmony with this view the genetic view of language began to be employed on—and, as it were, descended into—perceived material, the sounds and the material organs which produced them. The man who did this consistently was de Brosses (1709-1777).[39]

In showing, for example, that the opposition which Harris set up between meaning and material, or Condillac's theories about what is accessible to the senses, had opened the possibility of a materialistic view of language like that of de Brosses, we have, however, still not examined the motives which led to this development.

Condillac had given axiomatic rationalism what amounted to its death-blow by inverting the central theoretical system of deductive reasoning, viz.

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[39]   A parallel with this development may be seen in the theory of linguistic functions expounded in the second and subsequent editions of Bloomfield's *Language*, attacking a one-sided concentration on the immaterial aspect of language just as de Brosses had done from his pragmatic standpoint. That Bloomfield came in effect to banish meaning from linguistics was a conclusion which de Brosses also accepted.

the concept of the mathematical sign, and using it as the weapon of his pragmatic assault. And yet, for all his brilliant reasoning, Condillac was still afflicted by the old weakness: the pragmatic method was less precise than the mathematical method of axiomatic rationalism, and therefore inferior to it. Yet even the pragmatists' enthusiasm for sovereign reason can in the end be satisfied by as great a degree of certainty[40] as possible. The axiomatic rationalists had thought that this point had been attained when counting and measuring had seemed to be essential for the understanding of movement; this method provided, they thought, the key to the whole universe. The physical sciences had in the meantime opened up other ways to the knowledge of natural forces; it was not the methods of mathematics, but those of the experimental physical sciences which seemed to lead to certainty about inorganic and organic natural phenomena. There were hints in de Brosses of this new scientific certainty, which came to the fore at the end of the eighteenth century and dominated the beginning of the nineteenth as positivism; and it became the underlying theme for de Brosses—the proto-positivist of linguistics—in his "physical etymology", his linguistic theory, and his view of function in general. After the florescence of functional views among the pragmatists, a florescence which could have provided an opportunity for establishing the self-sufficient autonomy of language on non-rationalist terms, the old rivalry in the search for certainty led de Brosses to overvalue the power of natural laws in his pragmatic theory of language, which once again confined linguistics in the rationalist prison: it is only the chains that are different. De Brosses's proto-positivistic neo-rationalism is to blame, along with what might be called Bopp's "palaeo-rationalism", for the materialistic bias of nineteenth-century linguistics.

In the area of the Semitic languages the concept of the root had achieved objective linguistic application, and an attempt was made in Holland to apply this principle to other languages, especially to Greek. Before comparative grammar took wing in the wake of knowledge of Sanskrit grammar, the speculative concept of the root had found only a rather general applicability in the field of language study, where more attention was paid to broad principles, to the philosophy of language, than to objective investigation. This, indeed, is where the concept of the root is investigated most subtly and purposefully —here, in the philosophy of language of the ever increasingly assured materialistic rationalism of the Enlightenment which emerged from

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[40] Condillac did not criticize, but rather praised de Brosses, who may in many respects be considered his pupil, for his move towards materialism.

the circle of the Encyclopédistes—most distinctively, perhaps, in de Brosses. Subtle and clear-cut, perhaps, but still speculative.

"Etymology", as known to the Ancients, had so far remained unchanged in method; Scaliger is in this respect no more modern than Varro. Etymology, in the sense of a principle of derivation in general, had indeed made some progress in limited areas; it was an undoubted gain, for example, when Leibniz demolished the concept of Hebrew as the original language. But in the technique of etymology, and in the principal component of its technique, the concept of the root, no progress was made; for the simple reason that etymology was finally discredited. Voltaire's keen intellect had no more than scorn for it (see Vernier 1888: 17f.). The personality and the work of de Brosses therefore stands out all the more sharply from the background. Here we have an intellect of the same mould as Voltaire, one, however, which not only breaks a lance for etymology, but attempts to bring about its rehabilitation by basing it in a rational theory.

De Brosses's most important work is entitled *Traité de la formation méchanique des langues et des principes physiques de l'étymologie*, ("Treatise on the Mechanical Formation of Languages, and the Physical Principles of Etymology", 1765); it was a great success from the outset, though of course the very nature of the undertaking was noteworthy. It was translated into German in 1777, and appeared in a new impression in 1801, by which time the price had risen fivefold (cf. Sautebin 1899: 23).

The title alone betrays the relationship of the work to the notion of man as a mechanism (or *L'homme machine*, as the title of Lamettrie's work has it). De Brosses had supplied entries on "Languages", "Letters", "Metaphor" and "Onomatopoeia" for the *Encyclopédie*; that on "Etymology" was written by Turgot, but in such a way that he was accused—probably unjustly—of plagiarizing de Brosses's *Traité* (see, subject to the results of more recent scholarship, Foisset 1842: 137). In the assured and confident tenor of his argument de Brosses is an exemplary representative of the Enlightenment; beyond this, going at times into a long concatenation of arguments in the manner of legal "whereases", he is President de Brosses [of the Parliament of Burgundy at Dijon], one of the most acutely minded magistrates of his stirring times. In comparison with his mind and his style, the composition is a little disappointing. But it must be remembered that the separate chapters were to a great extent read as lectures at the University of Dijon, which explains many repetitions and false starts.

There is a certain contrast between the two volumes, each consisting of eight chapters; and this is intentional. The first sets out the principles and

shows the source of roots (*d'ou viennent les racines*) in what was later to be called
the shadowy land of glottogony, so that the method tends here towards the
inductive or synthetic. In the second volume de Brosses views roots as the
nuclei of given words in given languages, using an inductive analytical me-
thod, "the destination of roots" (1765: I, 20). The two methods taken together
amount to an account of roots approached as it were from two sides.

The chapters of Volume I deal in turn with: (1 and 2), etymology and its
raison d'être; (3-5), "phonation", i.e. the speech organs, sounds and their
notation; (6), "primitive language"; (7 and 8) writing. The chapters of Volume
II concern: (9-11), the formation of languages, derivation, composition
(*accroissement*); (12 and 13), the names of moral entities (*êtres moraux*), and proper
names; (14), roots; (15), principles and rules of etymology; (16), etymology as
an "archaeologist" (*archéologue*). It is chapters 6 and 14, and after them 9, 10,
11, 15 and 16 which are of interest in considering this work here.

De Brosses begins with the case for etymology, which is precise (*sic*) and
useful. It is precise because language, at its deepest level, is completely
determined in a mechanistic, physical sense, and further because "primitives"
are few enough in number to be easily surveyed; it is useful, because many
sciences can derive benefit from it. There are six speech organs: lips, throat,
teeth, palate, tongue and nose. The consonants correspond exactly to these.
There is actually only one vowel; differences merge into one another from *a*
to *u*. This vowel and the consonants are related for de Brosses as material and
form. The curious treatment of the sixth speech organ has its reasons: "the
nose must be regarded as a second pipe in the instrument" Here, in Chapter
4, de Brosses makes a first announcement of sound symbolism: "the nasal
voice expresses a negative idea" (*la voix nazale exprime l'idée négative*). In Chapter
5 we find an early attempt to produce a universal phonetic script, an "organic
alphabet", i.e. a script corresponding to the speech organs.

Chapter 6, "On Primitive Language and Onomatopoeia" begins by reject-
ing the view that any given language still in existence, e.g. Hebrew, can have
been the original language: "No known language can have been formed as
an entirety and by a single act of creation; there is no modern language
which is not a modification of an earlier one" (§62). Instead, "It is necessary
to examine nature to see how it would go about producing a primitive
language" (heading of §65).[Z] The preliminary part of such an investigation
was implied in the preceding chapters: "In expounding the results deriving
from the fabric of each part of the vocal instrument, I was attempting to
penetrate into the internal and primitive fabric of all language."[AA] We have
now come to the threshold of language. On this side of it, then, lie the sounds

which are completely determined by our physical make-up—apart from the nasal sounds with their scintilla of meaning—on the far side lies formed and developed language with its "accustomed words" (*mots usités*). This threshold itself, this "primitive language, will, if we can discover its traces, provide us with the roots of familiar terms. ... Let us now try to capture the moment when the first words arise from the first sensations" (§66f.).[BB] The direct "imposition of names" comes about by "depiction (*peinture*) or imitation"; there is no question here of indirect naming through derivation from names already imposed; and "since it is necessary to abandon the idea of looking for primitive language in history, traditions and grammars", de Brosses now investigates children's language. This shows him that the oldest component is not nouns, but interjections: "If we examine them from this point of view, we shall see that they are the first words of primitive language, and we shall find them to be the same among all peoples."[CC] Interjections constitute the first of a group of orders of roots which are absolutely essential to nature, and therefore universal. De Brosses speaks of *ah, ha, heu, hum,* etc, employing old-style sound symbolism: "the voice of grief strikes the low chords ..., the voice of doubt and dissent readily becomes nasal", and so on. Nevertheless, de Brosses still has room for critical reservations:

> Such is the metaphysical knowledge which may be drawn from the study of the interjections. They show us that there are certain relationships, ... to which causes can only with great difficulty be ascribed, but the effects of which can be clearly seen. They give us the first hints of a necessary relationship, one which is independent of any convention. ... (§71 f.)[DD]

The second order is that of "labial roots", which all languages show in children's words for their parents. De Brosses gives innumerable examples from all sorts of languages. He ascribes the earliest differences to climatic variation. The third, fourth and fifth orders of primitives form a group indicating objects lying outside ourselves. The second order was itself a move in this direction. Here, absolute determination of form makes way for "almost necessary (!) primitive words" (*mots primitifs presque nécessaires*). The third order covers the names of the organs of speech, where the sound produced is the determining factor. In the fourth order de Brosses comes to onomatopoeia properly so-called. Again there are many examples from many languages. But if we had so far had to deal with concrete objects outside ourselves, the fifth order examines the primitives for what de Brosses calls the "modalities of beings" (*les modalités des êtres*):

> The examples are so numerous that it must inevitably be the case that some

concealed necessity played a part in the formation of the words. ... For example, why is firmness and fixity most often indicated by the graphy ST? ... Why, the hollow and excavation by the graphy SC?[EE]

De Brosses goes on to give more characterizations of this kind (*inter alia* FL, FR, SP), and draws his examples, once again, from many languages. With this fifth order we come to the end of natural words not established by convention (down to §87). This order itself, however, also arises

> because the mechanical structure of certain organs naturally makes them appropriate for naming certain classes of things of the same kind; ... this leads ultimately to the fact that the objects included in this class have some quality or some movement which resembles that appropriate to the organ. It is therefore nature which is in charge here. (§88)[FF]

The giving of names, however, subsequently moves further from depiction, and is achieved rather by "comparison or approximation": "There is, indeed, something arbitrary in this method; however, nature apparently loses as little as possible in the process".[GG]   The following is an example of such an analogy:

> A flower has no quality which the voice can represent, unless it be the mobility which makes its stalk flexible before any wind. The voice seizes upon this fact, and represents the object to the ear by its liquid inflection FL, which nature has given it as a characteristic of fluid and mobile objects. (§91)[HH]

Finally, "The inadequacy of this method brings about the birth of writing by drawing objects" (*L'insuffisance de cette méthode fait naître l'écriture primitive par la peinture des objets*). The modern reader will be struck by this motivation for writing; it is a further example of de Brosses's deterministic tendency. The writing of alphabetical letters and numerals concludes Volume I.

Volume II deals with events after the creation of roots (*post radicem*), and Chapter 9 begins with de Brosses's conjectures about the original language, "naturally induced cries; their infancy, adolescence and maturity are examined ... then the causes which contribute to its changing, its decline, and finally its loss". [II] Although de Brosses is clearly aware, from time to time, of the conjectural nature of his basic conceptions, this does not detract from the positiveness of his convictions; for example that groups of children left outside external linguistic influence would attain a language of essentially the same sounds as a result of the mechanism of their organs; climate, for example, might cause some differences, but these would be only small ones. Chapter 10 brings us back to the word and its forms:

> Every word which is not a root is derived from another word, either by the

disposition of the organs, or by onomatopoeia ... there is no term which has no etymology, unless it was necessarily ... or almost necessarily, produced as an original. (§170).[JJ]

Here de Brosses discusses derivation in terms of changes in sound and meaning in general.

It is only in Chapter 11 that he goes on to speak of what we understand as derivation. We see the beginnings of the establishment of a concept when de Brosses says:

> When we [go on to] say that a given word is the root of a given other one, this is a shorthand way of indicating its immediate relationship. A word may be called primitive, when in the language to which it belongs and in neighbouring languages there are no other words from which it derives. This denomination serves to distinguish it from the derived words which are related to it. But the majority of these roots are not properly so called, since they are themselves derived. [KK]

In this chapter we also see for the first time the special sign that de Brosses introduces for the term "root". To the best of my knowledge it is the sole use before Schleicher; and the very fact that he felt the need for such a special notation is an indication of the importance of the place which the concept of the root had in his thinking. In the same chapter, we meet in §193 an "observation on a singular change which can sometimes be seen in the direction of a letter", where de Brosses explains the relationship between *pempe* (πέμπε) and *quinque* in this way.[41] §195 is headed:

> the growth of primitives, by termination, prefixation and composition; on grammatical formulae and their semantic value. Each language, in accordance with its inherent character, extends its words before or after the "generator" —but most frequently before; it might also extend them in the middle. (1765: II, 175–176)[LL]

The term "generator" here is new; what de Brosses means by it is what we now normally call "stem"—what Bopp called the *Grundform* ("basic form")— though we are naturally far removed here from the precise connotation which comparative grammar was to give to this concept. In the same context de Brosses also speaks of words which *grow* both before and after the generator. Biological imagery of this kind is to be found again in Friedrich Schlegel, and

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[41] Benfey (1869: 289 *n.* 2) was the first to note this lapse into speculation on the part of de Brosses. This criticism, which is out of all proportion to the significance of the passage in de Brosses's work as a whole, is probably the main reason why this work has been undervalued—or even totally ignored—in the history of linguistics.

de Brosses's use of it here is not unique: the root is called a "radical seed" (*germe radical*) or "generative root" (*racine génératrice*), etc. In §§197 and 198 de Brosses inquires *inter alia* into the question of the origin of inflectional endings and prepositions, the question which, at least as far as inflections are concerned, Bopp was to place at the very centre of linguistic interest. On comparative, adverbial and similar affixes de Brosses in general accepts the view that they go back to roots: "that they have their origin in certain roots, which, individually and in isolation, essentially expressed certain ideas or objects"[MM] (§197, p. 184). However, de Brosses finds no possibility of verifying this principle in the case of declensional and conjugational inflections. These are arbitrary, although they gain in use a kind of necessity. Of prepositions, de Brosses says:

> They are themselves primitive roots, but I have found it impossible to give any reason for their origin, to such an extent that I believe their construction to be purely arbitrary. I think in the same way of particles, articles, personal and relative pronouns, conjunctions ... (§198, pp. 187–188) [NN]

Chapters 12 and 13 are not important for the present study. Chapter 14, "On Roots" is the counterpart of Chapter 6 in Volume I, although it approaches the matter, as indicated above, from a different angle, by reduction, in keeping with the approach of Volume II. In de Brosses's own words, this chapter deals with a general principle, and naturally we will find treated here many aspects of this central point which had already been covered; there is no need, therefore, to give a further account of it here. De Brosses explicitly retains the layout of Chapter 6, on primitive language; but now he sets out to show "how the scholar should set about finding and establishing roots", though he warns: "There is no cause to be surprised if the reasons for the process cannot always be found, or to require that derivatives be traced back to their primitive and organic root" (§225, p. 318).[OO] In §226 de Brosses completes the distinction he had already made between roots "absolute" and roots "improperly so-called". Any word which is irreducible "in the absence of further knowledge" may be a root, but:

> this name should by rights be given only to the other kind of roots, consisting of the vocal sounds produced by the conformation of the organ independently of any arbitrary convention, and appropriate for depicting by imitation the existence of the object in view, or for displaying the general relationships which obtain between certain impressions and certain organs. These are the true absolute and primordial roots; such as seem to be given by nature, which seems to have made them apposite to define a whole species of ideas, a whole species of modifications of objects. It is in this way that we noted above, as the result of

exhaustive analysis, that ST depicts fixity, SC, hollowness, FL, liquids and fluidity. (§226, pp. 320–321) [PP]

A little earlier de Brosses had presented the "true root" as the "syllabic key", a "hieroglyphic figure", a "characteristic", but he does not go beyond these definitions. What he does is to give the root AC as an elaborated example; that is, he sums up a long list of nouns—mainly Greek and Latin—"which may be considered together under this key". This is a far cry from the precise reduction in the manner of modern linguistics. And finally, all restraints are broken, and speculation is given a free rein, when de Brosses analyses an articulation like R as a root, "a key or radical seed serving to name the class of rapid, rough, ruinous, ramshackle things, things with irregularities or wrinkles, etc".[QQ] It is not surprising that the list is a long one, although de Brosses assures us that he has exercised restraint. Yet we do find here and there examples which suggest better things, methodologically at least: "For example, the Latin dialects say FoRT; the Germanic dialects say VaLD to express the same idea", yet they are "one and the same root" which de Brosses proves by showing that the consonant pairs F/V, R/L and T/D are "produced by the same organs in the same order" (§227).

It may be noted further that de Brosses claims that verbs may be secondary, and derive either from nouns or directly from roots (§240); that roots are monosyllabic and relatively small in number: "Although the number of these monosyllabic roots is large, it is not too large to be written on a single sheet of paper ..." (§236);[RR] that roots are abstractions (§241). And with this, de Brosses comes to one of the best-known controversies of later times;[42] but this paragraph is also extremely important for other reasons. Why are roots abstractions?

> Roots or radical keys are used only extremely rarely in everyday language, and rightly so. Men do not have, and can hardly ever have, ideas which are perfectly simple, without the addition of some circumstance or accessory consideration which speech expresses along with the simple idea, by an extension of the word formed upon the radical key which defines the simple idea. ... Thus radical keys are for the most part no more than abstract signs expressing in general a whole range of ideas, and applicable in the composition of words as a result of being their nucleus. (§241, pp. 369–370)[SS]

Having thus reached a position where word-formation has become a problem,

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[42] Continuing until very recently [1952]. There were to have been several contributions to the Fifth International Congress of Linguists, which was abandoned owing to the outbreak of the Second World War. See *Rapports*, 1939.

we are guided in the direction where the next period of scholarship was to
look for a solution:

> The ancient Indian language of the Brahmins will provide an excellent and very
> clear example of what I have proposed throughout as a principle of fact, con-
> firmed by my observations on the fabric of language, that is, that men apply a
> small vocal sign to a whole class of ideas, to a whole way of looking at things;
> that this sign serves them constantly as a primitive, on which an infinitude of
> identifications of external objects can be formed, because they come to regard
> them in the abstract under a specific aspect, and they use this root as a nucleus
> about which they assemble all the circumstances of their thought relevant to the
> object defined; that since this sign does not define a physical object, but merely
> indicates the form of its existence, it follows that, taken on its own, it must
> remain unused in language, in which it could not exist in the absence of the
> subject of which it is no more than the form. (pp. 370–371)[TT]

So much for this glimpse into the future of linguistics.

De Brosses's achievement above all is to have identified "the synthetic
method upon which the Sanskrit language is constructed"—later scholarship
would use the term "agglutination" here. This makes de Brosses the first
linguistic theorist to incorporate an insight into Sanskrit[43] and its structure
into a general view of language, a theme which Bopp was later to develop.

De Brosses took his data—and perhaps his insight—from the publication
in 1743 of a report, dated 'Careical, 23 November 1740',[44] by the Jesuit mis-
sionary Fr Pons. Pons knew some Sanskrit, and his report is, according to
Windisch (1917: 7), the first correct description of the grammatical analysis
provided by native Indian grammarians. De Brosses gives extensive quotations
and details.

Having shown in §242 that other languages are inferior to Sanskrit in
"synthetic method" and "structural form" (*forme de composition*), de Brosses
dilates further upon the abstractness of the root in §243. He compares roots

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[43] Even if his data are derivative, there is a sharp contrast between de Brosse's clear argumen-
tation and the naturalistic prejudices of Friedrich Schlegel forty years later. Schlegel, of course,
did know Sanskrit; he proclaimed it and gained the reputation of a pioneer. It was only in the
later works of Bopp that de Brosses's views were again taken up. Schlegel, however, is closer to
the truth in his general view of language when he remarks, "Everything which derives in this
way from the simple root ... is related, and is maintained and reinforced by this relationship".

[44] De Brosses (1765: II, 371-374) gives full credit to Fr Pons (1743: 218-258): "A Jesuit
missionary has given us a very fine description of the synthetic principles on which the Sanskrit
language of the Indians is constructed. It is a learned language, and one of the most ancient in
the world." ['Careical', otherwise Karikal, in the French Indian colonies, is in the Tanjori
District of Southern Madras, on the Coromandel Coast of the Bay of Bengal.]

with such abstract concepts as 'whiteness', 'fortune', 'misfortune'. Just as these concepts are "non-existent entities", the roots are "unused words", "simple articulations of an organ, which only served as models, common points enabling a large number of currently-used terms to be constructed readily"—with this difference, that the abstractions are a point of convergence for "derived words". The perception of air, water and fire led to the concept of fluidity: "The voice depicted this as FL, and language has derived the words for breath, river and flame (*flatus, flumen, flamma*) from this articulation".[UU] — Paragraphs 244f. observe, *inter alia,* that it is characteristic of primitives not to appear independently in linguistic usage; thus for example the primitive CLin, containing the root CL, except in the expression *un clin d'œil* ("the twinkling of an eye"). There are also simple words, which appear only as components of a compound. Of primitives he says that they constitute "true etymology", but the definition of the term is vague in the extreme. — De Brosses looks upon the root as a discovery of the scientific investigation of language (§§248f.). The imperative of the verb comes closest to the root (§252). De Brosses had already given his opinion in Chapter 11 of roots in particles and inflections; and also of independent words in connection with inflections. All of these points remained live issues for Bopp.

The final chapter of de Brosses's work gives a prospectus of a universal language which is to be constructed using roots as its basic elements.

The analysis of this "archaeologist" ends here, but a few words of critical appraisal are in order. De Brosses was extremely well-versed in the works of Leibniz—as also, for that matter, was Condillac. If the extremes of dogmatism and pragmatism were already approaching one another in the systems of Condillac and Hobbes,[45] the approximation became very close in de Brosses and Leibniz. But for this very reason the fundamental differences between them become all the more apparent. In Leibniz there was an "alphabet of primitive notions", initially established extra-linguistically, to the content of which the Adamic language had once corresponded, and to which language always did or could correspond in the universal character. In de Brosses we find an alphabet of sound-roots, which had originally formed the basis of a consistent universal language, or which could form the basis of a future universal language, his "archaeological principle". A further difference between Leibniz and de Brosses[46] is that the latter evolves his basic com-

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[45]   Meiner's work, considered above, pp. 331-336, also deserves mention in this connection.

[46]   How slight objectively this seemed to be may be observed in Lambert, who also uses the

ponents from languages themselves as the roots common to all of them. In this respect he is still a pragmatist; but, again, little remains of the characteristic quality of pragmatism, the requirement for free activity. The basic function of language is the production of elementary sounds which are determined by the structure of the speech organs and the necessities of analogy. De Brosses gave preference to the ancient φύσει (innate quality), and sought a solution in sound-symbolism, just as Leibniz had done. The difference is that Leibniz starts out from mathematically exact principles, de Brosses from physically exact basic sounds. Leibniz regards the irrational residue of language as obscurity, de Brosses regards deviation from the root language as changes in sound (induced for example by climate).[47]

De Brosses restored etymology to honour. He regarded etymological components as in principle discoverable; they form the basic inventory of truths, but these truths are derived from language, and hence misleading from an epistemological point of view. The true meaning of the word is the truth: this is the view of the pragmatist de Brosses. This means that he is still no more than a proto-positivist; fully-developed linguistic positivism will virtually forget meaning and study exclusively the changes brought about by the operation of sound laws.

Thus de Brosses's view of truth remains only immanently linguistic; but the distance from Leibniz is reduced, in that Leibniz had allotted thought a significative character through his theory of representation; and the distance is still further reduced when the deductive followers of Leibniz's linguistic theory set about deriving the *a priori* (!) structure of thought ... from language. This is the line Meiner took.

The question of origin, which was in any case dealt with for the most part by the pragmatists, was thus by no means avoided by de Brosses' static and mathematical theory of depiction. But, although de Brosses uses such biological terms as 'seed', 'generator' (*germe, générateur*), etc., his answer indicates

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term *Wurzelwörter* ("root words") for *notiones primitivae*. In a scientific language these should, in Lambert's view, be established *a priori*. But when this is done scientifically, arbitrariness is lost (*würde das Willkürliche wegfallen*). See the discussion of Lambert, above, pp. 327-331.

[47] Funke's observation (1934: 46) that de Brosses's "widely ramifying, arbitrary, often uncontrollable ways of producing language by the 'mind', and especially semantic change and the associated ambiguity of words" constituted nothing short of a disaster cannot be sustained by the general tenor of de Brosses's linguistic theory. De Brosses is too good a pragmatist to go in for negative criticism of language—though negative criticism is possible, as in the case of Maupertuis; but his disapprobation was conditioned by his criticism of Hobbes's views of language, and Hobbes was a axiomatic rationalist with a positive view of language.

an origin by construction (*fabrication*), by "mechanical formation" (*formation méchanique*), in short a means of formation that is nothing other than an effect determined by the workings of the organs involved, not conforming to guiding principles, but constrained by necessity and having no choice.

This concludes a fairly exhaustive account of de Brosses's work; the reader may be left to make a critical paraphrase of the whole for himself. Comparison of Bopp with de Brosses will derive profit from much that has been said of de Brosses.

CHAPTER 11

PRAGMATIC RATIONALISM

*Part II: — Further linguistic theories in the tradition of
Port-Royal, Condillac and de Brosses*

THE PREVIOUS CHAPTER discussed three leading currents in the
views of function held by pragmatic linguistic theorists in France; first,
that of Port-Royal, a tentative, legitimizing and rationalizing grammatical de-
fence of language against the criticisms of axiom-based theory; then that of
Condillac, the philosophical triumphalist who challenged the claims of mathe-
matical theory to supremacy within rationalism; and finally that of de Brosses,
the speculative etymologist who considered that language had originated in
a mechanically or physically determined pattern of sounds, and attempted,
as a proto-positivist, to find certainty in the material basis of language.

But there also appeared in France, from the middle of the seventeenth
century until about 1800, several dozen other general works which attempted
to account for fundamental principles. The most important of these[1] will be
discussed briefly here; but for most—though not all—of them, we may be
satisfied by reference to the three already discussed in detail, i.e. Port-Royal
grammar, Condillac and de Brosses.

After 1660 there was to begin with practically no development in linguistic
theory;[2] for while Port-Royal had made modest protestations on behalf of the

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[1] Strange as it may seem, the only study of linguistic theory in this period (apart from a single
specialized work (Sahlin 1928) is a work of some seventy pages (Harnois 1880), in which the
authors discussed are approximately those listed here as "pragmatists", together with Leibniz.
The account, however is, almost entirely descriptive; Rousseau, Turgot and Leibniz are dismissed
in a dozen pages as "independents" (i.e. "men whose thought is too original to be associated with
the currents of thought of their time"). While this work is too limited in scope and too uncritical
in its approach to offer many conclusive insights, I might have been encouraged to pursue the
ideas of Turgot more fully, if it had come into my hands sooner.

[2] At least as far as the discussion of principles is concerned. Grammars, French and classical,
did indeed appear, but remarkably few general works. Duclos' teacher, the Abbé Dangeau, for
example, was publishing his *Réflexions sur toutes les parties de la grammaire* in the last decade of the
seventeenth century and the early decades of the eighteenth, but the works of Desmarais (1706),
Buffon (1732), D'Olivet (1740) and Girard (1747), as Fromant observes, make little advance on
Port-Royal.

study of language in its own right, the tenets of axiomatic rationalism still continued to hold sway. Leibniz and Locke speak at second hand, after Descartes and Hobbes, about language and its cognitive content. Meanwhile the grammar of Port-Royal had spread far and wide, and become the canon of linguistic belief. Then Locke's empiricism provided an opportunity to move into the attack, an opportunity that Condillac exploited, while Harris, and before him Shaftesbury, had come out in opposition to the "systems", and their works rapidly became known in France, where the Encyclopédistes attacked them. These will be discussed in due course.

Port-Royal to Beauzée

In 1754 C. P. Duclos (1704-1772), the Secretary of the Académie Française, had appended his *Remarques* to the Port-Royal grammar. He made no changes to the general plan of the work; Duclos was, indeed, anything but a reformer.[3] In 1766 there appeared, after several earlier reissues, a new edition, scrupulously modelled on the first, but accompanied by a Supplement by the Abbé Fromant, almost as large again as the main work, entitled *Réflexions sur les fondements de l'art de parler* ("Reflections on the Principles of the Art of Speech"). Fromant was not an original thinker; his achievement lies in following the sequence of the chapters of Port-Royal and setting out in detail for each topic the views which had been developed by grammarians since the appearance of the first edition.

The most important figure whose opinions he discusses is C. C. Du Marsais (1676-1756), who wrote a *Traité des tropes* ("Treatise on Tropes", 1735) which has become a classic in its field. Du Marsais is an acute observer and a humanistically-minded investigator, and he keeps his distance from the tendency to justify language on rationalistic grounds[4] which had marked the grammar of Port-Royal. Du Marsais' attitude of dispassionate description marks, so to speak, the truce (Sahlin) between the defensive attitude of Port-Royal and the counter-offensive of Condillac.[5] Towards the end of his life,

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[3]   He says of himself, "By temperament I was very much a libertine, and I only began to busy myself seriously with letters after I had become sated with libertinage, much like women who give to God what the devil no longer desires". See the *Grand Larousse,* s.v. 'Duclos'.

[4]   Language has no neet whatever to be ashamed of "unreal" meanings. "In his view tropes do not as a whole depart from normal colloquial speech; nothing is more natural than they are" (See Stutterheim 1941: 138-40).

[5]   The *Grand Larousse* (s.v.) calls Du Marsais the heir of Buffon and Arnauld, and the precursor of Condillac.

Du Marsais wrote linguistic articles for the first seven volumes of the *Encyclopédie*, which had begun to appear in 1751; and he was succeeded in this task by Beauzée.[6]

Belonging, like Beauzée, to a younger generation of schoolmaster-grammarians is the Abbé Charles Batteux (1713–1780), a subtly aesthetic classical scholar, who nurtured admiration for Antiquity through his work on *De gustu veterum in studiis litterarum retinendo* ("On the Preservation of the Taste of the Ancients in the Study of Letters", 1750), and above all in his *chef d'œuvre*, *Les beaux-arts réduits à un seul principe* ("Assimilation of the Fine Arts to a Single Principle", 1746), in which he treats all the arts alike as imitations of nature. The work was translated into German, and was very influential. Indeed, such international influence may be asserted for all the French linguistic scholars of this persuasion;[7] and this applies *a fortiori* to Batteux' contemporary Beauzée.

Nicolas Beauzée (1717–1789) wrote a *Grammaire générale ou exposition raisonnée des éléments nécessaires du langage, pour servir de fondement à l'étude de toutes les langues* ("General Grammar, or Explanatory Account of the necessary Elements of Language, designed as a basis for the study of all languages", 1767). The very title is interesting, and adumbrates further developments in this direction.

Port-Royal had escaped the demand of axiomatic rationalism that language should be subservient, and give expression, to an *a priori* set of correct thoughts by a clear and natural exposition of the "foundations of the arts of speech"; these foundations were themselves "reasons", and deviations were classed as "differences which occur". Thus Port-Royal presents "what is common to all languages" as rationality, but hardly as a standard or criterion. Port-Royal, then, reverts to a pre-Cartesian theoretical position on two counts: it fails to provide any *a priori* position, and what it implicitly claims as a foundation can hardly be considered a criterion. It therefore merely satisfies the demand of axiomatic rationalists for the reproduction of thoughts correctly derived from axioms, i.e. the accurate reproduction of thoughts—in the guise of an "art of speech". Beauzée's position is different.

In the century which had elapsed since the first appearance of the "Art

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[6] Important as the *Encyclopédie* may have been for the spread of Enlightenment views on language, as on other topics, the very number of its contributors on linguistic subjects means that it gives no more than a cross-section of pragmatic views. For this reason, the present study considers the various stages and viewpoints within the pragmatic camp as they are expressed by individual scholars.

[7] So much so that Jellinek's history of German grammar frequently has to take note of these French scholars; cf. above, p. 335, *n*. 14.

of Speech", knowledge of the languages spoken in all parts had grown ex-
tensively, and with it the material for the comparative study of languages.
French, together with Latin and Greek, had—albeit tacitly—provided Port-
Royal's sources. This now became impossible. Comparison in depth with the
common core of language absorbed considerably greater academic attention
than previously, but it promised a greater certainty that the indestructible
general principles of language, the basis common to all peoples, would be
discovered.

Here Beauzée seizes the opportunity of providing linguistics with a
rational criterion, a standard of evaluation, of raising it from an "art" to a
science. This science is "general grammar"; the "special grammars" of indivi-
dual languages are "arts of speech". Its criterion is therefore language in the
abstract, the principle which underlies individual languages. Beauzée's cri-
terion is therefore bound up with the use of language, but he does at least set
up a criterion; and it frequently emerges from Beauzée's remarks that the
structural principle immanent in linguistic usage is no different from the
mathematical, axiomatic view of the world constructed *a priori* by philo-
sophers, and indeed coincides with it in all respects:

> But people like Sanctius, Wallis, Arnauld, du Marsais have demonstrated in
> their excellent works that *the science of speech is hardly different from that of thought,*
> which is so honourable, useful and appropriate to man; and that Grammar,
> which can do no more than explain the one by the other, is accessible to
> philosophy; that the principles of language can be reasoned out, generalized and
> supported; in short that a body of science can be made of this branch of
> literature (1767: xx).[A]

"*Hardly* different" is still tentative, but this tentativeness disappears in Beau-
zée's contemporary Condillac.

Yet a conscientious study of individual languages is necessary; and it is
here, naturally, that inconsistency becomes apparent. The regular guideline
for making such an investigation is inevitably something that can be dis-
covered only as a result of the investigation. We are confronted here with a
case of a professional linguist's inability to provide theoretical principles, with
the result that although he takes Descartes as his model, he is involuntarily
constrained to trim his tactical procedure to the practice of his adversaries;
and he may be said to be "anti-axiomatic" in the tradition of Port-Royal.

These scholars in the school of Port-Royal are, however, unlike Condillac
and de Brosses, without exception professional linguists. Beauzée was in a
position to to draw on knowledge of some twenty languages, including
Basque, Chinese and Peruvian; he also wrote an important study on French

synonyms. In the conduct of his investigations, Beauzée starts out from word classes, as Port-Royal, the Middle Ages and classical Antiquity had done. Here again the same question is begged, that of setting out from a supposedly identical system in all languages—Beauzée speaks readily of "the metaphysical system"—which is treated as known and certain before it has been established.

It was not Beauzée's aim to deal with the origin of language, but he finds himself concerned with this question from time to time, as in dealing with nouns, where he rejects the view of Rousseau, Diderot and Scaliger that proper names came first. He says:

> Whatever system of language formation can be imagined, if it is supposed that man was born dumb, insurmountable difficulties will inevitably be encountered; and it will be impossible to believe that languages could have come into being by purely human agency. The only system which can anticipate every kind of objection seems to me to be one which establishes that God gave our ancestors at the same time the ability to speak and a complete pre-existent language. (1767: I, 251)[B]

Only now has Beauzée a firm footing: instead of letting language emerge from outside language through a man "born dumb", he can now remain inside language; and this enables him to continue (ibid.): "In this first language, *as in all the others*, proper nouns were drawn from appellative nouns" (*Dans cette première langue, comme dans toutes les autres, les Noms propres étoient tirés des Noms appellatifs, etc.*).

And so Beauzée, though at heart a linguist, comes only once to an explicit vindication of the autonomous functioning of language in its own right over against the claims of logic:

> Du Marsais subdivides appellative nouns into generic nouns or nouns denoting genera, e.g. 'tree', and specific nouns, or nouns denoting species, e.g. 'nut-tree', 'olive-tree' (I, 253) ... This division can have no use in general grammar ... ; no grammatical rule can be given to account for the difference between these two classes of nouns, in the way that grammatical rules may be given to account for the difference between appellative nouns and proper nouns. (p. 254)[C]

There is no special category here, for the very reason that their linguistic role is undifferentiated.

Such a rejection of pre-linguistic and extra-linguistic thought amounts in this tradition of pragmatic linguistics to an attempt to isolate language from logic. Here linguistic scholarship comes into its own as far as it could within the confines of pragmatic rationalism—but no further, if it was not to be drawn into the wake of the pragmatic linguistic counter-offensive of philo-

sophers like Condillac and Diderot. In 1799, Bopp's teacher, the Orientalist Silvestre de Sacy (1758-1838) published his *Principes de grammaire générale, mis à la portée des enfans et propre à servir d'instruction à l'étude de toutes les langues* ("Principles of General Grammar, made suitable for Children and designed as an Introduction to the Study of all Languages".[8] In Part III, chapter 4 of the second edition of this work, Silvestre de Sacy expressly differentiates between the "logical subject" and the "grammatical subject", the "logical attribute" and the "grammatical attribute". But this second edition did not appear until 1803, and so, strictly speaking, it lies outside the field of the present enquiry.

There were several general grammars of this nature in addition to those discussed here, including some in the period between Beauzée and Silvestre de Sacy.[9] Like those discussed, they were written by specialists, and they, too, instinctively avoid the question of origins as far as possible, as being non-professional and speculative.

After this critical discussion, a summary characterization of these grammarians is unnecessary; suffice it to say that grammar attempted, from Port-Royal to Silvestre de Sacy, to stand on its own feet and operate in accordance with its own theoretical principles. "Principles" are the aim of Port-Royal; "principles" are the aim of Silvestre de Sacy. And in the era of rationalist philosophy that is a real achievement, quite apart from the fact that such a specialist investigation of principles is a fundamental privilege, and a fundamental duty, of any scientific investigation, and that these grammarians were aware of this. It is for this reason that they rejected any prescriptions made on the grounds of philosophy or social theory.

Pierre Louis Moreau de Maupertuis

In the course of dealing in detail with Condillac I had occasion to mention the influence of the pragmatism of his philosophy on the school of the so-called "idéologues". However, the philosophical grammar of Destutt de Tracy lies beyond the limits of the period under discussion here; and, what is more,

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[8] Children were distinctly cleverer then than they are now—or perhaps it was Silvestre de Sacy's aim here to reject *philosophical* views of language (i.e in his circles the theories of Condillac), and in this way to confine himself to language proper. Compare the remark: "In the way he elaborates his theory in this chapter de Sacy shows that he is a typically practicalistic linguist, who defends the special nature of the type of rationality peculiar to language against any pretension as if its fundamental structure would be a logical system" (Verburg 1950: 462).

[9] Lanjuinais' preface to Court de Gébelin's book, mentioned above (p. 378), names several more, including English, Italian and German works.

the philosophy of language follows in the footsteps of Condillac for several decades, even after Destutt de Tracy was writing.

There are two remarkable short texts from the hand of a mathematician and physicist of similar status to Condillac, and an independent thinker in his own right, which merit discussion in the line of philosophical development. He was some twenty years older than Condillac. As he was less influential, and as language was not central to his thought, he cannot be considered to have typified pragmatic linguistic theory, but in other respects, as will become clear, he was very close to Condillac.

Pierre Louis Moreau de Maupertuis (1698-1759) was a pragmatist who, like Condillac, built on the empiricism of Locke. He set out to derive even mathematical and mechanical principles from sense perceptions; nevertheless, he was opposed to materialism.

Maupertuis was a renowned cosmologist; in 1736 he had led the first expedition to measure latitude, going to Lapland for this purpose; and he clearly noticed the language of its inhabitants. In 1741 Frederick the Great invited him to Berlin to take up the office of President of the Academy, and he spent the rest of his life in Berlin, in philosophy continually opposing the tradition of Wolff and his followers.

His *Dissertation sur les différents moyens dont les hommes se sont servis pour exprimer leurs idées* ("Dissertation on the various means employed by men to express their ideas") was twice published in 1756.[10] After a phase of being spontaneous, gestures and cries became conventional, and these conventional signs developed by way of mime and pitched tones into the languages we know.[11] The Dissertation deals with a matter of greater importance for the purposes of the present study, however, when it takes issue with the "universal language" of the axiomatic rationalists ("celebrated men"), for Maupertuis considers such a project to be as impossible as a "universal script":

> If the nature of ideas could be identified for certain, if it were possible to arrange ideas in an order which corresponds to their rank, their generality, their specificity, it would be not impossible to establish characters which would have relationships corresponding to the relationships of ideas. Once such characters

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[10] Inf his *Œuvres,* from which it is quoted (1756: III), and in the *Histoire de l'Académie Royale des Sciences et Belles-Lettres* for 1754.

[11] For Maupertuis' treatment of the theme of the origin of language, see the extended critical account by Benfey (1869: 283-5 *n.*). Benfey does not, however, seem to have known Maupertuis' views on linguistic function, as contained in the *Réflexions.*

were established, they would be not only aids for the memory, but also instructions for the mind, and this philosophical script would deserve to be a universal script or language.[D]

But men can never agree on the "principle of rank and value of ideas". Agreement can be reached about a limited small group: algebra, mathematics and music are universal languages in Europe, says Maupertuis, "but their universality is due only to their small numbers and the simplicity of the ideas they express. And it would seem practically impossible to deal in such languages with topics other than extension, number, or sounds".[E] Here Maupertuis assigns limits to mathematics, and cuts off any prospect of the subjection of knowledge by mathematical principles to a schematic arrangement of ideas; and in doing so he overturns the cornerstone on which universal character had to be erected (see Maupertuis 1756: III, 462 ff.).

Maupertuis' *Réflexions philosophiques sur l'origine des langues et la signification des mots* ("Philosophical Reflections on the Origin of Languages and the Meaning of Words", 1756: I) is even clearer in the expression of his views on language than the Dissertation, perhaps because of the more positive application of functional criteria which are absent in the earlier work. The comparison of modern languages teaches us little, says Maupertuis: "the expressions of ideas in them are cut in the same fashion" (*les expressions des idées y sont coupées de la même manière*). An investigation of the origin of language, on the other hand, teaches us "the traces of the first steps taken by the human mind". The store of words we learn as children is full of "prejudices", which block our access to the "true value of words", and the "certainty of our knowledge" (§3). This is an echo of Locke's criticism. Languages were "simple in their beginnings" (§4); to understand how language may have originated, says Maupertuis, I will imagine for a moment that I have been deprived of all my apperceptions and reasonings. Then I receive, for example, a perception, which at the present stage of language I would record as 'I can see a tree'; followed by one with the content of 'I can see a horse'. In the absence of "a developed language, I would differentiate them by certain marks, and I might be satisfied with these expressions, 'A' and 'B', for the same events as I understand today when I say 'I can see a tree', 'I can see a horse'".[F] And so on: soon we have 'R' for "I can see the sea" (§7); i.e. discrete, special denominations for perceptions which are completely separate from one another. But a great number of perceptions, each with its special sign, is a great burden on the memory. The next stage is that "I would notice that certain perceptions have something in common, and affect me in the same way" (*je remarquerois que certaines perceptions ont quelque chose de semblable et une même manière de m'affecter*). Then

I would replace 'A' and 'B' by new expressions 'CD' and 'CE' for what we would now express as 'I can see a tree' and 'I can see a horse'. Proceeding on these lines, I would observe that I could make further subdivisions; 'I can see two lions' becomes 'CGH', and 'I can see three ravens' becomes 'CIK'. But if I want to describe the lion and the raven, the two characters 'H' and 'K' are no longer adequate; it becomes necessary to subdivide the signs still further (§§9f.). "But the character 'C' ("I can see") will remain", unless I have to describe totally different sensations, "I can hear", "I can smell", etc. Maupertuis follows this conjecture with the confident remark: "That is the way languages are created" (§12).

At this point a word of criticism is in order. The pragmatists of the day all have a thorough knowledge of Locke, whom they regard from their empirical point of view as an exemplary axiomatic rationalist. But they also have a good knowledge of Hobbes; such outstanding writers of the 1740s and 1750s as Condillac and Rousseau explicitly take account of his views. The way in which Condillac crept into Hobbes's skin has been noted; something similar happened in the case of Maupertuis, for he erected his idea of language on the function of the *nota* or 'mark', as Hobbes himself had done. But the illusion of resemblance goes no further; for this wolf in sheep's clothing, this perception disguised as a *nota*, is no more susceptible of extension than the 'marked ideas' of Hobbes. For Hobbes the word was a cipher in the operations of reasoning and calculating, which helped to transform an invalid "perception", and re-encode it as a valid "apperception", an arithmetical symbolization of the word, making it function as an instrument of thought, a process of *ennoesis*. (In this Maupertuis is indebted to Hobbes's successor Leibniz, whom he followed readily as a result of his exposure to Wolffian views in Germany, even before he turned directly to Hobbes.) Condillac had turned this line of thought upside down, and set it up as a weapon in the counter-attack on Hobbes and axiomatic rationalism. Maupertuis did not make such a spectacular counter-attack as Condillac had done; for, like Hobbes, he accepted the function of language as a set of signs indicating perceptions; and he also agreed that language leads to factual knowledge (*sciences*) by way of analysis and synthesis. But he omitted a central component of Hobbes's theory; he did not share the latter's optimistic view that the analyses and syntheses which language introduces are logical calculations, and saw them rather as a necessary evil. For Hobbes, the verbalization of perceptions converted them into rational concepts; for Maupertuis, language performs a similar intra-mental service, but only under constraint. In his view it would have been better if language did no more than

register discrete perceptions in their discrete sequence; but now it offers analyses, to the detriment of simplicity:

> And, since languages once formed can lead to many errors and distort all our knowledge, it is of the greatest importance to know the origin of the first propositions, to know what they were before languages were established, or what they would have been if other languages had been established. What we call our factual knowledge depends so intimately on the modes adopted to denote these perceptions that it seems to me that questions and propositions would all have been different if other expressions had been adopted for the first perceptions. (§12, 1756: I, 267–268)
>
> It seems to me that no questions would have been asked, no statements made, if the simple expressions 'A', 'B', 'C', 'D', etc. had been retained. ... It seems to me that none of the questions which embarrass us so much today would have entered our minds, and that, on this occasion more than any other, it may be said that memory is the adversary of judgment. After combining expressions made up of different parts in the manner suggested, we have failed to recognize what we have done: we have taken each of the parts of the expressions as objects; we have combined objects with one another to discover points of resemblance or difference between them; and from this arises what we are pleased to call our factual knowledge. (§13, p. 268) [G]

After this diatribe Maupertuis asks whether a people with a small store of ideas—he mentions the Lapps—would have escaped this development, or whether a stronger memory would have enabled a people to make do with "simple signs". Without actually answering his questions, he exclaims: "This is an example of the mess established languages have created!" (*Voici un exemple des embarras où ont jeté les langages établis,* §14).

In the following eleven paragraphs Maupertuis shows what languages have on their conscience, *inter alia* the concepts of substance and mode. In §18 his criticism is clearly directed at Descartes' view of extension; he regards this view as another consequence of language. In §19 he draws attention to the differences arising between scholars of different nations because their languages are constructed in each case on different principles, with "allocations of signs to different parts of perceptions"; "once a language has been made in such and such a way, it casts [a special light] on each proposition ... has continual influence on all our knowledge" (§19). Finally language commits a mortal sin when, in the manner Maupertuis sketched, it reaches the point of saying, "There is a tree: this final perception transfers its reality, so to speak, to its object, and predicates the existence of the tree outside me." [H] Maupertuis attacks this position with all the arguments of scepticism and destructive criticism available since Zeno's days. The final four paragraphs adduce the

successive occurrence of the original simple perceptions to explain the difficulties of the concept of duration, unmistakably anticipating the theoretical position of Bergson.

This concludes an account of Maupertuis' views, interwoven with a modicum of criticism. Maupertuis does not in fact invalidate Hobbes's view of linguistic function: it is notional (*ennoetic*) and notational; it is less, indeed, a method of calculation than a mnemonic device, but it is this in full measure—and this is, naturally, something that Hobbes stresses. But when the time comes to evaluate this facet of language, it is regarded as a defect. This is remarkable: the *a priori* criteria of axiomatic rationalism in general ensured that its attitude to natural language was negative, and it was only Hobbes who was wholeheartedly appreciative of it. Pragmatists, on the other hand, were in general positively disposed towards natural language, as we have seen in many examples. But here we find a pragmatist who, out of pure counter-suggestibility, and probably in opposition to Hobbes, finds fault with language.[12] And he seems to have done this because language and languages lead to the "factual knowledge" of the "philosophes"; they are Maupertuis' *bêtes noires*.

Together with his rejection of "factual knowledge" Maupertuis also reveals a tendency towards a general pessimism about culture, and as a corollary an inclination to glorify the primitive state of nature. Here he resembles Rousseau. Did the pedantries of the Wolffians inspire the one, and the broad tundras under the even broader northern sky inspire the other?

I will conclude with an amusing episode. Although Maupertuis' book had appeared anonymously, one critic was bright enough to take Maupertuis' use of alphabetical letters as examples as his point of departure, and write to him as follows:

> We must not ask who the author of this work is. The modest size of the volume, the geometrical precision which characterizes it and the metaphysical doubts which pervade it make its authorship sufficiently clear, and might lead one to suspect that his researches into the origin of languages are no more than a pretext for writing it. (Maupertuis 1756: I, 256f.) [1]

This trod on the pragmatist Maupertuis' tenderest corn, and his reply reads:

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[12] I was pleasantly surprised to find that the validity of the contrast between axiomatic and pragmatic rationalism was further confirmed at this point. If, however, I had set out from the opposition of positive and negative attitudes to language, I should have found myself in recurrent difficulties.

I will not be taken by this gambit. Everything that M. Boindin says in my favour could be turned against me, if there are any grounds for what he goes on to imply. The more a work of this kind contains of geometry or precision, the more pernicious it could be ... (p. 257)[J]

To sum up: in Maupertuis we are dealing with a pragmatist who sees language functioning primarily in the construction of thought ("ennoetically"), or rather, in view of his sensualistic pragmatism, functioning within the mind or within the senses; for this incorporation occurs not by means of mathematical reasoning, but by perceptive thinking. Language does not raise perceptions to the status of valid knowledge, to science; rather, it reduces them to science. Truth lies in direct perceptions; and the further we go from direct perceptions, the greater the grounds for scepticism. Maupertuis' ideal of knowledge, and hence of language, lies in the simple succession of perceptions. Did he think he had found a sequential use of language by the Lapps? Maupertuis is, *mutatis mutandis*, the pragmatic counterpart of Hobbes. Among philosophers, he conforms to an earlier age and earlier attitudes; Maupertuis is still fighting an uphill battle with axiomatic rationalism, while Condillac has already gone over the summit.

Antoine Court de Gébelin

Although de Brosses had been just as speculative in his philosophy as Maupertuis, he was unlike Maupertuis in being of great importance for nineteenth-century developments in linguistics as a result of the physical and positive direction he gave to the question of origins and the mechanistic views of the function of language which this entailed. This does not mean that a direct derivation or influence from de Brosses can be traced in Bopp, for example, but de Brosses's etymologizing, coupled with the linguistic philosophy which Condillac and the "idéologues" based on sense-perceptions, tilled the field for the positivistic sound-based linguistic science which was seeded by the school of Bopp.

The apostle of de Brosses—in so far as he needed one to propagate his views—was Antoine Court de Gébelin (1728-1784). He was the descendant of a Huguenot family from the Cévennes, and—to a higher degree than his older contemporary Voltaire, in whom it is generally esteemed a special virtue—had had the courage to resist oppression in the Protestant cause. It is perhaps his unique claim to fame in the field of linguistic theory that he explicitly set language in the total context of the development of culture. Lanjuinais speals of

his gigantic enterprise in making known the primitive world in its primitive language, in all its dialects, in its hieroglyphs, in its writing, its mythology, its calendar, its religious observances, its history, its antiquities; the intense pleasure of living in this ancient world: and finally in having explained all this in terms of the great principles of need and natural order, and in having reproduced this same pleasure in our midst by means of a morality, a religion and political system based on agriculture. (Court de Gébelin 1816: iv–v) [K]

Court de Gébelin was the "beloved disciple" of the physiocrat and economist Quesnay, and behind the two of them looms the figure of Rousseau. If anything may be said for this assumption of the history of language into the history of culture—something his contemporary Monboddo in any case did much better—any credit is taken away in respect of language itself by the superficiality with which he describes and assesses linguistic phenomena. Court de Gébelin adds nothing new to de Brosses; on the contrary, the clarity of de Brosses's thought and the judicious reserve of his hypotheses is lost in the "more vigorous and confident exposition" (cf. Benfey 1869: 290) of Gébelin, from whose hand there appeared between 1773 and 1784 a nine-part work entitled *Monde primitif analysé et comparé avec le monde moderne considéré dans l'histoire civile, religieuse et allégorique* ("The Primitive World analysed and compared with the Modern World, taking account of Civil, Religious and Allegorical History"). The second volume deals with "Universal Grammar", the third with the "Natural History of Speech, or a Short Account of the Origin of Language and Writing". Gébelin later published a separate abridgment of these two volumes with the title *Histoire naturelle de la parole, ou précis de l'origine du langage et de la grammaire universelle* ("Natural History of Speech, or, a Brief Account of the Origin of Language and Universal Grammar", 1776; cited from the edition of 1816, which also includes Lanjuinais' extensive introduction). We can at once recognise de Brosses, and the two parts of his book, in Lanjuinais' summary of this work. Of universal grammar proper, and of its natural history he remarks:

Language was born with man; it was given him by nature. Therefore the rules which govern its use are not arbitrary; they are only modifications of immutable principles. It may be said that the comparative grammars of the various languages derived from this general or universal grammar ...

Every word has its justification derived from nature. It is upon this basis that Gébelin bases the art of etymology. According to him, vowels represent sensations, and consonants represent ideas. Passing on to writing, he considers that it was at first hieroglyphical, but that later trading nations derived the alphabet from this, in such a way that each of the letters which it comprises represents an object taken from nature. (Court de Gébelin 1816: preface, p. 6) [L]

Book V is an Etymological Dictionary of the French Language, and Books VI and VII one for Latin; these two volumes were also published separately as *Dictionnaire étymologique et raisonné des racines latines* ("An Etymological and Explanatory Dictionary of Latin Roots").

At this point the physico-mechanistic tradition ceases.[13] It holds what might be called the middle ground between the grammatical trend which started with Port-Royal on the one hand, and the philosophical trend of Maupertuis, Condillac and the "philosophes" on the other. The school of de Brosses might perhaps be characterized as one of cultural theory and anthropology. It is the territory of the *Encyclopédistes*, of d'Alembert and Diderot, but above all of Lamettrie and his "Man a Machine" (*L'homme machine*), and of Holbach, the systematic materialist.

De Brosses—and with him Court de Gébelin—is an exponent of this school of thought rather than a contributor to it; even before de Brosses's Treatise, the Abbé Pluche had written a *Mécanique des langues* ("Mechanism of Languages") in 1751. Linguistic theory thus allowed itself, once again, to be dictated by philosophers, although these were philosophers of another kind than the disputed "philosophes" and their disputed "systems". Out of the frying-pan into the fire, it might be said: escaping from axiomatic rationalism, only to end up in proto-positivism! But the search was always for certainty.

It is at this point, too, that the present general analysis of the functions which the pragmatists allotted to language—or rather, which they defended in language against the presumptions of philosophical mathematical science—comes to an end. Different as they are among themselves, many as were the controversies which divided opinions and excited minds within this circle, it is this basic non-theoretical trait which unites them This connection is made clear from the very title of a discussion of language (which, as it appeared in the nineteenth century, falls out of consideration here). This is a "letter" of four hundred pages (!) on language addressed to J. B. Lemercier, apparently by M. Mercier (1806),[14] for which, in view of their common pragmatic basis, Beauzée's views on science and art, Condillac's competitive mathematical principles and de Brosses's rigorous physical approach seem all three to have stood sponsor. The title is *Lettre sur la possibilité de faire de la grammaire un art-science, aussi certain dans ses principes, aussi rigoreux dans ses démonstrations, que les arts-sciences physico-mathématiques..*

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[13] A fuller account of Court de Gébelin's work is not considered necessary; after the detailed treatment of de Brosses, on whose work his own was modelled, this would lead to repetition.

[14] This is noted in Lanjuinais's preface to Court de Gébelin's *Grammaire*, p. 1.

THE AFTERMATH OF RATIONALISM

Diderot and Rousseau — Hamann and Herder

B EFORE GOING ON to discuss some transitional figures let us pause for
a moment to take our bearings. Pragmatic attitudes have been discussed
first as they appeared in the Port-Royal *Grammaire raisonnée*, then in Condillac's
philosophy of language, and finally in the closely related etymological theories
of de Brosses: if we leave aside the British school of cultural theorists and
Vico, the history of pragmatic linguistic theory exhibits three trends, each of
which may be traced back to one or other of the three sources already ana-
lysed. The theories of Port-Royal and de Brosses were to be of special
importance in the study of language in the strict sense.

De Brosses, part grammarian, part philosopher, came from Encyclopédiste
circles, and was an exponent of the tendency towards mechanistic naturalism
which became prevalent in this milieu. Such a one-sided approach had not
been present from the outset, for Diderot, who along with d'Alembert was a
central figure in the group, gives occasional glimpses a of moral aesthetic
spirituality fundamentally opposed to the basic attitudes of Lamettrie, Hol-
bach, de Brosses and others of their persuasion. This is particularly noticeable
in his views on language.

Rousseau is even more remote from this materialism; indeed, it is in this
context that he distances himself from the Encyclopédistes and goes his own
way in developing a moral and social sensibility in explicit opposition to the
mechanistic naturalism of de Brosses and his like.

Both Diderot and Rousseau made their comments on the functions of lan-
guage more or less in passing, for they were theorists of culture in general,
and language was not their main concern.

They are both transitional figures, Rousseau more so than Diderot. It is
Rousseau above all who is a forerunner of romanticism, which received its

initial impetus in the eighteenth century from Hamann and Herder,[1] and which came to stand aside from rationalism, although it maintained links at several points with pragmatism.

Denis Diderot

The contribution of Denis Diderot (1713-1784) consists in his discussion of the question of inversions in the course of dealing with word-order in the sentence or phrase in his *Lettre sur les sourds et muets* ("Letter on the Deaf and Dumb", 1751). Condillac had commented on the problem in 1746 in his *Essai* (§§84ff.), and the grammarian Batteux had called attention to it in his *Lettre sur la phrase françoise comparée avec la phrase latine à M. l'Abbé d'Olivet* ("Letter to the Abbé d'Olivet on the French Sentence in comparison with the Latin Sentence", 1748). In this way there developed a miniature symposium in which the three schools into which the French linguistic theorists have been divided each, as it were, found a champion: a philosopher, a professional educationist, and a theorist of literature and culture. Condillac, in keeping with the way he considered thought to have evolved from the senses,[2] had given priority to the noun; at a certain stage of development, he says, an object was given a name, while the verb was expressed by a gesture

> at a time when verbs were still not in use, the name of the object to which one wished to refer was uttered at the same time as the state of the speaker's feelings was expressed by some movement; this was the most suitable way of making oneself understood. (Condillac 1746: III, 122) ... Thus the most natural order of ideas made it desirable to place the dominant component ahead of the verb, so that the speaker would come to say, for example 'fruit want'. (p. 123)[A]

Batteux distinguishes a (moral) practical order and a (speculative) metaphysical order. In metaphysical order the subject is primary: "The *sun* is round"; but the practical order allots the initial position to the item which is most important for the speaker, who might perhaps wish to say "Round is the sun". This is then the natural order, the order not of the head, but of the heart. In his work on the syntax of oratory (*De la construction oratoire*), which appeared fifteen years later, Batteux identifies a "grammatical order", which

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[1] Cf. the frequently quoted remark of the young Herder: "I am looking for my identity, in the hope of establishing it and never losing it again. ... Come, Rousseau, be my guide!" See Buck 1939: 3.

[2] Jellinek (1913) discusses this in §§573, 575, 576. My observations on Batteux are dependent on §575.

places the subject in initial position as governing word, a "metaphysical order", an order based on thematic or logical status, and an "oratorical order".[3] This corresponds to what had formerly been called the practical order, which, in his view, was the only valid natural order. Latin can adopt this; French is forced to use inversions.

The view of Diderot is just as characteristic as those of Condillac and Batteux.[4] Diderot approaches the question from the angle of the development and history of culture, distinguishing three stages in the growth of language:

> These three stages are the state of birth, that of developing form, and the stage of perfection. At birth language was a conglomeration of words and gestures, where adjectives, which indicated neither gender nor case; and verbs, which had neither conjugation nor rection, maintained the same endings in all circumstances; in developed language there were words, cases, genders, conjugations, concords, i.e. the oratorical devices necessary to express everything, but no more. In perfected language the need was felt for a greater degree of harmony, because it was felt that it would be not disadvantageous to charm the ear in speaking to the mind. But since a minor item is sometimes preferred to the major one, the order of ideas was also occasionally overturned, to prevent the harmony being disturbed. (Diderot 1751: 143-5)[B]

The original natural [*sic*] language is the gesture-language of the deaf and dumb; here the main concept has priority. In formally developed language we have an echo of the dispute of the Ancients and the Moderns (*Querelle des anciens et des modernes*), for Batteux was a classicist:

> I could see how in developed language the mind is in thrall to syntax, and therefore finds it impossible to establish among its concepts the order which prevails in Greek and Latin sentences. Hence, I concluded, (1) that, no matter what the order of expressions may be in an ancient or a modern language, the mind of the writer has followed that didactic order of French syntax, (2) that, since this syntax is the simplest of all, the French language had in this respect, and in several others, an advantage over the classical languages (Diderot 1751: 230-1). ... And, pursuing the transition from formalized to perfected language, I have encountered harmony (p. 232).[C]

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[3] Batteux was a classical scholar: the humanistic tradition continued predominantly in the Port-Royal school (see the remarks above, p. 400). In Batteux's view, Latin can adopt "oratorical", i.e. "natural" word-order, but French cannot, being restricted to "grammatical" order. As a result, French is encumbered by distortions of natural order, i.e. inversions.

[4] Hunt (1938) fails to observe that Diderot's book was a contribution to what was at the time a thoroughly vigorous exchange of ideas. While he gives some indication of an ongoing discussion when he remarks, "In the *Lettre sur les Sourds et Muets*, which Diderot was prompted to write after a perusal of *Les beaux-Arts réduits à un même Principe*, by the Abbé, he attributes language ..." (p. 218). But this is not correct, for Diderot was not writing in opposition to this work of Batteux.

This harmony, as the highest goal, is achieved in the use of his own language; Diderot prefers French to all the ancient and most of the modern languages:

> I hold to my views, and I still consider that French, in comparison with Greek, Latin, Italian, English, etc, has the advantage of utility over elegance. ... But ... if our language is admirable in utilitarian matters, it may also lend itself to elegant matters. Is there any character which it has not taken on without success? It is exuberant in Rabelais, naive in la Fontaine and Brantôme, harmonious in Malherbe and Fléchier, sublime in Corneille and Bossuet, not to mention the numerous other qualities it has in Boileau, Racine, Voltaire and a host of other writers in verse and prose. So let us not complain. If we know how to use them, our works are just as precious for posterity as the works of the Ancients are for us. In the hands of an ordinary man Greek, Latin, English, Italian will produce nothing but commonplaces; French will produce miracles from the pen of a man of genius. And whatever the language, a work supported by genius will never fail. (1751: 239-241)[D]

So much, then, for Diderot. The linguistic usage of the genius—and Diderot considered himself one[5]—is a law unto itself. In face of this extreme subjectivity any problems of function, including that of inversion,[6] vanish in the brilliant but blinding light of the boldly innovative aesthetic personality which uses language freely and without inhibition, of the literary pseudo-inspirational genius. Rejection of dogmatic normalizing principles leads in this case to the detestation of all rules, and the functions of language proceed without rhyme or reason, with the result that Diderot overstretches pragmatic rationalism to the point of irresponsible self-indulgent witticism.

We can go so far as to realize clearly that this possibility is inherent in the fundamental attitudes of pragmatic rationalism; but there is no longer any theory of functions. Here the principle of genius is driven to its utmost limit; genius provides a promise of linguistic elegance which has not a single guarantee in critical theory; nor can it point the way to linguistic clarity, or even to the linguistic by-way of rational validity, or—however deviously—to literary elegance.

Diderot diverts the norms of linguistic function to the judgment of the individual, and does so both objectively and subjectively. Whatever he, Dide-

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[5] It is known that Diderot's influence on his contemporaries was largely attributable to a kind of ecstatic frenzy of eloquence in the course of which, by his own account, his enthusiasm caused him physical tremors and induced an equally ecstatic admiration in his listeners.

[6] It is strange that Jellinek did not proceed beyond Diderot's "developed language"; there is, indeed, little room for theoretical comment on "perfected language", but the linguistic use of the man of genius is ultimately Diderot's solution of the problem of inversion.

rot, or a person of comparable genius does, is both linguistically correct and elegant; and when the words are couched in French there is an accompanying objective guarantee of linguistic propriety and elegance. The Francophone genius is by his very nature the ideal of linguistic activity; such a genius orders and disposes of language with sovereign power, and is too exalted to be affected by any criterion, or, of course, any reproach of inversion.

Jean-Jacques Rousseau

Jean-Jacques Rousseau (1712-1778) turns away from the Encyclopédistes, and this makes him the antithesis of the materialistic proto-positivism which de Brosses had introduced into linguistics. But this assessment takes no account of the positive individual features of his complex and contorted personality and theories, with their pathological inhibitions and bitterness towards society. The individual quality which made him popular in the salons, the outrageousness of his brusque denigration of civilization, was also the source of his estrangement from the literary and cultural milieu of the Encyclo-pédistes.

There is a tendency towards irrationalism in the over-estimation of the dynamic power of genius, as we have seen in Diderot. Even in Kant's *Critique of Judgment*, which as it were transcends the formalism of his earlier *Critiques*, it is possible to speak of the paradox of the justification and foundation of rationality, if not in irrationality, then in something beyond rational explanation.[7] In the case of Rousseau we are concerned more clearly with irrational features, with a passion for passion and a sentiment for sentiment. In other words, his subjective philosophizing consists at its deepest level of a discharge of emotions. Rousseau's work thus gives evidence of pragmatic traits and tendencies, to which he remains faithful, but which in the last analysis seem to be inspired by sentiment, and to be developed by way of daydreams, sometimes brilliant ones—*Rêveries d'un promeneur solitaire* ("Reveries of a Solitary Rambler")—rather than by strict thought-processes; achieving them, as he puts it himself "according to my lazy practice of working by fits and starts" (*selon ma coutume paresseuse de travailler à bâton rompu*).

What, in his view, has language achieved, what does it achieve; what is its purpose and value, its positive or its negative contribution? Let us examine his *Discours sur l'origine et les fondemens de l'inégalité parmi les hommes* ("Discourse on the Origin and Basis of Inequality among Men", written in 1753, published

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[7] Cf. the remarks on Kant above, p. 373, *n.* 33, in the course of the discussion of Monboddo.

in 1755). What is the origin of social inequality, and is it justified by the law of nature? Rousseau's Discourse is an answer to these questions, the subject of a prize essay competition proposed by the Academy of Dijon, the home of de Brosses.

The word "social" has been prefixed here to Rousseau's "inequality", for this is how he understands the term; he expounds the place and function of language in terms of society.[8]

In the first part of this work, Rousseau answers the first part of the Academy's question by describing the original primitive condition of mankind.

> I regard all animals as nothing but ingenious machines ..., with the difference that nature alone is responsible for all the actions of the beast, while Man, as a free agent, contributes to his. ... All animals have ideas ... ; it is therefore not so much understanding which constitutes the specific difference of Man among the animals as his capacity as a free agent (1755: 30f.). ... Primitive man, abandoned by nature to instinct alone ... will thus begin with purely animal functions. ... The emotions, in their turn, will derive their origin from our needs, and their development from our knowledge. ... The only benefits he knows in the whole wide world are food, a mate and rest; the only ills he fears are pain and hunger (pp. 34–36). What advances can the human species make when scattered in the forests among the animals? ... Only consider how many of our ideas we derive from speech; ... and think of the unimaginable efforts and the infinite expense of time which the first invention of language must have cost; ... and you will realize that thousands of centuries were necessary to develop successively in the human mind the operations of which it is capable. I may perhaps be allowed to reflect for a time on the difficulties surrounding the origin of languages. I might be content to quote or repeat here the researches that the Abbé de Condillac had devoted to this topic, and which perhaps first set me thinking about the matter. But as it is clear, from the way this philosopher solves the difficulties he made for himself in accounting for the origin of conventionalized signs, that he took for granted the very point which I question, viz. the existence of some pre-established form of society among the first inventors

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[8] Rousseau is not innocent of a misconception, a misunderstanding which is still prevalent today, even in linguistics. This, briefly, is the confusion between social *behaviour*, i.e. relationships between individuals, and social *attitudes,* i.e. respect, consideration, pity, equality, etc. and their opposites—terms which Rousseau himself uses. The social component of language is usually taken to mean its ability to *create* understanding, contact and relationships between individuals. It would be preferable to exclude behaviour patterns completely from the term 'social'. Give and take does indeed establish contact and relationships between individuals, but this is not properly 'social' behaviour. The other, *functional,* side of the term, which is a motive force in Rousseau's thought, seems to me to be the only sense of this term which is useful here. For an example of this confusion see Segerstedt (1947).

of language, I feel myself obliged, when I refer to his reflections, to add my own to them, in order to expound the same difficulties in their proper light.[E]

Having thus taken as his starting point the assertion that animals, too, have "understanding", and that civilized man is characterized not as a rational animal—Rousseau does not say this explicitly, though the anti-rationalist tendency is apparent here and elsewhere—but as a "practical" animal (in his capacity as a free agent), and having numbered language among the mental activities characteristic of man, he gently reproves Condillac for making society a prerequisite for language, while for Rousseau himself it is society itself which is the problem. How could language have originated before society existed? Rousseau expounds the problem clearly from his own point of view: "If men had no contact with one another, and had no need to have contact, there was no imaginable need or possibility of inventing [language], since it was [after all] not indispensable" (1755: 46).[F] But in the state of nature there was no social contact, even between mother and child; as soon as the child can find food for itself, it leaves its mother.

But assuming for once that languages were necessary in the state of nature, Rousseau continues:

> How could they have been produced? This is a fresh difficulty even worse than the previous one; for if Man needed language to learn to think, he had an even greater need to be able to think in order to discover the art of speech. (1755: 49)[G]

Here Rousseau is confronted by the rationalists' problem of priorities, whether language is a constituent of thought (*ennoesis*) or a representation of thought (*metanoesis*). From his sociological viewpoint Rousseau, with a touch of irony, reduces the problem *ad absurdum:*

> The first language of Man, the most universal, the most vigorous language, the only language he needed before he had to sway assemblies of men, was the natural cry. Since this cry was drawn forth only by a sort of instinct in moments of great pressure, to beg for help in great dangers or to offer solace for grievous ills, it had no great currency in the ordinary run of life. ... When men's ideas began to expand and multiply, and a closer communication became established among them, they multiplied the inflections of the voice, and added gestures, which, by their very nature, are more expressive, their sense depending less on a previous codification. So they expressed visible and mobile objects by gestures, and those which could be heard by imitative sounds; but since gesture indicates little more than objects close at hand or easy to describe, or visible movements; since it has no universal currency, and since darkness or a physical obstacle might make it invisible, and since it demands attention rather than inviting it,

it was finally decided to use articulations of the voice in its stead; and since
these articulations, without having the same connection with well-defined ideas,
are better suited for expressing them all as conventionalized signs—a substitution
which can be made only by common agreement, and in a manner very difficult
to accomplish for men whose coarse organs had no practice, and still more
difficult to conceive at all, since a unanimous consent would have to be moti-
vated, and language seems to have been very necessary in order to establish the
use of language. (1755: 50–53)[H]

Thus Rousseau also undermines the rationalistic hypothesis that man,
having used a gesture language for a period, found it unsatisfactory and "fin-
ally decided" by common agreement or "unanimous consent" to replace it by
a better one of articulated sounds. Such "common agreement" is, however,
rather difficult in the continued absence of the new language of culture.

Having set the problem of the relative priority of thought and language,
and also of society, in these terms, Rousseau ends with a disclaimer:

I will leave to anybody who is willing to undertake it discussion of the problem
of which is the more necessary, an established society for the invention of lan-
guages, or pre-existent languages for the establishment of society. Whatever the
origins of language, the limited concern nature had to bring men together to
satisfy mutual needs and facilitate their use of language demonstrates clearly the
limited preparations she made for sociability. (1755: 60)[I]

Rousseau concludes Part I with the declaration that inequality is hardly
perceptible in the state of nature (p. 91), on the grounds that there was at yet
no society. But the first man who enclosed a piece of land and said "This is
mine" was the real founder of civic society. Beginning with this statement,
Part II describes "how man could gradually acquire some rough idea of
mutual obligations" (*comment les hommes purent insensiblement acquérir quelque idée
grossière des engagemens mutuels*, p. 103); "each family became a miniature society"
(*Chaque famille devint une petite société*, p. 107). Rousseau expects us to understand
simultaneously from this description how language developed:

It may be seen a little more clearly here how the use of words gradually
becomes established and perfected in the bosom of each family. It may be
considered that a common idiom would necessarily be formed among men
brought together in this way [sc. by the creation of islands], rather than among
those who wandered at random in the forests of the mainland. (p. 109)[J]

And when inequality begins to appear in a society established in this way,
language, developing in and with the social environment, bears some of the
responsibility for this inequality: "The one who danced or sang best; the best-
looking, the strongest, the most skilful or the most eloquent became the most

highly esteemed; this was the first step towards inequality, and at the same time towards vice" (p. 112).^K

This sums up the views of Rousseau in the "Discourse on Inequality". His views on language are completely incapsulated in his social theory. But while he considers language to be closely bound up with social life, it is no more than a secondary concern for him here. Although in many respects he develops valuable concepts of socialization, he has no eye for language as a factor in solidarity, in the tone of social relationships, for example, in the selection of plain or elevated words, in social idioms, in politeness formulas, etc., though he does observe that eloquence can engender social prestige.

But Rousseau also wrote an "Essay on the Origin of Languages", which appeared posthumously in 1782.[9] Its subtitle indicates that the work will also deal with melody and musical imitation; and, as a passage in *Émile* indicates, the essay was originally entitled "Essay on the Principles of Melody".

For the most part the views expressed in this work are the same as those of the Discourse, but the content explains the indecision which characterized its title. Is it a treatise on musical theory or linguistic theory? Although the cohesion between the twenty chapters is, generally speaking, not strong, they give evidence of a sensitive intuition and a power of observation in advance of its time; and it is only where he applies his observations to his ideology that Rousseau's reasoning goes awry. But in order to overcome the difficulties arising from the structural weaknesses of the work, it is advisable first to look at the conclusions to which Rousseau was led by his observations.

In the concluding chapter, on "Relations of Language to Government", in which Rousseau makes a critique of language, and speaks of what he expects of a language and the good or bad qualities he sees in it, his views of function become apparent. Classical Antiquity used language to persuade, and possessed eloquence. What is the position today?

> There is no need of art or figures of speech to be able to say, "This is what I like". What speeches are there left to be made to the assembled people? Sermons. ... Societies have taken on their ultimate form; nothing more can be changed, save with guns and money, and since there is nothing more to be said to the people apart from "Give us money", it is said by posters at street-corners or soldiers in the houses. (Rousseau [1782]1968: 197–199)^L

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[9] Reprinted in *Œuvres Complètes de J.-J. Rousseau* (Paris 1844: III, 495–522); not in the recent (1966) Pléiade edition of Rousseau's works, but edited separately by Porset (1968). The text in this edition is on the recto pages only; the facing versos contain notes.

It is strange to find such remarks in an essay on the origin of languages; Rousseau, then, sees no comprehensively persuasive, energetic and lively use of language at the present day. But the reason for this lies in languages themselves. "There are some languages which are favourable to liberty; these are sonorous, rhythmical, harmonious languages, utterance of which may be heard at a great distance. Our languages are made for boudoir whisperings" (p. 199).[M] Rousseau is applying a social criterion, the applicability or non-applicability of language, of a language, to the respect for the human individual, for freedom. Does he also apply this criterion to the objective social content of language, to politeness formulas, say? Does a language which, for example, does not distinguish "thou" from "you" stand on a higher plane?[10] No: this distinction belongs to languages with a rich musical sound-quality, which have the function of promoting freedom. Rousseau sees language as a product of feeling which has social effects, or perhaps also as an emotionally charged operation of the understanding combined with social objectives. (The border between understanding and feeling is notoriously indistinct for Rousseau.) He measures languages by the degree of their musicality and expressivity, and equates these qualities with the extent of their socially desirable objectives: the promotion of freedom, equality and fraternity, sympathy, respect, etc. On these terms, he claims, the French of his day and the way it is used falls far short. So we have depreciation of language, as in Maupertuis, i.e. the depreciation of present-day language in comparison with an idealized language of the past. And now we can examine the way Rousseau constructs his musical and social theory of language, beginning at the beginning.

Speech (*la parole*) distinguishes man from the beasts; language (*le langage*) distinguishes the nations from one another:

> speech, as the first social institution, owes its form to purely natural causes ... [i.e.] as soon as one man was recognized by another as a sentient being similar to himself, the desire or the need to communicate his feelings and ideas to [his fellow] constrained man to look for means of doing so". (p. 27)[N]

The only instruments by which man can influence his fellow-man are perceptible signs. "The inventors of language did not reason this out, but instinct suggested the result. There are no more than two general means by which we can act on the senses of others, viz. movement and the voice." (ibid.)[O] The former is divided again into (direct) contact and (indirect) gesture. This sug-

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[10] The Revolution brought about a certain equality in this respect, with the universal form of address as "Citizen".

gests a certain modernity,[11] inasmuch as Rousseau expounds the concept of language in terms of influence on one's fellow-men by means of purposive instrumental actions. Such a view of language had been in abeyance since the Humanists had formulated their theory of rhetoric; and even the Humanists, innocent as they were of eighteenth-century preoccupation with origins, made no suggestion of a development of language by this route. Gesture, for the Humanists, was an accompaniment of speech as part of rhetorical performance, and they clearly had an appreciation of the function of language for rhetorical effect; but they went no further. By contrast, the rationalists spoke incessantly about gesture, imitation, etc.[12]

Rousseau goes on to remark that while gesture is just as natural as the voice, it is less conventionalized. But gestures in themselves actually mean nothing, and present-day gesticulations have even caused us to lose the art of pantomime. "Look at ancient history: you will find [Egypt] full of these kinds of arguments addressed to the eyes; ... the most energetic language is the one in which the sign has said everything before the mouth is opened" (p. 29).[P] At the end of Chapter 1 Rousseau says:

> It seems, further, from these observations that the invention of the art of communicating our ideas depends less on the organs which enable us to make such communication than on a faculty peculiar to man which causes him to use his organs for this purpose, and which would cause him to use other organs to the same end, if those [used] were lacking.[Q]

This remark is clearly directed against de Brosses. Even if man were endowed with a cruder and less well-developed organization (i.e. were less well provided with the instruments of speech), he would, in Rousseau's view, have achieved the communication of ideas. This last description of the objectives of language, which is also, incidentally, indicated by the title of Chapter 1, still has echoes of unregenerate rationalism. Social factors, seen as interpersonal relationships, seem to delude him for a time when he considers the social life of beavers, bees and ants, who "have some natural language to communicate with one another" (*ont quelque langue naturelle pour s'entrecommuniquer*, p.39); but he retrieves the position with a logical consideration:

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[11]   Pos (1934: 16-29) provides a charming and instructive phenomenological view of deixis, gesture and mimicry in connection with the instrumentality of language.

[12]   Diderot is a case in point; but as he assigns a purely representational role to gesture in the revelation and expression of reflection, his observations on this matter were not apposite to the purpose of this study, and they have not been examined here.

Be that as it may, by the very fact that these languages are natural, one and all, they are not acquired; the animals which speak them have them from birth, and they all have them in the same form everywhere; they do not change; they do not make the least progress. Conventionalized language is the unique possession of man. (ibid.)[R]

All this comes from Chapter 1. Rousseau considers his view of language as a means of expressing feeling and influencing the course of events to be different in kind from the view held by axiomatic and pragmatic rationalists alike (except by Hobbes) that language is the representation of thoughts[13]: "And if we follow the course of facts in the light of these distinctions, it might be necessary to think differently about the origin of languages than we have done hitherto" (p. 41).[S] But it is just the close association of the expression of sensibility (the affect) with the control of events (the effect) that once again obscures the path, for Rousseau's conception of passions is confused, combining as it does psychological and emotive factors with moral and social ones. In Chapter 2 Rousseau takes his leave of gestures: "It was necessities that dictated the first gestures" (*les besoins dictèrent les premiers gestes*), before going over to sounds:

the passions bring together men whom the need to search for food forces to flee from one another. It was not hunger, or thirst, but love, hate, pity, anger, which drew forth the first vocal expressions from them; ... nature dictates accents, cries, laments, to move a young heart, to repel an unjust aggressor. This brings about the invention of the first words, and this is why the earliest languages were sung and impassioned before becoming plain and methodical. (Chapter 2, p. 43)
    Since the first motives which caused man to speak were passions, his first expressions were tropes. Figurative language was the first to emerge; and plain denotation was the last thing to be discovered. Objects were designated by appropriate names only when they were seen in their true form. The first speakers spoke exclusively in poetry; and men learnt to reason much later. (Chapter 3, p. 45)[T]

This turns the existing rationalistic scheme upside down (a similar development is found, for example, in Hamann), and Rousseau is aware of the fact: "I realize that the reader will stop me here and ask how an expression can have a figurative meaning before it has a literal one"; and he illustrates his contention with an example. The savage is terrified by large persons and calls

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[13] The term is here used broadly, to cover not only the view that language is no more than a reflection of mental processes rather than an instrument, but to cover all views which regard language primarily as the reproduction of thoughts, feelings, etc.

them giants, and it is only later that he acquires enough knowledge to call them men: "Emotions dazzle the eyes; the first idea they suggest is not a true one" (pp. 45, 47).[U] Here we can see again the distance which separates Rousseau from his contemporaries' rationalistic evaluation of language.

But it is only the first "natural voices" that are unarticulated interpretations of the feelings. Then differentiations begin to be made; it is primarily stress which provides contours, but quantity and rhythm also play a part (Chapter 4). A further step in the direction of rationalization and cultivation is writing; "drawing objects is suitable for savage peoples; signs for words and sentences for barbaric peoples, and the alphabet to civilized peoples" (p. 57).[V] Rousseau, naturally, expresses an unfavourable view of writing:

> Writing, which appears to stabilize language, is the very factor which changes it; it does not change the words, but the spirit, replacing expressivity by precision. The speaker expresses his feelings, the writer expresses his thoughts. The writer is forced to use all his words in their common acceptation, but the speaker can vary acceptations by the use of tones, and can fashion them to his taste. He is less constrained to be clear, and can yield more to forcefulness; and it is not possible for a written language to retain for long the vivacity of one which is exclusively spoken. It is articulations, not sounds, which are written. Now, in an accentuated language, it is sounds, accents, intonation of all kinds which constitute the greatest energy of language, and cause a sentence which would otherwise be commonplace to be uniquely appropriate where it occurs. The steps taken to remedy this deficiency extend and protract written language, and when they are transferred from books to discourse, they enervate speech itself. In speaking as one would write, one is doing no more than read as one speaks. (Chapter 5, pp. 67-69)[W]

For this reason, Rousseau can hardly believe that the great Homer set down his works in writing (Chapter 6).

In Chapter 7 Rousseau discusses prosody:

> We have no conception of a sonorous and harmonious language which speaks as much by sounds as by articulations. If you think the absence of living accentuation can be made good by diacritics, you are wrong, for diacritics were invented only after accentuation had been lost. (p. 75) ...
>
> All this tends to confirm the principle that all languages must, by a natural process, change their character, and lose forcefulness in gaining clarity, that the greater the efforts made to perfect grammar and logic, the more this process is accelerated, and that the only thing needed to make a language cold and monotonous in short order is the establishment of academies among the people who speak it. ...
>
> [On vowels and consonants:] It would be a simple matter to construct from consonants alone a very clear language for the purposes of writing, but one

which could not be spoken. Algebra has some of the qualities of such a language. (p. 81)^X

It is clear where Rousseau's preferences lie. The Romantics were later to call the consonantal system a lifeless skeleton, but the vowels the soul of the word.[14]

In Chapters 8, 9 and 10—chapter 9 being by far the most extensive in the whole work—Rousseau deals with the different natures of the languages of the south and the north:

> In gentle climates, on fertile soils, all the liveliness of the pleasant emotions was needed to bring the inhabitants to speak; the first languages, being the daughters of pleasure, not of necessity, bore for a long while the marks of their parentage; their seductive accent faded only when the sentiments which had brought them into being had also faded, when new needs which had established themselves among men forced each one to think of himself and keep his feelings to himself. (Chapter 9, p. 127)
>
> In the long run, all men became similar, but the order of their progress was different. In southern climates, where nature is prodigal, necessities derive from the emotions; in cold countries, where nature is niggardly, the emotions derive from necessity, and the languages, sad daughters of necessity, reflect their harsh origin. (Chapter 10, p. 129) ... [In the north,] the first utterance was not "Love me", but "Help me" (p. 131) .^{Y}

Chapter 11 summarizes:

> The languages of the south were of necessity lively, sonorous, accentuated, eloquent, and often obscure as the result of their very energy; those of the north were of necessity dull, rough, articulated, strident, monotonous. ... Our languages are more telling in written than in spoken form; to judge the Orientals from their books is like painting a man from his corpse. (p. 135)^Z

The most noticeable fault-line in the Essay lies between Chapters 11 and 12. From now on Rousseau is expounding his theory of music, which he subsequently incorporates into his views of language. This incorporation may arouse admiration, but it is not entirely successful.

In the discussion which follows, the term "sound" (*son*) is important:

> In the earliest vocalizations the first articulations or the first sounds were created according to the nature of the emotion which provoked the one or the other. Anger draws forth threatening cries, articulated by the tongue and the palate,

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[14] *Translator's note:* Anthony Klijnsmit points out that this metaphor occurs at least as early as Priscian; it is quoted by Alcuin, found abundantly in Kabbalistic sources and also in Hebrew grammars (e.g. Spinoza); "it is mentioned by Schultens (1737) and probably by many others".

but the voice of tenderness is gentler, being modified by the throat, and this vocalization becomes a sound. ... (Chapter 12, p. 139)

A language which possesses only articulations and vocalizations therefore possesses only half its potential riches; to be sure, it conveys ideas, but to convey feelings and images it needs in addition rhythm and sounds, that is to say a melody; this is something Greek had, and French lacks. (pp.141, 143)

["Sounds" are variations of pitch and timbre, but:] just as the feelings which a painting arouses in us do not derive from colours, the sway music holds over our minds is not the work of sounds. ... It is arrangement, imitation which gives these colours spirit and soul. ... (Chapter 13, p. 147)

In music, melody does precisely what arrangement does in painting; it is melody which notes features and shapes, of which harmonies and sounds are no more than the colours. (Chapter 13, p. 149)[AA]

What makes music a representational art (*art d'imitation*) is melody, but even the most beautiful melodies can give us no information:

The most beautiful songs, in our opinion, will have only a slight influence on an ear which is not attuned to them: it is a language for which a dictionary is needed. (Chapter 14, p. 155)

Melody, imitating the inflections of the voice, expresses complaints, cries of pain or joy, threats, groans; all the vocal signs of the emotions lie within its scope. It imitates the accentuation of languages, and the patterns peculiar in each idiom to certain emotions of the soul: but not only does it imitate, it speaks, and its language, inarticulate but lively, ardent and passionate, has a hundred times the power of the word itself. This is the source of the power of musical imitations; this is the source of the power of song on sensitive spirits. Harmony may make a contribution in certain systems, by associating the sequence of sounds according to certain rules of modulation, making the intonations more precise, by bringing to the ear an assurance of this precision, by resolving imperceptible vocal glides and securing them to like-sounding intervals. But by placing these restraints on melody, harmony deprives it of energy of expression; it erases emotional accent and replaces it by the harmonic interval (p. 159).[BB]

So harmony is law, i.e. bondage, restraint, etc. for melody; harmony is for music what articulation is for language.

Chapter 15 is an attack on views like those of de Brosses, speaking of "this age in which we are forced to materialize all the operations of the mind, and to remove all morality from human feelings" (p. 167);[CC] It begins (p. 163): "As long as sounds are considered only by the disturbance they arouse in our nerves, there will be no true principles of music and its power over our hearts". And now we come on to the analogy of music and language: "The sounds of melody act upon us not only as sounds, but as signs of our arousal,

of our feelings; and this is the way they induce in us the emotions which they express, the image of which we recognize in them" (p. 163).DD

If sounds have the effect of signs, what do they represent?

It is one of the great advantages of the musician that he is able to depict things which cannot be heard. The musician will not represent these things directly, but he will evoke in the mind the same feelings as those experienced when the things are seen. (Chapter 16, p. 175)EE

Chapter 19 is entitled "How music has degenerated"; and here we are reminded of something we might have forgotten in the course of the discussion of music as an independent art—that it was originally incapsulated in language; but, as he had already noted:

In keeping with the perfecting of language, melody was submitted to new rules and gradually lost its former energy, and the yardstick of intervals was imposed on the subtlety of intonations. ... (p. 187)
    Thus melody gradually became less closely associated with speech and took on an existence in its own right, and became more independent of words. And so it gradually ceased to produce the miracles it had performed when it was no more than the accent and the harmony of poetry, so giving [poetry] the power over the emotions which speech afterwards had only over reason. So, after Greece had become full of sophists and philosophers, celebrated poets and musicians were no longer to be found. By developing the art of convincing they lost the art of moving. Plato himself was envious of Homer and Euripides, derided the one, and failed to imitate the other. (p. 189)FF

The unity of language and music was broken, to the disadvantage of both.

As the content of Chapter 20 has already been discussed, there is no need for further excerpts from the Essay, but there is room to assess and evaluate Rousseau's position in respect of linguistic functions.

Various statements have already been noted in which he unmistakably rejects any rationalistic materialism in the manner of de Brosses. Where de Brosses, setting out from Condillac's principle of sensations, had made his way to tangible, perceptible material phenomena from which language had to be constructed, Rousseau equated sensations with emotions (*sentiments*). Diderot had looked to the individual of genius as the fountainhead of linguistic usage in its most perfect form, thus making it impossible to apply any functional assessment, or indeed any rational criterion, to language. Rousseau does not follow the same path, but he does make an unmistakable approach to this kind of "personality cult" in the position he adopts on the expression of passion and "sentiment"; that is to say, while the discharge of

emotions does, indeed, have a psychological function, it is for this very reason not subject to any normative criterion. The emotional has no objective in itself, so that while its individual features may be distinguished, they cannot be measured against the criterion of fulfilling an objective function in their own right. Rousseau shared Maupertuis' cultural pessimism, but he had already rejected in the Essay any suggestion of the view which Maupertuis had derived from Hobbes that language was a thought-process (of *ennoesis*) which enabled the language of marks to turn perceptions into apperceptions. Rousseau does not praise articulation, the development of primitive linguistic utterances into cultivated languages, as Monboddo had done; for him this is simply the gravest defect of language. Harris's defence of language by his theory of "truths" is even more alien to Rousseau, for in fact he has no concern for the truths of language. While he does indeed consider an utterance to be a communication of ideas, the reproduction of ideas as rational entities is no longer for him a critical factor. "Clarity", the goal of the representation of ideas in the axiomatic rationalism of Leibniz and his followers, is for Rousseau an activity with a tendency to emasculate language; written language and its influence may well encourage conceptual precision, but it detracts from forcefulness and energy. Writing stabilizes ("fixes") language, but it substitutes exactitude for expressiveness, it weakens ("enervates") speech itself. "Written languages"—what Leibniz had called the "languages of scholars"—"inevitably lose in forcefulness what they gain in clarity".[GG] The languages of the south are more praiseworthy, though they are "often obscure as a result of their energy". (Even the concept of harmony, Leibniz's concept of the eponym, shares in this disqualification, if only specifically in Rousseau's view of music, as noted above. The quality of sounds as signs is considered to be depiction (*peinture*), but this is by no means "representation" of ideas or objects; they "excite" in others the emotions which they represent. Indeed, by these means the musician can "depict things which cannot be heard". Where the paths of music and language divide, rational "persuasion" (*convaincre*) takes the place of the psychological production of emotion (*émouvoir*).

As for the functions of language, there could have been no suggestion of any specific role for language if Rousseau had consistently maintained its subordination to the expression of feeling; and he is, strictly speaking, illogical in nevertheless finding a purpose for language. An expression of feeling has no objective, and is not addressed to an audience. That Rousseau does, however, allot language a task is a result of his confused concept of emotion and "sentiment", which lumps together under one head such varied "psychemes"

as lust (including lust for food), instinct (e.g. the mating urge), terror, joy etc., and mental attitudes such as consideration, sympathy, love, equality and freedom. In this way language can transcend the bounds of the mere expression of emotion, and aim, or be set to aim, for a social goal, and yet be said to remain in one and the same sphere. The identification of linguistic function lies in fact for Rousseau in the promotion of social virtues by means of persuasion. In propounding this function for language, Rousseau recalls the Ancients, who used language to convince.

Rousseau misses the mark in two ways. From a subjective point of view, language is charged with an emotive subfunction, the extent of which no doubt varies; but while the independent use of language is never without this component, it is not right to characterize the emotional and expressive content as the central feature of language. Nor, in the matter of conformity to rule in which the task of language lies, does the social content match the requirement of autonomous purposefulness for language. This is approached more closely by "clarity", even if the clarity of Leibniz and his peers, which Rousseau rejected, was infected with rationalistic traits.

And yet Rousseau gives glimpses of remarkably acute insights into the nature of language. When he speaks of the intrinsically "metaphorical" quality of linguistic function in such statements as "Figurative language was the first to emerge", or "At first all speech was poetry; any thought of reasoning came later" (p. 45),[HH] a destructive tendency cannot be denied. And yet this subverter of rationalism—at any rate in linguistics—has seen something here of the reality of language.

Rousseau thus goes much further than Diderot, for Diderot was, after all, still preoccupied with investigating the representation of thoughts; and barely justified the unmistakable "irrationalities" of language by a last-minute desperate leap into the concept of genius—the genius which can do what it likes with language.

In Rousseau there is no retrospective interest in the methods and matter of representation, but merely a forward-looking interest in the object and effect of linguistic effort; there is no calculation, only action. All the factors characteristic of the individuality of this original thinker are to be found in his attitudes to language: his denigration of culture, which causes him to see formal regularity and articulation—for Monboddo the greatest achievement of language—as symptoms of degeneration; his emphasis on social factors, in the case of language its object of arousing "moral passions", but all in all so different from the casual communication of ideas from one individual to another, the traditional so-called social component of language, as in Locke;

his adoption of feeling, warm-heartedness, sensibility in all activities as his starting-point which for Rousseau the musician lies in the melodic elements of language.

We could write page after page of critical appreciation. We could, for example, note that in contributing to linguistic features such as word, phrase and sentence, inspirational components[15] are just as highly formalized as the units in which they are incapsulated, and that by being at one and the same time formative, diacritical, charged with feeling and energy they necessarily contribute to a secondary function of language, while, in semantic terms, they are naturally fully functional in their own right. We could ... But there is one feature to which we must draw attention; this is Rousseau's continued association in the Discourse of the invention of language with reason. Because he still acknowledges a duality of language and thought he has to leave the question of institutionalization unresolved in this work: for the institution of language ... language is necessary. In the Essay language and thought are interwoven, and here language, and with it thought, comes from the emotions.

Is Rousseau a rationalist after all? In his sociological pronouncements he is still a pragmatist, though his view of origins makes language into an expression of feeling: but is its social regularity any more than an unconscious entelechy? Here too, the answer seems to be yes. And when articulation— which Rousseau regards as no more than rationalization—comes into play, language loses its fitness for purpose. Rousseau shudders at the thought of any law!

Rousseau has been described above as one of the borderline figures of pragmatic rationalism. Did he cross the border in his views on language? A single observation about his influence as a linguistic theorist may help us to decide.

Hamann's remark "Poetry is the mother-tongue of the human race" (*Poesie ist die Muttersprache des menschlichen Geschlechts*) might have come straight out of the *Essai*.[16] Herder has already been mentioned. The works of the two Schlegels are immersed in Rousseau's mental imagery, though they consistently oppose him and their cultural optimism stands in contrast with his pessimism. Klopstock, too, can be mentioned here. These are authors in whom a direct influence of the Discourse may be seen (see Buck 1939: 32-36). Broadly

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[15]   It interesting to compare the views of Rousseau with the theories of Stenzel, who gives great prominence to the musical, or rather 'inspirational' contribution to the emergence of language.

[16]   *Translator's note:* Rousseau writes: "D'abord on ne parla qu'en pöesie" ([1782]1968: 45); Hamann's remark comes from "Aesthetica in nuce" (1762). Rousseau's text was written by that date (he sent a manuscript of his text to Malesherbes in 1761), but it is doubtful whether it could have been known to Hamann.

speaking the influence of Rousseau on the *Sturm und Drang* and romanticism is unfathomably broad and deep; and let us think, finally, of Goethe, Schiller, Jean Paul and Humboldt, especially the last-named's far-famed theory of energy. Where does this come from?

Rousseau's undying achievement is the central core of his vision: language is a "faculty", a procedure (*opération*), an "energy", a function—but a function with no constraints!

Johann Georg Hamann

Johann Georg Hamann (1730-1788), the oracular "Magus of the North" (*Magus im Norden*) of Königsberg, warehouse-keeper and philosopher, a man who falls outside all the parameters of his time, an existentialist *avant la lettre*, a law unto himself, imbued with a contradictory spirit, was a Bible scholar and fervent Christian with a drive for self-revelation centred in his passionate desire to be a language—a language of God? (see R. G. Smith 1944: 198 ff.)

Hamann continually draws a parallel between the Word of God and the word of man—or rather he identifies the two. The criterion he applies is certainly not a rational one, but does he in fact apply any criterion at all? Man's urge to utter language is so closely linked with divine Revelation that language threatens to become an end in itself rather than simply autonomous: language is creative force, the outflowing bestowal of salvation, the call of God. ... The rediscovery of Kierkegaard has helped to bring Hamann, too, into greater prominence. Existentialism finds in him a kindred spirit. Existentialism is in essence a form of irrationalism, and Hamann's views on language seem to illustrate this. For him, language no longer bows before reason, rather the reverse. We may ask, indeed, what manner of existence did not have to bow before the word in Hamann's view of the world. This is certainly true, as far as the Word of God is concerned. Hamann seems to imply as much from time to time, but ... can this position be maintained?

In my search for concepts of linguistic functions I have repeatedly followed the method of making the heuristic enquiry: "What criterion, what norm is applied to language?" This has frequently provided an approach to an author's views of function and his ontological principles. This exploration of norms, however, is more than heuristic. Language is a human activity and has a place in the sum of duties laid upon man; and it is for this reason that we recognize the nature and order inherent in language by the laws or norms which regulate it. But if we apply this question of norms to Hamann's attitudes to language, it seems doomed to be inconclusive. Does he regard the system of functions which underlies the existence of language as the universal

form of life? This is the conclusion to which the continual assimilation with the Word of God leads. But language is at once subject to laws (hypono-mous), and at the same time autonomous, by analogy with the rich differen-tiation of God's command to his creatures. It is autonomous, that is to say, in respect of other duties of the creature; hyponomous and autonomous in the sense that language is subject to its own laws, though never a law unto itself. But is this not the way Hamann regards language?[17]

In my view, no matter how exceptionally important Hamann's views of language are, his opinions are no longer rationalistic, although his valuation —or over-valuation—of language had, in its origins, a relationship to pragma-tic views of language. This judgment needs substantiation; but this lies outside the present work, and the reader is referred to specialized works on the subject.[18]

Johann Gottfried Herder

There is just as little reason, in my view, to regard Johann Gottfried Herder (1744–1803) as a practitioner of eighteenth-century rationalistic linguistic theory. He received decisive influences from Hamann, to whom he was bound by lifelong ties of friendship, and joined with him in opposition to Kant, their great, somewhat older fellow-citizen of Königsberg. In addition, he had made the personal acquaintanceship of Diderot, whose views of genius have been described; and his respect for Rousseau has already been mentioned.

Herder had a great influence on linguistic studies, not so much through his *Abhandlung über den Ursprung der Sprache* ("Treatise on the Origin of Lan-guage", 1772)—though this is the work which is mentioned first, and often exclusively, in this connection—as through his other contributions to linguistic criticism (cf. Jespersen 1949: 28), above all in his *Ideen zur Philosophie der Ge-schichte der Menschheit* ("Ideas towards the Philosophy of the History of Man-kind", 1784) and his *Metakritik* (a tract directed against the *Critique of Pure Reason*) of 1799. And finally, when we consider the extent to which language permeated Herder's writings from beginning to end, we have to ask ourselves

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[17] "In this way his style may be seen, as Goethe puts it, as a great attempt to make the totality of his free personality reveal itself through the word. The word becomes the unique mani-festation of the unique personality of Hamann, just as his total view of the world is revealed to us as the individual expression of his individual mind" (Heinekamp 1936: 59).

[18] See the bibliography of Unger 1905 (98 items); cf. also Unger 1911, Metzke 1934, Rode-mann 1922, Weber 1917, Burger 1925.

whether there are any of his works which remained entirely free from his passionate concern and reverence for language. Herder—along with Hamann, it may be said—also set his stamp on romanticism in his later works, but it was naturally the *Abhandlung* which gave the first impetus here (cf. Fiesel 1927: 6).

The key to understanding romanticism seems to be language, which defines exhaustively in a subjective way how it felt about the world, and in an objective way shows what it made of its experience. Where the human spirit expresses itself, it is language, and when it encounters the world, it encounters signs, symbols, i.e. language. Romanticism, sometimes in alliance with classicism, seems—though not in the eyes of all Romantics and Classicists—to be a movement which in its highest manifestations, where its persuasions are most assured and most passionately held, comprehends the whole of life in one existential category, and this category is language. In doing so it transcends rationalism, becoming a language-based ideology.

Herder and Hamann are thinkers who delight in contradiction. This attitude of theirs has to be borne in mind whenever we investigate any and all of their works methodically, and try to characterize them. In Herder's case this was done by Hanna Weber (1939). She allows Herder to speak for himself, and as she can listen, she asks Herder the one proper question, that is, she enquires what central concern underlies the whole of his work and the whole of his life: "What is Herder's view of the place of language in the structure of culture?"

There is one thing, however, which she does not do, and which has been done only more recently (Gillies 1945); she does not enquire into the provenance of so many of the theoretical positions which Herder unites into a great synthesis: Shaftesbury's aesthetic ethics, Vico's incorporation of language in cultural history, Harris's postulation of the Greeks as norm, Diderot's exaltation of genius in national languages and their users alike, Rousseau's language of music and language as action, Maupertuis' revival of Hobbes's notational language (compare also the mark [*Merkmal*] in Herder's *Abhandlung*), not to mention Leibniz's scheme of universal representation. For Leibniz was the only axiomatic rationalist who had tried to harmonize language in its familiar form with reason; he loved language, both language in the abstract and his mother-tongue. For the rest Herder cast his lot with all the pragmatists of function, and he had no time for axiomatic rationalism and its arid glorification of reason, witness, *inter alia*, his opposition to Süssmilch.

At this point we may leave Herder and the contention that it is impossible to regard him, any more than Hamann, as a rationalistic theorist of language,

even a pragmatic one. For this reason it seems to me that an investigation of the views of Hamann and Herder on linguistic functions would be better undertaken as the beginning of nineteenth-century linguistic theories.

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In the light of this consideration, no further discussion of Hamann and Herder is offered. The quarter-century before 1800 and the quarter-century after are a period of transition in which all kinds of new ideas are churning over and fermenting. Pragmatic ideas are, indeed, active in Hamann and Herder, but they do not constitute the central core of their work. These thinkers represent a basic frame of mind which stretches so far above and beyond anything that might be called "pragmatic" that it is reasonable to ask ourselves—as we did above—whether they did not by their independent intuition escape the spell of rationalism, which for another century, in all from about 1600 to about 1900, was to hold European culture in thrall, or who were protected from the overestimation of reason, whether axiomatic or pragmatic, in this case by another one-sided view, the overestimation of the function of language. Just as the pragmatism of the period after 1900 is a non-rationalist stance which may perhaps be characterized as subservience to economic principles, so it might be said, in the context of the three centuries of rationalism, that we are dealing in the case of Hamann and Herder with a kind of subservience to language. This is the more probable, in that Herder's humanism, intermittent though it may be, is at any rate associated with early humanism, which has been described above as a struggle between rhetoric or grammar on the one hand and dialectic on the other for supremacy within the so-called 'arts of language'; a tendency which may be described as "linguism" or "lingualism", i.e. a kind of subservience to language, though care must be taken not to undervalue the paedagogical and aesthetic elements of humanism.

These considerations give us an opportunity to consider in its proper place, i.e. at the end of the pragmatists' approach to language, the further influence and development of their views of language, to the extent that they constitute the beginning of a new trend. Talk of the German movement (*die deutsche Bewegung*), for all the nationalistic overtones of this name, has some justification, and Herder must be accounted one of its founders (cf., for example, Weisgerber). Herder and like-minded writers certainly introduced a new literary tradition; and Herder himself was also to have a strong influence in linguistics, for example on Grimm.

CHAPTER 13

LINGUISTICS AND THE HUMANITIES

The Study of the Classics in the Netherlands —
A Preliminary View of Bopp — Conclusion

WE LAST EXAMINED the study of classical literature, a by-product of
humanism, in the works of J. C. Scaliger and Sanctius, and the names
of Scioppius and Perizonius were mentioned as editors of Sanctius' *Minerva*.
It is with Scioppius that we take up the thread again, to turn our attention
to developments in the Netherlands.[1]

Scioppius (1576-1649) published a philosophical grammar of Latin in
1628; it went through a large number of editions, and is cited here from one
issued at Amsterdam in 1659. It is a remarkable document of the age, not
least in its subtitle: "Eminently useful, or indeed necessary, not only for begin-
ners in the Latin language to learn that art to perfection in a term, but also
for those skilled in Latin to explain the principles of what they read or
write".[A]

On opening the book, one is struck immediately by the many (unnum-
bered) pages filled with tables. Scioppius gives a survey of Latin, with enco-
mium after encomium, beginning with the term "grammar" itself. After the
first encomium we find a co-ordinated treatment of "definition", "subject"
and "instrument". The definition (or the aim or object) of grammar is to
control speech and correct errors of speech (*Dirigere locutionem et corrigere locutionis
vitia*). Errors are divided into "barbarisms" and "solecisms". What Scioppius
calls the *partes orationis* are divided into primaries, e.g. the letter, and those
derived from primaries—it will be noticed that there is no place in this

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[1] On the eminence of the Netherlands in the field of classical studies, cf. Wilamowitz-Moel-
lendorff 1921: I, i. 30: "The most eminent German scholars had turned even earlier, about 1600,
to the Netherlands, and those who stayed behind were drawn there. It is therefore appropriate
to begin there with the successors of Scaliger"; p. 35: "Indeed, there were very few works by
English authors in the seventeenth century, and these, like the German ones, could be accounted
to Dutch scholarship."

scheme for co-ordination. The instruments are of four kinds: "orthoepy, or rules for the pronunciation of letters; prosody, or the rules of syllabic quantity; etymology of the accidents and parts of individual words, and syntax, or the rules for the proper construction of words with one another".[B] In the subdivisions of the etymology of the noun and verb, and also in the syntax, we are referred to further tables. Scioppius provides sixteen tables in all; even the advantages and faults of "sewer grammar" (*grammatica cloacina*, see below) and Sanctius' grammars are compared in tabular form.

Scioppius is a typical enthusiast for innovation, and is conscious of the fact. While Scaliger had brought Aristotelianism back into grammar, and had based his philosophical survey on it; Scioppius, following Sanctius, rejected the authority of Aristotle, and also that of Cicero, Varro and Quintilian. The new edition of *Minerva* prepared by Scioppius was entitled in full: *Minerva Sanctiana sive commentarius de linguae latinae causis, ipsi etiam Ciceroni, Varroni, Quinctilliano ignotis* ("Sanctius' *Minerva*, or Commentary on the Principles of the Latin language, unknown to Cicero himself, Varro and Quintilian"). Scioppius' "system" aims not only to provide an easy method of learning Latin, but also to explain the principles, the reasons which define the construction of Latin. It is similar to the system of Ramus, but Scioppius does not use dichotomies as a dogmatic method after the manner of Ramus.

Scioppius became notorious for his outspoken and fierce criticism of his contemporaries. Although he had converted to Catholicism at the age of 22, he was hated as much by Jesuits as by Protestants as a "dog of a grammarian" (*canis grammaticus*).[2] He had no good word to spare for old-style grammar. With an allusion to Crates of Mallos, who introduced grammar to Rome after being sent there as an ambassador, but was forced, as a result of a fall into a sewer, to remain in Rome, Scioppius speaks of old grammar as "sewer grammar". He pressed the ecclesiastical authorities to introduce his grammar, which was "honest, happy and useful". The old syntax had run to five hundred rules; he needed no more than eighteen. The old grammar deserved the dismissive remark that "it provided neither any easy way to learning, nor any certainty" (*quod nec ullum discendi compendium, nec certitudinem praestet*).

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[2] Cf. Sandys 1908: II, 363. Although Scioppius' writings were widely distributed, classical scholarship seems to have left him largely out of account. Sandys deals with him in small print; Gudemann (1907) does not even mention him; Wilamowitz and Kroll also ignore him. Reisig (ed. Haase 1881: I, 38) makes an interesting observation about his relationship to Vossius—they were practically contemporaries (1576/7-1649)—[Scioppius] trampled the traditional views of the grammarians underfoot, but was an unscrupulous borrower from Vossius, whose scholarship he cloaked with his own ideas.

It is easy enough to criticize Scioppius' method. The way he divides his material is so heterogeneous and illogical—qualities, components, relationships, etc. are uncritically lumped together—that one can only be amazed that this tabular presentation was ever read and taken seriously. Clearly there was something about the work which appealed to the spirit of the age, in spite of all the faults of its composition. The inadequacy of its presentation is most apparent in the syntax. The much-heralded rules are all general, and couched in terms such as the following: "Every nominative is the subject of a finite verb, or is part of it, whether the verb is expressed or omitted (*sive expressum, sive suppressum*)". General rules can be formulated after this fashion *ad infinitum*. Even if a rule is not supported by usage, a rule which supposedly governs usage holds good, thanks to the magic wand *"expressum sive suppressum"*. It is, indeed, not clear how this work could ever have been used as a textbook. This "method" stops at nothing; it rationalizes everything. The whole work is written in this vein, and Sanctius' theory of ellipsis fits it perfectly.

Scioppius himself enquires into the nature of ellipsis on p. 50, and his answer is significant: "It is a figure of Latin practice whereby one or more words are missing from the proper construction" (*Est figura Latinae consuetudinis, per quam ad legitiman constructionem deest vocabulum unum aut plura*). So the "proper construction" is one completed by Scioppius. He notes four kinds of ellipsis, that of the noun, the verb, the preposition and the adverb or conjunction. On p. 51ff., for example, the teacher asks where the cognate nominative is omitted, to which the reply is: "In those verbs which are inappropriately called impersonal", i.e. by the idiomatic use of the passive voice, so that expressions which could literally be rendered as 'it is being run' or 'it is being sat' are taken to imply 'a run is being run' or 'a sitting is being sat'" (*In verbis illis, quae inepte Impersonalia vocantur ut curritur, sedetur etc. nam deest ac subauditur cursus, sessio…*). Something similar is suggested by the so-called absolute use of verbs, e.g. in the case of *vivo* "I live" *vitam* "life" is missing. And so it goes on.

What makes Scioppius' system so unacceptable is that, having adopted a critical attitude to language, he goes on to measure language against a model completely derived from linguistic data (e.g. *vivo vitam; vivo* without *vitam* is elliptical). To put it more accurately, he does this not co-incidentally, but as a matter of principle. That *stativa* ('permanent') on its own means *castra stativa* ('permanent camp') is clearly acceptable, but we are entitled to question the way Scioppius continually sees irregularities in the fundamentals of language, and, indeed reaches the absurd position of setting up rules of incorrect usage, e.g. rules for the incorrect use of the nominative, genitive, the verb active, the verb passive, the gerund, the participle. These examples occur in the chapter

on "Syntax or Construction". Or had the reality of language become too much for him, leading him, so to speak, to set up regularities of irregularity?

If we regard this philosophical grammar as a remarkable document of its time, we do so because it may be seen as an example of the vacuum in linguistic theory which came about between the acceptance of renaissance principles and the new attitudes of axiomatic rationalism. Scioppius does not accept Scaliger's Aristotelianism; but neither does he have any desire to return to the humanists' language-centred scholarship ("lingualism") and respect for authorities. Rationalism was only just beginning, and it was only later that rationalism was to lay new principles for the exploration of language. It would develop them linguistically in, for example, Wilkins; but by his time, a mere forty years later (in 1668), rationalism was playing its part. On the other hand Ramus had established his new order of grammatical facts more than fifty years earlier. This, too, had been an order imposed on language, but it had done no more than regroup the available data in order to produce a didactic summary of the whole. Scioppius does more than this: Ramus had set up principles for usage; Scioppius rationalizes language by making his only explanation a structure of meaning which does not in fact exist, and which he established by extrapolation. He outlines possible complements and supplements, as it were, rectifying defective usage in essentially the same way as the authors of rational grammar would later account for omissions and simplifications; and like them he finally produced a strict system. In my view Scioppius may be considered to be a rationalist *manqué*, possessed of the rationalists' feeling of certainty, but lacking the theoretical and philosophical expertise which sets out to rationalize language.

Classical grammarians took little interest in him, and repudiated this adaptation of the theory of ellipsis. Figures like Casaubon (1559-1614), and the equally famous J. J. Scaliger (1540-1609) construct a bridge from humanism to the solid professional scholarship of humane studies ("classical philology"), the latter more particularly to classical scholarship as practised in the freedom of the Netherlands.

I have spoken above of a process like the course of streams in a canyon. In much the same way, the grandiose linguistic visions the humanists had of the cultural mission of language disappeared in specialist scholarship. The question arises whether there was any awareness of this limitation among the great scholars who were the pioneers of seventeenth-century classical philology, more particularly in the Netherlands. We will turn our attention first to the greatest of the great, G. J. Vossius. But it is necessary to make a few

preliminary observations about classical philology in general in the emergent period, and about that in the Netherlands in particular.

As the humanities became more firmly established as a specialist branch of scholarship, the attention given to the functional principles of language grew less. The linguistic interest of classical scholars was largely confined to the critical study of texts. The enthusiasm the Humanists had shown for the power of language abated, and insistence on the intrinsic quality of language, based on rhetoric or grammar as opposed to dialectic, was implicitly deemed to have profited from being developed in the splendid isolation of what must be acknowledged as a dazzling array of polymathic literary scholarship.

The initial principles on which scholarship continued to be based were nevertheless a continuation of the basic principles of humanism, in contrast to the practice, now abandoned, of seeking them by radical self-examination. I have already attempted to show that the facts force a study like the present one to distinguish between humanistic and renaissance linguistic principles. Axiomatic rationalism was associated with the attitudes of renaissance thinking, while classical scholars kept their their distance, instinctively perhaps, in view of the humanistic tradition, from both renaissance and rationalistic attitudes; and when pragmatic linguists began a little later to attack axiomatic rationalism, the humanities seem to have found a powerful ally in this new movement, as shown, e.g. by Batteux. It might be thought that this was a natural process, in that the humanities were the best equipped sector of linguistics, but this is to misjudge the similarity of the basic ideas of the humanistic tradition on the one hand and the pragmatic approach on the other. This affinity has been noted in earlier pages in connection with the discussion of pragmatic rationalism.

The effect of the new alignment on the principles of linguistics, even where these studies were not preoccupied with apologetics, as they were for example among the authors of *grammaires raisonnées* in France, was a gradual shift in the seventeenth century, and more markedly in the eighteenth, from a humanistic to a pragmatic basis.

This development may be illustrated by a study of classical philology in the Netherlands—the study of the classical languages, because this was the dominant area of academic advance, and on our own soil because the classical scholars of the Republic at the time played the first violin in the European orchestra. Not all of them have an international reputation in their own right, but the studies carried out by the Dutch themselves outstripped those

of other nations.[3] When J.J. Reiske, the only one of the "many industrious and upstanding men" (*viele fleißige und brave Leute*) whom Kroll deems worthy of mention between Melanchthon and neo-humanism (1909: 108), set out to learn Greek, he had to go to Holland. This was what gave international standing to the work of even undistinguished Dutch professors: students of languages flocked to them from all corners of the earth to acquire in the Republic scholarship which their own lands could not offer.

Sandys (1908: 217f.) draws a distinction between the generation of Erasmus, Busleiden, Vives, Cornelius Valerius[4] on the one hand, and seventeenth and eighteenth-century scholars on the other[5], and speaks of a "Louvain" and a "Leiden" period in the Netherlands. In fact, a great deal of the activities of northern Dutch literary scholars was concentrated in Leiden. Protestantism set a seal on the work in the Republic, and to some extent determined the choice of material, in so far as Greek held the place of honour in the eighteenth century; for the Counter-reformation regarded Greek as the "language of heretics". Louvain was inactive, and Lipsius, who had returned to the old faith, laments over the Louvain of 1601 that "everything is now dormant and silent" (*nun iacent omnia et silent*).

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[3] Even Kroll (1909: 101) is forced to admit that "Scaliger, indeed, spent the last years of his life in Holland, such was the dominance of the Dutch in the seventeenth century", though he adds, rather churlishly, "admittedly, perhaps, in quantity rather than in quality." It ill behoves us Dutch, endowed as we are, perhaps as part of our national character, with such a modest valuation of our importance, to press such points as the present one; but it may be noted that while Bursian's *Geschichte der klassischen Philologie in Deutschland* ("History of Classical Scholarship in Germany") was published in 1883, a German had already written a "History of Humane Studies in the Netherlands" (Lucian Müller, *Geschichte der Philologie in den Niederlanden*) in 1869; so the eminence of Dutch scholarship had not been forgotten in Germany in the 1860s. The most comprehensive work on classical studies is that by Sandys, which only rarely looks outside its very extensive material; but the very number of the Dutch scholars he discusses, in comparison with those from France, Germany and England, leaves no room to doubt the position of the Dutch in these studies in the seventeenth and eighteenth centuries. And even so, he omitted one or two not unimportant figures (cf. Sandys 1908: 378 & 372). On the importance of the Dutch school, see also Gerretzen 1940.

[4] Sandys names the last of these twice, without discussing him at all; he clearly overlooked the importance of this scholar.

[5] The number of classical scholars who were active in the north of the Netherlands in the seventeenth and eighteenth centuries is almost incalculable: Dousa, Vulcanius, Lipsius, J. J. Scaliger, P. Merula, Baudius, Wowerius, Puteanus, Scriverius, G.J. Vossius, Meursius, Putschius, Cluverius, D. Heinsius, Grotius, Salmasius, F.Junius, J. F. Gronovius, Isaäc Vossius, N. Heinsius, Spanheim, Meibomius, Graevius, Rijcke, Francius, Jakob Gronovius, Broukhusius, Cuypers, Perizonius, Le Clerc, P. Burman I, Küster, Bos, Duker, Havercamp, Drakenborch, Hemsterhuis, Wesseling, J. F. Reitz, D'Orville, Oudendorp, J. Alberti, Abresch, P. Burman II, Valckenaer, Schrader, Ruhnken, J. D. van Lennep, Pierson, Koen, Scheidius, van Santen, Luzac, Sluiter, Wijttenbach.

Gerardus Johannes Vossius

The great figure of these early days was Gerardus Johannes Vossius (1577–1649). After he had been passed over for appointment to the chair which had become vacant at the death of J.J. Scaliger, he left Leiden, and from 1631 taught as a professor at the Athenaeum Illustre of Amsterdam. He was the founder of classical historiography, but not that alone. His most important work is the "Art of Grammar", subsequently known as *Aristarchus* (1635)[6]; next in importance are his works on Latin Etymology, and on Greek and Latin historians. He also did pioneer work on oratory and the nature of poetry.[7]

The first two books of *Aristarchus* deal with letters and syllables respectively. Books III–VI are concerned with inflections. In the work itself they are also given the separate title "On Analogy" I–IV. Book VII ("On Construction", i.e. syntax) also stands on its own.

In chapters 1 and 2 Vossius maintains, against J. C. Scaliger, that grammar is an art, not a science. It would perhaps be fairer to say that Vossius' own grammar is not a science. But while he does indeed begin by saying: "Grammar cannot be a science, since its aim is not knowledge, but practice. Again, its matter is not a necessary thing, but a contingent one, as we have said", he goes on to add:

> For I am speaking of the grammar proper to each language, not one common to all languages. For such a common grammar ... is completely natural, not arbitrary. ... There is nothing to prevent us from properly calling the latter a science, whether we consider its aim or its matter. But in order the better to understand the nature of speech, which is a human characteristic, it looks into the matter of speech, and illustrates its characteristics from the principles of nature. But when I say that grammar cannot be defined by scientific methods, I am speaking not of natural, but of artificial grammar, not common to all men, but proper to this or to that language.[C]

It is clear that Vossius recognizes the legitimacy of a general grammar, indeed, that it is just this which he accepts as linguistic science, but his own aim is to produce an "art", specifically one of Latin. The act of distancing himself from the practice of a science which "illustrates from the principles of nature"

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[6] *Aristarchus sive De arte Grammatica,* cited from the Amsterdam edition of 1695: *De Vitiis Sermonis et Glossematis Latino-Barbaris Libri Novem,* bound together with *De Arte Grammatica Libri septem.*

[7] "This scholar is the creator of a Poetics, a Rhetoric and a Grammar: the two first constitute the wings, and the last the enormous centrepiece of the triptych of the linguistic scholarship of his day" (Stutterheim 1941: 132).

shows at the same time a lack of concern for questions of principle in linguistics. Vossius showed himself to be a brilliant master within the limits he set himself, and, as the quotation reveals, he was well aware of these limitations.

There remains the question why this self-limitation was necessary; but all that is needed to answer this question is to point out the prevalent hostility of the age to humanism and a culture based on language. This was observed in Bacon; and Descartes' modernism was also to play into the hands of the defiant self-assurance of the age. The new scholars considered themselves to be more than a match for the Ancients; as Bacon had put it in the *Novum Organum* of 1620: "It is not that we should credit the ancients with a great deal on account of their antiquity, but we ourselves must be called more ancient in our utterances; for the world is older now than it was then, and we have a greater experience of things." [D] — We ourselves are older in experience! — The authors of antiquity had ceased to serve as a mine for the extraction of knowledge, as they had done for the humanists; and the mission of Latin as the universal language of culture was likewise over. J.J. Scaliger had glanced beyond the boundaries of his own specialism and written his *Diatriba* on the relationships between the European languages.

Faced with this situation, Vossius' reduction of ancient grammar to an art marks a departure from the pretensions of the humanistic past, and a close examination of reality. His contemporary Scioppius seems by contrast to have been attempting in his rationalization and simplification of Latin grammar to be attempting to accommodate himself to the spirit of the age.

In Chapter 7 (p. 11), Vossius comes to "Analogy"; here, too, he differentiates clearly between the analogy of natural grammar, the "science" of Chapter 2, and that in the special grammar, the "art" of an individual language:

> It lies within the purview of natural grammar to determine the nature of a letter, a syllable, a noun, a verb, etc. We may refer to a special grammar to determine that a given word is inflected in one way or another, that it takes one case or another. As Varro writes, ... the position of analogy in natural grammar, which Crates once opposed, and Aristarchus defended ... is simply clearer than the midday sun. In special grammars, the position is considerably more complex and obscure. It is not, however, so complex and intricate that we are forced to expound it, and deal with it in isolation. It is not the case that because there is no analogy in certain words, analogy has to be jettisoned, but rather that it has to be accepted because it is present in the rest. [E]

At the beginning of Book III, he clarifies his view a little more precisely. This part of his grammatical method is almost exclusively taken up with ana-

logy and anomaly. This is why he calls this part "Analogy". He considers the designation "Etymology" to be incorrect, "since it enquires into the origins of words, while analogy explains the differences between words" (*cum vocum origines inquirat; Analogia vocabulorum discrimina exponat;* 1695: 111).

In the development of this theme, to which no further attention will be given here, Vossius adheres to the moderate position of Varro, with a preference for analogy: "the number of anomalies which they were eager to impress upon us is not so very large" (*haud tanta est caterva anomalorum, quam se nobis persuadere studuerunt*). Vossius is constrained by the limitations of his area of investigation to keep himself distant from general judgments, as though analogy was to dominate language. He looks into regularities between words as far as they go, but there is no certainty that the form of one word resulted from that of another. If *ovis* ('sheep') gives us *ovile* ('sheepfold'), it might be expected that *avis* ('bird') would yield **avile* for 'aviary'. But the word is *aviarium,* and *apis* ('bee') gives *apiarium.* In this way Vossius views the system of analogy as a means for ordering linguistic occurrences within established practice, and there is no thought of general applicability.

Jacobus Perizonius

Scioppius had too often done violence to usage (*usus*), or what he calls "custom" (*consuetudo*) in his definition of ellipsis; for even though this criterion was derived from language itself, it was given exaggerated value as a general model. Vossius confines himself to actual usage. But the great attention he gave to the problem of analogy indicates a reaction against the spirit of the age.

Jacobus Perizonius (1651–1715) gave greater attention to the spirit of rationalism which dominated men's minds. His attitude towards usage is marked by a shift of emphasis: the changeable vernaculars reveal *usus* or *consuetudo,* while reason is the basis of the unchanging learned languages.[8] Gerretzen says of him:

> This philosophical character of Perizonius' scholarship also finds expression in his linguistic work. Here, too, he gives us, not a defined system, but merely discrete observations in his edition of Sanctius' famous work, *Minerva;* he claimed to have no time to make a system of it. These important observations,

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[8]   This expression, which corresponds to Leibniz's *langues des sçavants* ("languages of scholars") has no reference whatever to artificial languages; it means approximately those language which have a literature studied by scholars. These were above all the classical languages.

to which too little attention has hitherto been given, entitle us to regard Peri-
zonius as a precursor of Hemsterhuis. In his views of the nature and purpose
of language he agrees fully with Descartes, though he cannot be called a
Cartesian, for this would conflict with his eclecticism. In his opinion the basis
of a language is formed by reason (*ratio*); usage (*usus*) is important, but it
presupposes reason, for otherwise it would be "abusage" (*abusus*). Reason
predominates more in a learned language, such as Latin, usage, on the contrary
in the changeable vernaculars. (Gerretzen 1940: 70)[F]

On Perizonius' attitude to classical scholarship, Gerretzen remarks:

> Perizonius stands, as already indicated, between the earlier polyhistory and the
> later critical study of texts (1940: 63). In Perizonius we are once again reminded
> of Boeckh when we hear him declare in his Leiden oration that textual study
> is not to be equated with grammar in the narrower sense, for it is not limited
> to literature, but embraces all the sciences. (p. 64) [G]

His critical attitude towards the historical authorities of antiquity justifies his
being called the "forerunner of Niebuhr" (Kroll 1909: 103).

Gerretzen also discusses the concept of analogy in Perizonius, remarking,
"Since reason is for Perizonius the creative principle of language, he attempts
to explain linguistic phenomena by analogy" (p. 70), going on to give some
examples of such explanations in Perizonius' writings. He continues (p. 71):
"So here we have the principles which Perizonius still applied incidentally,
but which Hemsterhuis later elaborated into a firm system, his starting point
being the thought that the older a language, the simpler it was".[H] It should
be noted that his view of analogy, too, marks a change from Vossius. When
Perizonius sets out to make reconstructions of earlier linguistic forms, using
analogy as a guiding principle, he no longer regards analogy as the identi-
fication of a consistent regularity underlying the forms of words, but as a
principle of linguistic structure. He clearly regards analogy as serving both
these purposes at the same time (but see Gerretzen 1940: 70); and hence he
is a transitional figure in this respect, too. He marks the transition from the
esoteric and polyhistorical specialization of Vossius to the "philosophical"
textual study of Hemsterhuis and his school. He represents a transition in
another respect, too: Gerretzen noted a certain influence of Descartes on
Perizonius. The school of Hemsterhuis which followed was subject to the
principles, not of axiomatic but of pragmatic rationalism, and this merits a
brief discussion.

The School of Hemsterhuis

The first thing to note is that Tiberius Hemsterhuis (1685-1766) broke with the opinion of his time that Greek came from Hebrew or was at least related to it. He also restored Greek to favour after the one-sided preponderance given to Latin in the previous period, with the result that his school is spoken of as the "Dutch Graecists". Latin was seen as coming from Greek, a view which had also been held before Hemsterhuis's time.

There then developed among Hemsterhuis and his pupils, alongside their literary and interpretative work, an etymological investigation of language based on principles of reconstruction. In this context it is noticeable that the leading members of the school, Hemsterhuis himself, and Valckenaer (1715-1785) propounded and applied these principles in their lectures, but did not base any printed publications on them. Johannes Daniël van Lennep (1724-1771), too, a follower rather than a man of independent ideas, but a gifted teacher of profound influence, also kept silent on this point, though he had a great reputation within the walls of the lecture-halls as a true prophet of analogy. Since the Netherlands were an international forcing-house of classical studies, the views of these scholars became widely known—in Germany, France, England, and even as far afield as Transylvania[9]—through the circulation of students' lecture notes. The great French scholar de Villoison remarks at one point that the notes on these topics were "well-known even to schoolboys in Holland" (*vel pueris in Batavia notissima sunt*). The English scholar Burgess associated himself with these ideas, remarking that "they should be better known, as they deserve" (*ut notiora fiant, cum digna sint*). It was Everhardus Scheid[10] who made these views generally available by publishing notes of van Lennep's lectures on analogy in 1790.

The term "Analogy" in these lecture-notes was no longer the ancient one of Alexandria, of Varro and of Vossius, for something else had been added —or rather had become mingled with it—notions derived from the methodology of the natural sciences as generally known at the time. As a result the

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[9]   This observation, like those immediately following, derives from Gerretzen 1940: 320-325.

[10]   Scheid (1742-1795), a German by birth, was a pupil of van Lennep; professor at Hardewijk until 1793, and at Leiden from 1793 to 1795. [*Translator's addendum:* Thomas Burgess (1756-1837), later Bishop successively of St David's and Salisbury, visited Paris and the Netherlands in the summer of 1787. The dedication (to Villoison) of Scheid's edition of the lectures of Valckenaer and van Lennep (1790: f*1v-f*2r) calls Burgess an "imitator" of van Lennep, and refers to Dawes (1781: 371), where Burgess's remark occurs in an editorial comment introducing (at second hand from Villoison) observations by van Lennep on the future tense in Attic and Ionic. Burgess met Villoison in Paris, but does not appear to have stayed long in the Netherlands. See Harford 1840, especially pp. 114 & 43-48.]

concept of analogy in linguistics was no longer restricted to mutual corres-
pondences between individual words[11] in inflection and composition, but
embraced much more.

In Chapter 1 of this course, entitled "On Analogy in the Greek Lan-
guage" we read the following remarks about the term:

> I note that what is called analogy in languages is a consistent similarity and
> congruence of all the words of the language, of their significations and adjuncts,
> of sentences and of construction as a whole, appropriate to one another
> according to their classes.[I]

He is not satisfied with the conventional definitions, "similarity of words" or
"comparison of similars", for these definitions take no account of "notions,
both literal and metaphorical, added to the individual forms of words, and
the whole principle of the construction of language".[J] Van Lennep then goes
on to divide analogy into three parts: (1) the laws of word-formation; (2) how
meanings have evolved and developed from primitive words, and (3) the rules
or principles of constructing speech (cf. Gerretzen 1940: 323).

It must be observed that van Lennep says he will confine himself to the
first of these points, on the grounds that the second and third are so extensive
and difficult. That is to say he considers the content of these two groups
(development of meaning and structure of language) to be comprised in
analogy. It is certain that the Dutch Graecists did not limit themselves to the
application of the method of analogy to the word-forms before them.

How the reconstructive application of the analogical method worked out
in practice may be seen in the "Academic Observations" of Valckenaer, de-
rived like van Lennep's "Analogy" from lecture-notes, and like that work
published by Scheid. Further details again come from Gerretzen:[12]

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[11] There was also a tendency to raise analogy to a structural principle of language among the
Alexandrians, but these tendencies did not become established. Kroll remarks (1909: 37) that it
is only modern scholarship which has been able to establish the extent to which analogy was a
formative principle in languages. However,Kroll is speaking of nineteenth-century linguistics,and
it is an open question whether the concept of analogy which applied then was still influenced by
that of Dutch scholarship. He could certainly have given no attention to this question, given his
ahistorical disparagement of the importance of the Dutch (see §68 and §59).

[12] I have myself examined these works, but found no reason to go beyond Gerretzen's analyses
and excerpts. I should note in passing that Gerretzen, whose study is devoted to a limited set of
scholars, and whose own approach is primarily textual, leaves no room for doubt about the
source of his views. His analysis of the fundamental linguistic motives of the school of Hemster-
huis, viz. that these came under the direct influence of philosophical and scientific views of his
days, emerges from the texts themselves. If anybody can refrain from importing his own ideas
into the subject of his investigation, it is Gerretzen.

The first eight of Valckenaer's Observations, brief remarks only a few lines long, comprise the following theoretical positions: simple verbs[13] are either primitive or derived; there are very few primitive ones, but the derived ones are numerous; primitives consist of two syllables and contain two, three, or four letters; but there are only five which consist of only two letters, αω, εω, ιω, οω, υω. Derived verbs consist of more than two syllables, and contain four or five letters. To distinguish primitive verbs from derived verbs it is necessary to think oneself into the simplicity of ancient times or the simplicity of nature; in those ancient times men still had the art of creating primitive verbs out of syllables. Observation 9 is a summary of what has gone before and gives examples of primitive verbs. There is only one two-lettered primitive beginning with α, but there are eleven of three letters, in which the middle letter is one of the eleven consonants. The same applies when they begin with another letter, such as ε, δ, π etc. In addition we also find four-letter primitives, but only those beginning with a consonant; for if the first letter is a vowel, they are not primitives, but derivatives. Observations 10 to 16 deal with the origin of derivatives, divided into fully simple derivatives, and partly simple derivatives, i.e. those extended by means of the five vowels α, ε, ι, ο, υ, etc. (Gerretzen 1940: 280–1).[K]

This concludes Gerretzen's summary of the views of Valckenaer: in them we possess something of a tangible model of how the roots (*stirpes*) of language were regarded. This theory formed at least the background of van Lennep's *Etymologicum*—a work of over 1300 pages which Scheid published in 1790 with numerous additions from his own hand, and which gained considerable currency, not least in Germany.

For Valckenaer, as for Hemsterhuis, analogy was initially no more than an aid to the investigation of possible earlier states of language; in practice, we must be guided by usage (Gerretzen 1940: 281). But Hemsterhuis had said:

> This intrinsic principle of analogy is inherent in all things—*i.e. not only is the production of linguistic forms determined by an inviolable rule*—but the whole of speech is structured in such a way that it should best serve to interpret our thoughts and communicate them to others. (*Lectio Publica* ["Public Lecture"], quoted, with a comment (italicized), by Gerretzen 1940: 117)[L]

In dealing with the question of origins, Hemsterhuis, who knew something of Locke's views, did not regard man as the founder of language, and declared that analogy came from the Creator: "Just as the Judge of the universe would have set up the standard in languages ..." (*Hanc ut fixerit Arbiter universi normam in linguis*), though Gerretzen, to be sure, sees traces of other views (p. 117).

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[13] A basic rule of derivation was that nouns were derived from verbs, not verbs from nouns; or, "it is only verbs, and simple verbs at that which can be considered roots" (*pro stirpibus haberi*).

Valckenaer speaks openly in his "Observations" of the "excellent principles of composition and construction which the first founders of language seem to have set up" (*componendi et glutinandi rationes, quas primi conditores linguae admirabilis fixisse videntur*).

Gerretzen (1940: 115) imputes the exaggeration of the importance of analogy ultimately to the Hebrew scholar Schultens, not to Hemsterhuis, and claims that Hemsterhuis had set out to do for Greek what Schultens had done for Hebrew. The theoretical construct of analogy was something which went far beyond the bounds of classical grammar. Lambert ten Kate, for example, was just as greatly interested in this question as his associates in classical linguistics (see Gerretzen, p. 114).[14] Hemsterhuis was very familiar with ten Kate's work: "The ancient Gothic, or rather Scythian, language is rightly regarded as the source and mother of almost all the northern languages" (*Gothica vel potius Scythica lingua vetusta merito omnium pene septentrionalium linguarum censetur fons et mater*). In this context we read on another occasion Hemsterhuis's formulation of the fundamental rule of linguistic comparison: "In making explanations, the first rule is to examine the inner workings of the language in which we are operating. That well established rule of analogy forbids us to have recourse to clearly unrelated languages".[M 15]

It is now time to summarize the history of the study of the classics in the Netherlands in the seventeenth and eighteenth centuries, and and to discover what lay behind the remarkable functional motif of analogy.[16]

As we have seen, the seventeenth century had led Vossius to allot Latin a privileged position. Grammar is an "Art", and is closely confined within the boundaries of this art. This position is held, for example, by Nicolas Heinsius, Gronovius and Graevius. Descartes was living in the Netherlands at the time, and was at his most active towards the middle of the century. His views were very influential. He was the prime mover in the new sense of

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[14] If the present study were not limited to classical scholarship, an investigation of ten Kate's contribution to this discussion would undoubtedly prove illuminating. Gerretzen speaks of ten Kate's views in some eight places.

[15] See Gerretzen 1940: 148. The words quoted form part of notes from Hemsterhuis's lectures published as "Public lecture by Tiberius Hemsterhuis on the Origins of the Greek Language" by J. H. Halbertsma 1845: II, 324-370). Gerretzes saved this lecture from oblivion, attaching great importance to it, and analysing it in detail (1940: 128-152). Hemsterhuis was concerned only with Greek, and ten Kate only with related languages, but did Hemsterhuis not go further than ten Kate in the direction of reconstructing lost primitive roots?

[16] The following remarks are again indebted to Gerretzen, both his Introduction (1940: 1-12) and his Summary (pp. 369-383).

mathematical certainty which was obtained by way of a sceptical method, and which reinforced the idea of progress which had begun with Bacon's anti-humanistic stance. Doubts and criticisms are directed equally at the philosophical and the literary authorities of antiquity. Gerretzen notes a situation very similar to what has been described above as obtaining in Port-Royal: classical scholars disarmed the attack, so to speak, by taking over criticism. Perizonius and Bentley are examples of this.[17]

After Perizonius had provided some samples of the derivation of Latin from Greek, Hemsterhuis went on to apply the principle of analogy to this question. Meanwhile the wind of rationalism had changed. The great influence of Descartes had encouraged a critical attitude, but mathematical principles had not been able to maintain their monopoly, even in the natural sciences. Hemsterhuis, with his finger on the pulse of the time, observed the development of experimental science as opposed to pure mathematical analysis. By that time Swammerdam, Leeuwenhoek, Christiaan Huygens and Boerhaave had already abandoned Cartesianism, and the mathematical approach was already on the retreat in Locke's empirically-tinged rationalism. This development among the Dutch physical scientists has already been seen in the course of dealing with Condillac; and Brunet (1926) has noted their influence on the French Enlightenment. In these circles analogy was now applied to the natural sciences as a methodological principle, and consciously propagated as a new, non-mathematical approach to the rationalists' common goal of certainty.

What, then, of Hemsterhuis's treatment of analogy? Perizonius, at any rate, had still regarded literary languages as rational, and was still under Cartesian influence. Hemsterhuis, too, started in the same vein, speaking of an inherent component of analogy (*infixum analogiae*), but by the time he came to Leiden, his linguistic research had already become an anatomy of the body of language. While neither he nor Valckenaer would have wished for the exaggerations of their imitators, in particular Scheid, these exaggerations came in fact from extrapolation of their own views. No doubt they deserve some credit for their successful attempt to systematize the random etymologizing of their predecessors, but otherwise they are subject to the same reservation as de Brosses. In phonetics, they abandoned the analogical transitions of the school of Hemsterhuis; but in semantics—the analogy of

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[17] Bentley is the only English classical scholar who comes into question here. He formed no school, and remained a lone figure. Gerretzen appends to his dissertation as his third contention or thesis (*Stelling*): "There is no hint of the direct influence of Bentley which Ruhnkenius asserts."

signification—they did at any rate adopt a tenable position.[18] Valckenaer, like Hemsterhuis, regards linguistics as dissection. The attempt to go back to first causes and establish reconstructions began in earnest with him, as his "Observations" show; yet a firm attachment to usage seems to have prevented both alike from making over-bold speculations about origins.

We may conclude this survey with a few critical remarks. De Brosses's etymology, which drew on the same sources as Dutch etymology, has already been discussed in detail; it offers only uncritical conclusions and a self-confident entry into what would later be called the shadowland of glottogony. In this respect Hemsterhuis and Valckenaer at any rate were more discreet. They remained linguists in the first place, it seems, rather than philosophers. But what, then, of van Lennep, the "apostle of analogy"? For him analogy is the philosophy of language, as it had been for Condillac.[19]

If non-speculative professionalism is accepted as the reason for silence about their etymologizing by analogy, this is perhaps not the whole story, for its consequences, as they developed in France, led directly to the unbelieving circles of the *Encyclopédie* and its contributors. Another trait which may also have contributed something to this silence is repeatedly discussed by Wille (1932: 58-76 and *passim*).[20] Science had to remain generally orthodox in its public pronouncements. Too close an association with sensualistic and materialistic theories of the origin of language would certainly have provoked trouble with the clergy.

Nevertheless this association was a reality, even if it was veiled. The linguistic studies of these Dutch scholars were at first entirely compatible with the currents of French pragmatic rationalism, and in their further development were also greatly indebted to the same source; but the later stages in France were characterized by a stronger philosophical component and a weaker linguistic component than those in Holland.

Just as Rousseau abandoned rationalism in France, and Hamann and Herder made a similar move in Germany, there were also men in the Netherlands who wished to dissociate themselves from rationalism, even in classical

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[18] G. Curtius (1852: 11) notes indebtedness to these Dutch scholars in his own day.

[19] Gerretzen did not look into the relationship between the ideas of the later followers of Hemsterhuis and those of the philosophers of the Enlightenment; this was not one of his aims. It would, however, be interesting to pursue this relationship further, inasmuch as the ideas derive form the same source, the branch of pragmatic rationalism which tended towards materialism.

[20] The modest title of his work: "The literary scholar R. M. van Goens and his circle" conceals an uncommonly rich cultural history of literary and scientific life in the eighteenth century. Gerretzen was right to draw extensively on this work.

studies. Van Goens is the prime example of this tendency; but his life was a failure. His sober, too sober homeland did not understand him, and rejected him, and thereby lost the opportunity of making the treasures of the classics, as collected by centuries of scholarly tradition, profitable for a new age, a new age which, by way of romanticism,[21] led to a study of classical antiquity, which gave to the study of classical literatures and languages its new and uniquely tenable sense of cultural history.

Meanwhile Scheid's publications on Dutch etymology enjoyed a much greater success in Germany than in van Goens's sober motherland. That Valckenaer himself already voiced criticism of van Lennep has been noted. The so-called Dutch method characterized grammars until the Greek Grammar of G. Curtius introduced new linguistic concepts into Germany in 1852.

Franz Bopp

It is clear that the Dutch Graecists approached language pragmatically, for they examined the rationale of language by means of a strict analogical analysis of its etymological and genetic structure. Lines were, as it were, derived inductively and produced until they met in extremely simple original words; a rationalistic construction which uses only the data of language, but constructs within language a false rationality which entirely lacks any support from the facts of language.

Bopp took over the leadership in linguistic matters from the Dutch; and in order to conclude this study by examining what views of linguistic function he drew on, we may ask how this new science of language looked upon its predecessors. Some clues may be found in Bréal's introduction to his French translation of Bopp's Comparative Grammar (1866-74, I: xxix-xxx). Does Bréal see or suspect a difference in method? He claims that Bopp was the first scholar to give proper attention to Greek and Latin roots, and to divide words accurately into their constituent parts, giving as examples, *inter alia*, δί-δω-μι — *da-dâ-mi*, ἵ-στη-μι — *ti-shthâ-mi*. This is in opposition to the practices of the Dutch of whom he says: "What is surprising ... is the idea they still had of roots—they include ω among the radical letters, for example λ-ε-γ-ω, a quadriliteral root"; he finds it still worse that they use grammatical inflections to explain derivations. In the same context Bréal mentions Bopp's recognition

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[21] The new impulses which romanticism gave to archaeology are familiar; but the results of this archaeology contributed to making, as Wilamowitz-Moellendorff put it, "an adjacent land of reality" (*nahes Wirklichkeitsland*) into a will-o'-the-wisp.

of the ν in κρινω, κλινω, etc, as a "formative letter", and of the "identity
of Sanskrit infinitives in -*tum*, like *sthâtum*, *dâtum* with Latin supines like *statum*,
datum."[N]

Bopp realized the boundaries of the compositional elements as a result of
comparison with Sanskrit. But was there so much difference between his
approach and that of the Dutch? Bréal, at least, seems to think not.

A discussion of the functional principles of Franz Bopp (1791-1832) takes
us beyond 1800, the *terminus ad quem* of the present study. Bopp, the founder
of Comparative Linguistics, was not the first person to compare languages,
and not even the first to compare languages methodically—Lambert ten Kate
(1674-1731) and Rasmus Rask (1781-1832) had already done this before him
—but he laid the foundations of the imposing edifice of linguistics as we now
know it; and he is certainly a figure of the nineteenth century. He set his seal
upon the whole field of the study of language in his day and thereafter.

I have shown elsewhere (Verburg 1950) that Bopp in some ways occupied
an isolated position towards developments in the linguistics of his day and
before it. I used a method of elimination to show that Bopp's central views
were not related to the vitalistic romanticism of the Schlegels, and were
different from the perceptions of Grimm in, for example, the controversy
about *Ablaut*, that his Kantian friend Humboldt was dependent on Bopp
rather than Bopp on Humboldt, that he had progressed beyond the linguistics
of Fulda and Adelung, and that, although he had a detailed knowledge of the
Dutch Graecists, they, too, had no influence on the attitudes he adopted. Nor
were his principles limited by general grammars, although he studied with
Silvestre de Sacy, who had written a work of this kind. Bopp's views of the
fundamental structure of language seem to derive from early axiomatic ratio-
nalism in the tradition of Leibniz. It was thus possible to show to what a
small extent Bopp introduced new ideas, and how he made use of little or
nothing that was actually new in his day, viz. Romanticism and Humanism
on the one hand, and Critical Idealism on the other. Even pragmatism, which
still had a significant advantage over axiomatic rationalism, does not colour
his thinking; instead he derives his preconceptions from Leibnizian
rationalism in the watered-down version taught in German universities by
Wolff and his school.

Why then should a nineteenth-century figure like Bopp be chosen as the
conclusion of this study? To illustrate yet again that even the principles of this
great figure in the history of linguistics were subject to philosophical influ-
ences? Or to make him, as it were, a target for the criticism of linguistic
principles? The fact that in the centuries before Bopp linguistic principles

were also affected, not to say permeated, by all manner of philosophical currents is if anything a mitigating, rather than an incriminating factor for philosophical features in Bopp's preconceptions.

Is it justifiable, then, to direct criticism at Bopp as a linguist, because he, of all people, is always classified as utterly unphilosophical, i.e. devoid of preconceptions, and as such a genuine specialist? Was it not tempting to reveal this aspect of his work? In this historical context it would certainly have been necessary to withdraw criticism on these lines, if Bopp, for all his hidden prejudices, had been no more than an adherent of a fashionable or at least an established philosophical current—an adherent admittedly endowed with greater application than others—whose work was done in the area of a language which he did not even discover and the study of which he had not pioneered.

Is it because Bopp was not only conservative, but reactionary? But what makes Bopp the concluding figure in this study is not that he may be considered a Metternich of linguistics. Bopp's preconceptions, serving as they did as the basis of the life's work of a man continually urged on to fresh endeavours by a comprehensive knowledge and expertise which were, and still are, rightly regarded as a high point of linguistics, were not conservative or even reactionary, not typical of his own or of an earlier time, but were nevertheless fateful for the development of linguistics in the nineteenth century. The benign but overpowering authority of his knowledge imposed its old-fashioned assumptions on the linguistics of his day and suffocated the efforts of those who set out from fundamentally different premises, and *inter alia* had shown or showed deeper insights into the functions of language than Bopp did— people like Hamann, Herder, Humboldt and Grimm.[22] For his conservative deductive approach paved the way for positivism. While his great achievements are admitted, this, at least, must be held against him.

Bopp's work was both a help and a hindrance to later linguistics. The final phase of pragmatic rationalism—particularly in the case of de Brosses and the Dutch Graecists, and exclusively in the area of phonetics—had, to be sure, already revealed traces of a concern for physical phenomena, which, especially in de Brosses, might be called proto-positivistic, and which derived from the desire to establish a principle of certainty equivalent to the old mathematical *a priori* certainty of deductive rationalism. Although de Brosses

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[22] Grimm escaped contamination because his exposition of *Ablaut* followed the linguistic channel which Bopp's Comparative Grammar had dug out.

was a philosopher of language, and although the Dutch Graecists were linguists by profession, their linguistic principles were too speculative to have had any part in producing the triumph of positivism in nineteenth-century linguistics—and the way Hemsterhuis and Valckenaer kept these theories to themselves is an indication of internal reservations.

And even Kant, influential as he was, was the antithesis of an advocate of positivism. Kant had adopted Leibniz's absorption of language into reason, but Leibniz's consciousness of language was scarcely to be found in Kant, if it could be found at all. At best, it might be possible to trace some effects of the incorporation of language in reason in his transcendental dialectic, while the *Critique of Judgment* language provides no more than an analogy of expression for art. Other activities have their share in Kant's "Practical Reason", but language does not. The application of the idealistic concept of form by Kant's disciple Humboldt might have given us something of a phonological system *avant la lettre* which would have taken the wind out of the sails of phonetics. But Humboldt stood alone; his master Kant was no longer about, and he himself had too much respect for Bopp's scholarship and personality to set himself up in opposition.

The contradictory spirit of Hamann's mysticism and the equally contradictory spirit of Herder's literary appreciations are part of a current of feelings and cast of mind which for a time constituted a threat to the early stages of positivism, in language as elsewhere. Rousseau's perceptions of function had in principle abandoned any form of rationalism. But what Lefmann once said of Schlegel and his introduction to Sanskrit may be urged against the whole of this current, or group of currents (pre-Romanticism, Romanticism, Humanism, Classicism): "His theory explains nothing, and was not in a position to explain anything. It did not start a new movement, for it gave nothing to build on".° The young Bopp was himself carried away for a moment by this enthusiastic glorification of language, but he very quickly abandoned it. Nevertheless, at the academic and grammatical level this tendency neatly filled the gap in the deductive and positivistic fabric of Bopp's linguistics, a shortcoming which was a direct result of its deductive preconceptions; it gave Bopp and his followers a scientific justification for genetic and diachronic changes to sounds. On this matter of explaining sound-changes and accounting for movements in linguistic phenomena, Bopp was no further forward than the Dutch etymologists, perhaps even not so far ahead; and while Bopp was satisfied with the static comparison of words divided into their component parts at discrete and fossilized stages of language, Grimm, a Romantic who grew into an outstanding scholar,

provided the coping-stone of the new linguistics with the genetic transitions of his phonology. This he did in spite of Bopp, as the *Ablaut* controversy shows.[23] Thus the romantic in Grimm had saved Bopp's inert comparatism from the worst excesses of one-sidedness, which otherwise might have led us to speak of the New Linguistics of ten Kate and Grimm, and of Bopp as no more than a worthy Sanskrit scholar. History willed it otherwise, considering Grimm's work as a complement of Bopp's, and not the other way round.

How did it come about that Bopp's deductive procedures acquired such a great and critical importance for linguistics? The reaction of Metternich was no more than an interlude, a transitory application of the brakes, but Bopp's conservatism, on the other hand, paved the way for the success of the modern period to come. The conservatism of Bopp in the matter of function seems to have been an instance of *reculer pour mieux sauter* in linguistics. It determined the modern scientific character of nineteenth-century linguistics. A slight digression will illustrate this: the history of philosophical rationalism in the seventeenth and eighteenth centuries shows the dominance in turn of axiomatic, pragmatic and idealistic thinking, of which the last may be seen as a reconciliation between the two former. The influence of these two tendencies has been discussed above; idealism had little place in linguistics, though one may think of Monboddo or Humboldt. The nineteenth century repeats history in different terms. Positivism started (from about 1830 onwards), as the axiomatic school had done, from a scientific certainty in the form of the exceptionless application of biological and physical laws. To a certain extent positivism runs parallel with early "scientialism", i.e. axiomatic rationalism—it has even been called "scientism" (by Renouvier). And against positivism there comes a kind of pragmatic reaction, so-called neo-positivism (it is necessary to mention only Dilthey's theory of understanding). Then there follows a neo-idealism as a kind of reconciliation (here we may think of Cassirer and his return to Humboldt; and Saussure's idea of systemacity in linguistics is related to neo-idealism).

What ensured Bopp's influence was the way his restoration and renewal of deductive linguistics brought about a continued connection with neo-rationalistic, positivistic trends in nineteenth-century linguistics. Humboldt's ideas of form and Herder's humanistic view of language stood little chance against this. They fell, so to speak, between two stools.

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[23] See Verburg 1950: 451-453. It might be well to note again that Lambert ten Kate had already noticed the importance of *Ablaut*, as Grimm had acknowledged, *Deutsche Grammatik* (1822-1837, I: 67; see Gerretzen 1940: 148, *n.* 2).

We may conclude with a brief account of the encounter between the functional ideas of the old mathematical school and those of the new positivistic school of which he is the inaugurator.

Bopp left his "romantic" period behind him with his *Conjugationssystem der Sanskritsprache in Vergleichung mit jenem der griechischen und germanischen Sprache* ("Conjugational system of the Sanskrit Language in comparison with that of the Greek and Germanic Languages", 1816), as can be seen from his *Analytical Comparison of the Sanskrit, Greek, Latin and Teutonic Languages, shewing the Original Identity of their Grammatical Structure* of 1820. This period is significant because he expressly distances himself from earlier ideas. Friedrich Schlegel had expressed his views of inflectional variability in *Über die Sprache und Weisheit der Indier* ("On the Language and Wisdom of the Indians", 1808) in biological imagery like "every root ... a living seed," (*jede Wurzel ... ein lebendiger Keim*, p.50) or:

> The structure ... of Sanskrit ["Indian"] is pervaded throughout in a completely organic manner by inner changes and modifications of the root sound in all its meanings. In Greek there is still some slight possibility that inflectional syllables arose from particles and auxiliaries blended into the word. In Indian, however, there is no longer any trace of this possibility. (p. 41) Not composed merely mechanically by adding words and particles, while the roots themselves remain barren and unchanged. [P]

Bopp turns away from this; faced with the choice of organic or mechanical, "internal modification" (*Ablaut*) or external affixation (agglutination), he chooses the second alternative. Does this mean that in his examination of the structure and functions of language he reaches the same conclusion as de Brosses ("the mechanical formation of languages") and the Dutch (e.g. Valckenaer's methods of structure and syntax, his *componendi et glutinendi rationes*)? No: for all the resemblances in their methods the difference lies just in the functional foundations of language. And it is to this we now turn.

What Bopp does is purely and simply to compare, and to draw conclusions from comparison. The matter of glottogony is a mystery (*Geheimnis*). The relationship between the Indo-European languages under comparison is no longer a problem; it had already been accepted when he began. His importance as a comparatist is concentrated not so much on related words as such, but on inflectional forms. By investigating these he succeeds in identifying the structural elements of the words and separating them at their

points of contact. In doing so, he follows Scheid[24] in speaking of verbal inflections as being in essence suffixal pronouns. The progression of their change to inflections remains undiscussed. Bopp's analysis of linguistic elements goes back directly to his fundamental views on language. "Basic concepts", which are nominal and not verbal, and "secondary concepts" constitute the inventory of thought which language has to express; the structure of language corresponds to the structure of the world of thought:

> Why should not language represent secondary concepts by secondary words attached to the roots? ... The purpose of nouns was to denote persons or things ... ; and hence it was the most natural thing to expect pronouns among the components of word-formation, as the indicators of qualities, events and circumstances. (Bopp 1857-61: §110)[Q]

By such an analysis into component parts, Bopp was able to introduce the concept of the "stem" ("basic form" or "theme"; *Grundform, Thema*), and overturn the primacy of the nominative singular in declension and the first person singular present indicative in conjugation; and with it an anatomy by letters, such as the Dutch had used, was ended. This was a gain.

If Bopp had been content to state that his division of words into component parts established his basic views on language, his *a priori* suppositions might not have been noticed; but he went further. Wolff had followed the tradition of Leibniz in proclaiming the presence of the verb substantive as copula in the inflections of all verbs, "but the copula has been subsumed into the verbs for the sake of brevity" (*Allein der Kürtze halber hat man das Verbindungs- wort in die Haupt-Wörter mit verstecket;* see above, p. 320). It is surprising that the linguist Bopp tries to discover the verb substantive whenever he has a chance, above all in futures and aorists formed with -σ-. In this activity, *potest* is a notional model, but in the *-vi* of *amavi, delevi* he finds a by-form of *esse,* i.e. **phu.* The reader should not be surprised at the absence of this root, "the absence of the substantive verb he will perhaps consider as a kind of ellipsis (Bopp 1819: 23).[25] Humboldt greeted this theory with scepticism immediately on its first publication.

The dogmatism of the *a priori* views to which Bopp was attached (for details see Verburg 1950) may be seen even more clearly in his difference with Grimm on the matter of *Ablaut.* Grimm regarded apophony, or *Ablaut,* as

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[24] He praises Scheid in his *Analytical Comparison* of 1819 for his demonstration of "compound structure".

[25] Ellipsis had been used earlier, by Sanctius, Scioppius and Perizonius, to provide a solution when the facts of language did not support an *a priori* theory.

semantically important, and Humboldt also inclined to a similar view. Bopp
was unwilling, indeed unable, to accept this. To acknowledge this would bring
him back to the very view of inflection as "inner modifications" which he had
encountered, and rejected, in Friedrich Schlegel. These apophonic modific-
ations are by no means semantically relevant, or as Bopp would put it,
"grammatical". Nor is the Sanskrit *guna*, in which Grimm sees an association
with *Ablaut*.

Humboldt put forward a possibility that accentuation provides a solution
here, but Bopp passed over this suggestion from his friend and adhered to his
own theory of elements; *Ablaut* is not "grammatical" but "mechanical"; as in
a balance, a "heavy" stem corresponds to a "light" inflection, and *vice versa*.
Bopp's explanation is thus purely phonetic, although his phonetics derives
directly from his doctrine of components. It is only in these categories that
Bopp can think consistently about language and its structure; but his theory
of word components gives him no help in setting up a well-founded view of
roots in a case where he is obliged to acknowledge a meaningful vowel-
change, as in the Semitic languages (this conclusion is supported in detail in
Verburg 1950).

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The foregoing gives a brief survey of Bopp's fundamentally *a priori* ideas of
function, and their consequences for his linguistics. It now remains to exa-
mine those ideas of Bopp which gave support to the transition to positivistic
linguistics. His phonetic system itself forms the bridge; but phonetic systems
of this kind can be found also in the Dutch and de Brosses.[26] This is true, but
these are produced by an analogical method which leads to no more than
probability. Bopp, on the other hand, goes into the phonetic shape of the
word in order to see in it the confirmation of the system of ideas of which he
is convinced *a priori*. He draws in another way on the phonetic qualities of the
word; he compares inert word-forms as representations of equally inert
mathematical concepts, and takes no interest in the processes of sound-
change; he does not look for a genetic process of verbalization, but he finds
a rational and regularized certainty in the "physical" structure of the word.

In his formulation of the regularity of language Bopp is a child of the new
age. He speaks of "physical", "mechanical" and "dynamic" laws of language.
Bréal asked for objective clarification about these terms at the time. "Phy-
sical" simply means no more than what Bopp calls instances of "euphony"

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[26] At this time, of course, closely associated with the segmentation of the normal alphabet.

(e.g. *ad-ti* → *at-ti*); "mechanical" regularity is instanced by the alternation of weight described above. Of this, Bréal remarks:

> He was concerned to show, by comparison with other Indo-European languages, that apophony of the kind present in the Germanic languages has no primitive qualities, that vowel gradations did not originally convey any change of meaning, and that these variations were due to contractions and laws of equilibrium. (Bréal, in Bopp 1885: xxxv)[R]

Bopp also uses the term "law of gravity" (*Gesetz der Gravität*) for this feature. On this point his system of laws was to be corrected by Grimm, "the true creator of studies relative to sound-changes". "Grimm marks a new direction in Bopp's researches" (Bréal). And what of "dynamic"?

> If, in opposition to my own view, it is accepted with Grimm that the change of vowel in the Germanic conjugations is grammatically significant, and if, for example, the *a* of the Gothic past tense *band*, ('I tied') is regarded as the expression of the past, as distinct from the *i* of the present *binda*, ('I tie'), then it would be possible to claim that the *a* has dynamic powers. (Bopp to Bréal; cf. Bopp 1885: 1, *n.* 1)[S]

This theory of laws marks a terminological shift from the Graeco-Latin grammatical tradition, and also from Sanskrit grammar, to which Western pioneering studies of that language had so far adhered.[27] But it is not only a shift in terminology; it also marks, by its content, the transition to the new age. Bopp, who had begun by finding in language a reflection of the *a priori* certainties of the early rationalists; Bopp's basic system of nominal and pronominal roots,[28] his division of language into component parts, and his theory of the "incorporated verb substantive", are all step by step imbued with the spirit of axiomatic rationalism. In a number of the laws of language he establishes on a phonetic base, he erects his certainties as a foreground of linguistic facts against a background of *a priori* principles. In these laws his certainty is, so to speak, forgetful of its origin in the mathematically-based axiomatic tradition, and is accommodated to the new theoretical certainty of the positivism of natural science, with its doctrine of natural laws which allowed of no exception. The principle of physical probabilities, of which de Brosses's philosophy of language and the etymologizing of the Dutch classical scholars were

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[27] Colebrook followed Pānini; Carey and Sir Charles Wilkins followed the methods of the Brahmin schools; cf. Bréal, in Bopp 1885: xxvi. August Schlegel, in particular, is critical of Bopp's heterodoxy.

[28] No more needs to be said about this point here; but see Verburg 1950: 465f. Bopp's system corresponds exactly to that of Leibniz; see above, p. 295.

exponents, contributed to the same movement. Bopp's axiomatic stance found its confirmation, and the tradition of de Brosses and the Dutch analogists found the certainty of theoretical precision in nineteenth-century positivism.

Conclusion

At the turn of the century in 1800 views of linguistic function stood as follows:

The philosophical approach to language in Germany was still characterized by the old deductive type of thinking; Meiner's book was the standard university text on linguistic theory; Hamann and Herder stood to one side in their aim of freeing language from the clutches of rationalism and emphasizing its emotional factors. In doing this they transcended rationalism in certain respects; their influence may be seen in romanticism, and also—together with other influences—in classicism. These movements, and their attitudes to linguistic function, lie outside the limits of this study.

This is also the case with the principles of linguistic formation set forth by Humboldt on the basis of Kantian idealism, which, in spite of Steinthal's enthusiastic espousal, have come to the fore again only in the twentieth century (e.g. in Saussure and Cassirer).

In France the central position Condillac gave to language continued to dominate men's ideas in the ideological school of Destutt de Tracy; the proto-positivist de Brosses was a radical exponent of physico-mechanical etymology, and Court de Gébelin followed him. There are also followers of the tradition of Port-Royal in Fromant, Beauzée and others, down to Sylvestre de Sacy.

In Great Britain Monboddo's views of linguistic development and Harris's aesthetic approach lived on, but under vigorous attack from Horne Tooke, who reveals a remarkably practical and realistic view of language.

Linguistics in the narrower sense applied analogical methods to the phenomena of language, especially among the Dutch Graecists, the school of Hemsterhuis. In Bopp the emphasis in linguistics shifted from the methods of classical philology to comparative and historical studies—in principle, at least, for it took until the middle of the century for this change of direction to become established.

Bopp's work, too, lies in the nineteenth century; but since linguistics, with the support of his expert knowledge of languages, was finally able to shake off the direct interference and arrogance of philosophy in matters of language, he was the founder of a new era in the approach to linguistic data, and this is why the present study has concluded with a look forward to the linguistic

principles of this great linguistic scholar. But, although Bopp kept himself free from philosophical contamination as a result of his supreme professional ability, he, too, like any scholar embarking on research, or for that matter any individual in day-to-day non-scientific life, acted on certain principles. And it is these principles which define scholarship.

*   *   *   *   *   *

Although a science is always justified in throwing off the prescriptions of a philosophy, a fundamental introspection is also necessary in any science, as a matter of the workings of conscience in everyday life—for it is conscience which makes man the king of creation. He asks: Where do I stand, what am I doing, what should I be doing? Every science, and linguistics as a science, has to carry out this comprehensive self-examination in order to establish its theoretical principles, and has to formulate its principles in its own way.

Science will be able to keep itself free from idle speculation if men take account of the effects of reality in their practical daily dealings. Reality does not identify language with emotion, with thought, with ordered arrangement, or anything else whatever. In contrast with the manifold interconnections of secondary functions in the many kinds of autonomous function which the real world offers, naive experience will generally concentrate on the practical differentiation of the system of functions peculiar to the matter under discussion, of language, say, from that of other areas of experience. Theory is a subcategory of practice. And practice is subject to law (hyponomous), and remains so, even within is own varied systems of self-regulation (paranomies). Theory looks into the structure of the law to which the phenomenon is subject (hyponomy), scientific introspection derives its many and rich divergencies from the examination of the conditions of existence.

APPENDIX A

Revised opening of Chapter 5, in draft English translation

Humanism — Part I

In the course of preparing his work for translation in the 1970s (See Translator's Introduction, above, p. xxv) the author made a drastic revision of Chapter 5. The original Dutch text is lost, but the draft of a literal English translation has survived. As Verburg explains in his note on Dante, he felt it necessary to come to terms with important publications in the field which had appeared in the twenty years since his work first appeared. While much is new, it is apparent that a great deal of the printed edition was preserved, and although the draft does not tally word for word with the translation given here, it clearly represents an alternative version of the Dutch text.

The system of references has been normalized as far as possible, and one or two obvious slips in spelling and punctuation have been silently amended.

THE FIRST PARAGRAPH IS UNCHANGED, THEN:

From the start, Reformation and Counter Reformation were fixed concepts which gave the historian little difficulty. Humanism and Renaissance, on the contrary, were loosely defined and applied as historical concepts only about 1860, by G. Voigt (1869) and by J. Burckhardt (1860). The French term *Renaissance* had been used by Michelet five years earlier in the seventh part of his *Histoire de France*. Burckhardt's book found very few readers at first, Voigt's book fared no better. Only when the tumultuous but nonetheless brilliant critical essays of Nietzsche had drawn attention to what was congenial to himself in the Renaissance (see Rehm 1929), did the breakthrough of the New Era become a problem which was never again abandoned. Investigators and standpoints are legion; we would mention only Sabatier, Thode, Brandi, Von Pastor, Burdach, Dilthey, Cassirer and Thorndike; in Holland, valuable contributions to this problem have been made by Huizinga (1919; 1926) and Schulte Nordholt.[1] As regards the standpoints: we shall not go deeper into the problem than is necessary to obtain the object that we have set ourselves: to see whether, and if so, how in the change-over to the New Era linguistic concepts emerge which are sufficiently new in comparison with the Medieval ideologies and also sufficiently different from one another to be treated as separate trends. Thus no preconceived definition of or relation between Humanism and Renaissance has been adopted as a starting point; it will transpire, however, that just the linguistic concepts which have been found necessitate a sharp distinction and co-ordination instead of a subordination of the two currents.

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[1] 1948, chapters 1 and 2. For the problem in general, compare Eppelsheimer (1933).

Generally speaking there has been, and there still is, a tendency to cover what occurred in the cultural life of the West from about 1400 to 1600 with the concept Renaissance. The Reformation and Counter-Reformation succeeded at an early date in freeing themselves from this subsumption. But Humanism too dissociated itself, especially when people began to speak of a second and even a third Humanism. We have in mind the second Humanism of Winckelmann, Lessing, Herder, Goethe, Schiller, Wilhelm von Humboldt (see Billeter 1911) et al., and the third of Nietzsche, E. and A. Horneffer, Rohde, Zielinski, but especially of W. Jäger. The two last named Humanisms are characterized by the words of Rohde: "I undergo in myself the gradual transformation of the aesthetic and absolute evaluation of Ancient Times into the historical and relative evaluation". The third Humanism in particular is characterized in Zielinski's (1905) aphorism: "Not norm"—thus the second Humanism saw the Greek world—"but seed". No adoption of the antique pattern of life as a norm, but reinclusion of the antique principles as a germinating seed in the field of European culture! It is then regarded as common to all three Humanisms that they derive from an idealizing vision of the antique world or a period of antiquity as the case may be, a pedagogic vocation, a refined eruditive mission for the people of their own time. The three Humanisms unite in this apostolate poets and thinkers, fanatical enthusiasts and quiet "Olympians", heathens and Christians.

All this evidenced a growing and deepening understanding of what was common and characteristic in these movements, but there was a very real danger of a second and even of a third revival being mooted while the original, in this case the first Humanism, had not been adequately investigated and understood.

The same danger has to be reckoned with when one speaks by way of anticipation of a Pre-Humanism—as we ourselves have done. In dealing with this historiological problem it is of primary importance whether one adopts, as a historian, the Uniqueness standpoint or that of *l'histoire se répète*.[2] It is also important whether one starts from a wider or a narrower concept of culture: in the latter case the object of the investigation, in our case "First Humanism", will be isolated at once from, for instance, the socio-political and the economico-commercial context—which will lead to one-sidedness and distortion. A certain—though not an absolute—remedy for such defective principles is presented by the examination of as comprehensive as possible a mass of material, which should consist of authentic sources.

The scene of the prelude and the first phase of the original Humanism, the so-called early Humanism, was the Apennine Peninsula from about 1300. It announced itself—as already mentioned—as a movement actuated by the will to educate, the desire to model one's fellow-men on the traditional classical Roman ideals of culture, republican and

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[2] This fundamental difference constituted the background of Schulte Nordholt's criticism of the scepticism of Huizinga with reference to the overwhelming plurality of phenomena covered by the general concept Renaissance.

imperial as well as patristic.

The Pre-Reformation came into being simultaneously in England and Bohemia; this too was a throwback—to Augustine—but from quite different motives; in this case Augustine is not the Roman Christian, as he is for the Humanists, but the Bible-devoted Christian. The Pre-Reformation failed; the Early Humanism of Italy, on the other hand, continued in a direct line in the subsequent Humanism as well in Italy as in the North; it also established connections with the Renaissance and the Reformation.

In this world we encounter, at the beginning of the fourteenth century, the striking figure of Dante (1265-1321),[3] towering above his entourage. Dante—scholastic or humanist?—Dante was about forty years younger than Thomas Aquinas, and about as much older than Occam. Dante's name is forever linked with the pioneer work for the establishment of Italian as a literary language. But however paradoxical it may seem, just for this reason he could not be regarded as a founder—or even as a harbinger—of a world-wide, or at any rate a European movement such as Humanism. For Dante had no message for the world. He is a refined, pious, noble figure, a poetical genius who at a certain moment became hopelessly involved in the pandemonium of the Italian internecine quarrels, but just as a result of this involvement was able, in nearly life-long exile, to complete the grandiose work by means of which he inaugurated Italian vernacular, and at the same time, in a unique way, endowed it with an initial capital on which it could draw for centuries to come. And by this means, too, Dante laid the foundations for the first Italian politico-national unity which was to be completed hundreds of years later. Admiration for his poetic gifts has not been confined to Italy, and rightly so, but he has been given a place in the ranks of the greatest artists the world has produced.

Dante's national particularism might have been neutralized, if not overcome, by a functional view of language in general, perhaps even by a general view of the vernacular as such. But this achievement was reserved for the Spaniard Vives, who lived in the southern Netherlands in the early part of the sixteenth century. In Dante's *De Vulgari Eloquentia* of 1305, which was written in Latin and never completed, we come across speculations concerning the nature and origin of language—Hebrew is the primordial

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[3]   It has become necessary to devote more space to the figure of Dante than in the original Netherlands version, because K. O. Apel, in his *Die Idee der Sprache in der Tradition des Humanismus von Dante bis Vico* (Bonn: Arche, 1963; 398 pp. [Archiv für Begriffsgeschichte, 8]), places Humanism between Dante and Vico. Owing to the fact that his work does not follow a definite chronological pattern and the dispersive treatment of the various thinkers, it is not quite clear whether, and if so, to what extent, he sees Dante as a Humanist. For the rest, it is incomprehensible that the author, whose German source-material is disproportionately great in comparison with the non-German material, does not appear to know the profound study by A. Borst, *Der Turmbau von Babel* (Stuttgart: Hiersemann, 1956-1963; 2320 pp. [!]), though it devotes 700 pages (pp. 823-1520) to the views of the language question propounded in the period between Dante and Vico.

language—and notes on the relationships of the languages later known as the Romance languages; for Dante, Latin was an artificial standard language, designed to counteract the disunion after the Babylonian confusion of tongues. Dante pleads for purity and regularity of language, for imitation of the Classics in the art of composition and grammar. In the *Divine Comedy*, his great masterpiece, he subscribes to the traditional scholastic or Thomistic philosophemes and the general cosmological background as homologized by the Church.

There is nothing new in his philosophical or theological views and the same can be said of his political ideas. While Dante, therefore, cannot be characterized as a precursor of the Renaissance, he is just as little a harbinger of Humanism. Despite his special place in the history of world literature, Dante has no mission and no perspective with reference to the theme of Language and of Man, the themes of Humanism and Renaissance respectively.

Whereas Humanism furnishes philosophical concepts only in so far as its pedagogic ideal remains, the *Renaissance*—and it shares this aspect with the Reformation and the Counter-Reformation—tends from the very start towards a cosmic philosophy and a philosophy of life. The Renaissance proper was deeply engaged in metaphysics, religion and the philosophy of Man; thus it was strongly opposed to any human dependency upon divine revelation or ecclesiastical authority, and was therefore often anti-Christian. Contrary to Humanism, when it came in contact with antique thought it sought the pagan motives therein and to that end, when it encountered a synthesis of pagan and christian motives, it broke up this synthesis. With the *Reformation* too there was a strong tendency to break through this synthesis, but in that case to expose the authentic Christian-revelational moments and to purge them of pagan motives. Roman Catholic thought was somewhat modified during the *Counter-Reformation*, but remained faithful to the synthesis—for example in the connection with Aristotelianism and Thomism.

We were constrained not to subordinate Humanism to the Renaissance, but to place the two in juxtaposition as movements *sui generis*. It was found that the Reformation and the Counter-Reformation had developed little or no views on the function of language which were characteristic of these movements.

Against his picture of the background of the cultural development of the fourteenth, fifteenth and sixteenth centuries, we wish to place those thinkers, in this case men of letters, whose views on language are of importance in the context of our investigation. We shall begin with the Humanists [see p. 106, *n* 4].

While Occam ... faculty and function [p. 107],

THEN:

Francesco Petrarca (1304–1374), sometimes called the first modern man, was the first to show a lyrical feeling for nature and romanticism. He was no narrow-minded poet, but one who wandered far and wide; his work shows passion and penitence, verve and vanity. Since Cicero, Petrarch was the first man to make himself clear in letters; he also consciously demanded that every man should write his own style. In Dante's *Inferno*

and *Purgatorio* we meet, in his function as guide, a Virgil who personifies *ratio;* how very different is Petrarch's longing for his idolized Virgil and Cicero in his letters to his "father" Cicero and "brother" Virgil. In contrast with Dante, Aristotelian scolasticism was for him the dry bones of a dead body, which he despised and ridiculed. It is true that Plato, whom he contrasted with Aristotle, is more honoured by him than known. He saw Plato only at a distance, far off behind his first idol, Augustine. Augustine was for Petrarch the Christian Roman! The failure of the reborn Tribune, Cola di Rienzi, and the impossibility it revealed of restoring the old Roman society, caused Petrarch to abandon his romantic anachronism. His ideal shifted to the *urbane humanities* to be found in Cicero. He applied himself to preaching it and endeavoured to realize it. This humanity is not confronted with anachronism, but can be realized at any time by following the antique *eloquentia.* The individualist Petrarch proposed to himself as objective-normative example the, to his mind clearly linked, old *humanitas* and *eloquentia.*

Petrarch has given us no discrete language theory. Yet he has infused new life into language as typical human *energeia* and severed its enslavement to argumentation, to make of it a free medium of expression.[4] His view of the rhetorical moment of language constituted a thorough renewal, as compared with the traditional doctrine of figures of the Middle Ages. It is true that Petrarch's language cannot yet be seen as an autonomity, for he makes it servient to education, to self-education, to *humanitas;* but this subserviency is a spontaneous and vital, an aesthetic and ethical service rendered to an ideal and freely determined aim. Thus in the imitation of the antique world there is an element of recognition of objective normality, but in his demand for a personal style for everyone there is already a change over to the subjective Humanism of Valla.

Giovanni Bocaccio (1313-1375) and Collucio Salutato ...in these years [p. 108],

THEN:

The two friends, Petrarch and Boccaccio, bequeathed to Italy a new literary spirit—initiated by the one in a personal and esoteric form, and broadened and secularized by the other—which had discovered language as the original force of the human heart. Salutati was from the start more of a scholar than Boccaccio ever became. He continues Petrarch's devotion to Cicero, but his Humanism is of a more scientific and philosophical alloy, and more apostolic and purposive than that of Petrarch and Boccaccio. But the influence he exercised in his own way, by his letters and tracts, was at least as great and effective. His projection of classical ideas on the nation and on freedom helped to define more sharply the innate character of the *studia humanitatis.* As a philosopher Salutati adhered to the principles of a Neo-stoicism.

Some twenty years after Salutati, Leonardo Bruni ... in history [p. 108],

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[4] That this free medium of expression was working does not detract from the spontaneous true-to-life quality of his language usage: *scribendi enim mihi vivendique unus finis erit.* Cf. Voigt 1893: I, 33, where this quotation is also given.

THEN:

[history,] while he was also the first great translator of old Greek texts into Latin; remarkably modern evidence of his hermeneutical principles is contained in his *De recta Interpretatione.* He also wrote ... letters and language? [p. 109],

THEN:

The literary skill of the humanist was shown in the so-called epistolography, which developed in Bruni's time into a literary *genre.* It is in one of his letters that Bruni says of the purpose of this studia that these studies are called humanist (*humanitatis studia nuncupantur*) because they perfect (*perficiant*) and adorn and elevate (*exornent*) Man.[5] But the literary culture became truly effective only in the *eloquentia,* which was practically applied in the speeches, made on numerous occasions in connection with festivities or especially a eulogies addressed to persons of high rank, whereby, however, the political situation—just as in the case of the development of *eloquentia* in olden times—exercised a perceptible influence. The humanist man of letters ... Livy, Sallust [p. 109 (omitting Latin texts)],

THEN:

The second half of the treatise is devoted to the exposition of the *rerum scientia.* These are sciences a total ignorance of which is as unseemly as ostentatious excellence (... *in quibus ut rudem omnino esse non satis decorum, sic etiam ad cacumina allarum evadere nequaquam gloriosum* [Baron 1928:11]). Such sciences are geometry, arithmetic and astrology! The basis must be such disciplines as concern themselves with divine religion and with good and honest living (... *Quae aut ad religionem divinam aut ad bene vivendum pertinent* [p. 12]). They are developed by knowledge of the works of ancient historians, orators and poets. The *scientia rerum* becomes fruitful only via the *peritia litterarum.* This is a standpoint in which the argument of Bruni's sketch of a programme culminates. It is clear that the divergence between ethical Humanism and the more scientifically interested Renaissancism, which begins to go its own way half a century later, was here foreshadowed.

As already stated, Bruni was a good Greek scholar. That Latin was much too difficult for the uneducated at that time too! Likewise the language of Plautus and Terence. Bruni's unmistakable preference for the literary and cultivated language is also evident from the fact that he placed the *rhetorica artificialis* above the *rhetorica naturalis.* Unfortunately, Bruni did not go further into this difference between literary and cultivated language on the one hand and vulgar language on the other. Contrary to the incorrect presumption, in the past the suspicion that this disparity existed was in itself before its time. It might have averted many a blunder of nineteenth-century hypercriticism. For Bruni, however, it was not so much a language-history discovery, but an argument for his *élite* language standpoint. Bruni accords to *history* a very special educational value. He

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[5]   Bruni, *Epistolarum Libri,* Hamburg 1724, p. 205. Cf. Toffanin 1941: 213.

himself was more conversant with Greek and Roman history than any of his prede-
cessors or contemporaries. The Republic is for him the Golden Age of Rome; emperors
are tyrants and bloodthirsty oppressors. Just as the old republicans with their stoic dis-
positions led an active life of sensible devotion to duty, Bruni—in his close adherence
to Salutati—wished to see the *recte vivere* proclaimed and lived up to. He himself pro-
claims it in his manual of morals, the *Isagogon moralis Disciplinae*, which we shall not go
further into at this point.

Bruni is an indispensable link ... Boëthius had advocated. (Cf. Vahlen 1870: 13–14)
[p. 116],

THEN:

This pungent characterization was penned by Vahlen more than a hundred years ago.
In his own time, Valla's book was regarded as heretical and made a great stir.[6]

He earned more renown with the more positive work of this period: the *Elegantiae
Latinae Linguae*, ...

REMAINDER OF CHAPTER UNCHANGED.

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[6]   [Cf. note 20, p. 118.]

APPENDIX B

Original Texts of Quotations

Chapter 1

A die das Wesen der Sprache dadurch wiedergeben, daß man es mit dem Worte Ausdruck bezeichnet. ... daß der Terminus Ausdruck zu weit ist, viel zu wenig besagt und somit nicht ausreichen kann, das besondere Wesen der Sprache zu treffen.

B ... zur Bezeichnung des zentralen Wesensmoments der Sprsche. ... daß die Sprache mit ihren Zeichen die Wirklichkeit symbolisch zu repräsentieren, ihre Sachverhalte begrifflich zu fassen, also Darstellung zu üben vermag.

C Die Gefahr liegt nahe, den Bereich der Sprache voreilig zu verlassen und an Stelle des konkreten Strukturbegriffs des Zeichens einen abstrakten Klassenbegriff zu setzen, der nur dadurch allgemein ist, daß er Wesen- und Rangverschiedenes strukturlos unter sich begreift. Denn es ist doch so, daß Zeichen im konkreten Sinn einer kategorialer Form seinen wirklichen Ort in der Sprache hat. Der sprachliche Ausdruck ist das Urphänomen des Zeichens: daran sollte der Begriff gebildet werden. Was wir außerdem Zeichen nennen, sind daraus abgeleitete oder einseitig gewandte Abspaltungen oder Entfaltungen innerer Möglichkeiten des Sprachzeichens. Und gewiß ist auch die Funktion des Bedeutens und Meinens für den Aufbau des menschlichen Bewußtseins konstitutiv: nicht aber als vorauszusetzende allgemeine Grundunktion eines reinen Bewußtseins vor aller Sprache, sondern als subjektiv-geistige Entsprechung zur objektiv-geistigen Welt der Sprache.

D La classification des sémies a montré qu'il n'existe aucune différence de nature entre la langue et les autres sémies. Les faits acoustiques sont simplement les mieux adaptés à nos besoins de communicaton, et, parmi eux, ceux de la parole offrent le plus grand nombre de sons différents que l'on puisse obtenir sans recours à un instrument pour les produire.

E Le terme de fonction ne doit pas, en linguistique, être restreint à la fonction syntaxique des signes à l'intérieur du discours; il faut considérer toute fonction, y compris celle du discours envisagé dans son entier.

Chapter 3

A Das Verbum intellectus ist also nicht das, wodurch der Intellekt erkennt—denn das ist die species intelligibilis—, sondern das, worin er erkennt.

B Es entspricht daher nicht der Ansicht des hl. Thomas, wenn F. Manthey die Sprachphilosophie, die sich doch eigentlich mit dem Sprechakt befaßt, aus dem Bereich der Sprachphilosophie im engeren Sinne ausgeschlossen wissen will und deshalb den Aquinaten nur „anhangsweise" über diesen Punkt befragt. Mögen auch grammatische und sprachlogische Erörterungen in den Schriften des Aquinaten einen breiten Raum einnehmen, so stellt doch die psychologisch-dynamische Betrachtung einen wesentlichen Teil der thomistischen Sprachphilosophie dar, die sich nicht nur mit den statischen Gebilden, sondern vornehmlich mit den Akten und Funktionen des Sprechens, bzw. Verstehens beschäftigt. In dieser Hin-

sicht tritt eine gewisse Verwandtschaft zwischen Thomas und Wilhelm von Humboldt hervor, der die Sprache „nicht sowohl wie ein todtes Erzeugtes, sondern weit mehr als eine Erzeugung" ansieht. Bekannt ist Humboldts Ausspruch: die Sprache ist „kein Werk (Ergon), sondern eine Thätigkeit (Energeia)". Freilich muß betont werden, daß Thomas gleicherweise einem einseitigen subjektivistischen Psychologismus, wie Dynamismus fernsteht.

C F. Manthey dürfte daher die wirkliche Ansicht des hl.Thomas nicht getroffen haben, wenn er die Sprache in dessen Sinne als das „Zeichen unserer Seelenzustände" bestimmt. Dieses Mißverständnis ist umso merkwürdiger, als Manthey doch sonst eine ablehnende Stellung gegenüber der psychologistischen Sprachbetrachtung einnimmt. Nach Thomas ist die Bedeutung vielmehr der gegenständliche Inhalt, wie er begrifflich dargestellt oder „intendiert" wird, nicht aber der Begriff als subkektives Erzeugnis des Intellekts.

D Mit diesen Bestimmungen hat Thomas eine Lösung des Bedeutungsproblems gebracht, die zwischen Nominalismus und extremen Realismus die rechte Mitte hält.

E Verschiedenartig sind also die Funktionen, die der Vollzug des Sprechens in sich schließt. Ihr Zusammenwirkung im konkreten Sprachgeschehen kann wohl durch folgende Figur zur Anschauung gebracht werden ...

F [ist] ein dreifacher Wesensbezug eigen: 1. ein subjektiver auf den Sprecher, dessen Innerlichkeit sie ausdruckhaft kundgibt, 2. ein objektiver auf den gemeinten Gegenstand und 3. ein sozialer auf den Hörer, dem etwas über diesen Gegenstand mitgeteilt werden soll.

G nisi quantum ad illud, quod est formale in eis, cum in hoc etiam forte a modis significandi activis non discrepent.

H *omnis modus significandi activus est ab aliqua rei proprietate.* Quod sic patet: quia cum intellectus vocem ad significandum sub aliquo modo significandi activo imponit, ad ipsam rei proprietatem aspicit, a quo modum significandi activum originaliter trahit; quia intellectus cum sit virtus passiva, de se indeterminata, ad actum determinatum non vadit, nisi aliunde determinetur. Unde cum imponit vocem ad significandum sub determinato modo significandi activo a determinata rei proprietate necessario movetur; ergo cuilibet modo significandi activo correspondet aliqua proprietas rei, seu modus essendi rei.

I quod non oportet, quod semper modus significandi activus dictionis trahatue a proprietate rei illius dictionis.

J licet privationes non sint entia positiva extra animam, sunt tamen entia positiva in anima ... et quia eorum intelligi est eorum esse, ideo eorum modi intelligendi erunt eorum modi essendi.

K Et cum alia sint ratio essendi, alia intelligendi, alia significandi, differunt secundum formales rationes. Conveniunt autem realiter.

L dicitur signum per rationem signandi, vel repraesentandi aliquid absolute; sed dicitur dictio formaliter per rationem signandi voci superadditam, quia dictio est vox significativa ... pars orationis est dictio, ut habet modum significandi activum

M Modus significandi generalissimus essentialis verbi est modus significandi rem per modum esse, et distantis a substantia.

N Modus *esse* habet rationem materiae quia facit Verbum cum Participio convenire; Modus *distantis* habet rationem formae, quia facit Verbum ab omnibus aliis distare et differe.

O a observar brevemente los valores trascendentales que subyacen bajo las bellas personificaciones del Opus luliano. ... El simbolismo ejemplarista no se limita a la figura del árbol (con sus raíces, tronco, ramas, ramos, flores, frutos y semillas) al candelabro de flores luminosas, a los círculos, triángulos, figuras y letras. Como si no bastasen esas semblanzas y representaciones, aparece en el panorama del Opus luliano un largo y magnifico cortejo de personajes simbólicos, damas, donceles, pajes ... ; personajes trascendentales en que se perso-

nifican la Inteligencia, la Intención, la Justicia, el Donaire ... con un fin estrictamente filosófico. Hallamos en no pocos autores, especialmente medievales (y en todos los tiempos en los poetas) abundosas personificaciones pero el simbolismo personalista luliano excede, sin duda, así por el número y vistosidad de los personajes simbólicos como por la diversidad de las personificaciones que ponen copiosamente de manifiesto la convicción profunda en el bienaventurado maestro, de verdades ónticas, de hechos y de cosas que, sin tener *ser*, su realidad es *valer;* di aquí que sus personajes sean vistosas representaciones de *realidades.*

^P Bedenkt man endlich, wie vieles erst berechnet werden kann, seit man das Ausziehen von Wurzeln höherer Grade auf eine Division reduziert hat, an die sich das Nachschlagen in den Logarithmentafeln anschließt, so wird man sich erklären können, wie Lull von einem Kombinieren von Zeichen und Aufsuchen der gefundenen Formel in den tabulae so Großes hoffen konnte ... Nur mit dem, was der Mensch ganz beherrscht, vermag er zu spielen.

Chapter 4

^A Si quis itaque vocum impositionem recte pensaverit, enuntiationum quarumlibet veritatis deliberaverit, et rerum consecutionis necessitatem velocius animadverterit. Hoc autem logicae disciplinae proprium relinquitur, ut scilicet vocum impositiones pensando, quantum unaquaque proponatur oratione sive dictione, discutiat. Physicae verum proprium est inquirere utrum rei natura consentiat enuntiationi, utrum ita sese, ut dicitur, rerum proprietas habeat vel non. Est autem alterius consideratio alteri necessaria. Ut enim logicae discipulis appareat quid in singulis intelligendum sit vocabulis, prius rerum proprietas est investiganda. Sed cum ab his rerum natura non prae se sed prae vocum impositione requiritur, tota eorum intentio referenda est ad logicam. Cum autem rerum natura percepta fuerit, vocum significatio secundum rerum proprietates distinguenda est, prius quidem in singulis dictionibus, deinde in orationibus quae ex dictionibus junguntur ...

^B Sed quoniam voces non significant nisi res, dicendo, quid sit, quod voces significent, necesse est dicere, quid sint res.

^C In Boethius' translation (ed. Geyer, 1933: 9): Quoniam autem sunt haec quidem rerum universalia, illa vero singularia, dico autem universale, quod de pluribus natum est praedicare, singulare vero, quod non, etc.

^D Hierauf aber nun beruht das eigentliche Partei-Schibolet Abälard's, denn aus jener Naturbestimmtheit des Ausgesagtwerdens folgt, daß weder die Dinge als solche noch die Worte als solche das Allgemeine seien, sondern die Allgemeinheit nur in dem Ausgesagtwerden selbst, also in der Redeform des Urteils, kurz im „*sermo*" liege, wodurch nun die verfehlte und unhaltbare Ansicht vermieden werde, daß man ein Ding von einem Dinge aussagen könne, wornach ein Ding als Ding gleichmäßig in mehreren Dingen sein müßte, wohingegen („res de re non praedicatur"), Alles, was ausgesagt wird, und insofern es ausgesagt wird, nicht ein Ding, sondern eine Aussage ist.

^E Licet etiam ipsum nostrae mentis conceptum ipsius sermonis tam effectum quam causam ponere, in proferente quidem causam, in audiente effectum, quia et sermo ipse loquentis ab eius intellectu proficiscens generatur, et eundem rursus in auditore generat intellectum.

^F Propositio est oratio verum falsumve significans; ... sicut enim omnes propositiones vel affirmativae vel negativae ac solae, itaque etiam verae vel falsae.

^G Nos langues classiques (grec, puis latin) ont semblé aux Européens plus "logiques" que d'autres; c'est pour cette raison simple que la logique devenue classique chez nous s'en est inspirée.

^H Indubitablement, la logique d'Aristote (Henrich Maier l'a montré) est, dans une assez large mesure, d'inspiration linguistique; c'est parmi les phrases grecques que, pour les besoins de

sa théorie, le Stagirite a choisi certains types, par lui considérés comme fondamentaux, et c'est par l'analyse des mots grecs qu'il est arrivè à certains prédicaments, conçus comme catégories essentielles.

I Propositio est oratio verum et falsum significans indicando, ut "homo currit", ... in hac enim propositione "homo" est subjectum et "currit" praedicatum, et quod coniungit unum cum altero, dicitur esse copula, ut patet in resolvendo, ut "homo currit" i.e. "homo est currens"; ibi hoc nomen "homo" est subjectum et "currens" praedicatum et hoc verbum "est" dicitur copula quia coniungit unum cum altero.

J Vox significativa ad placitum est quae ad voluntatem primi instituentis aliquid repraesentat, ut "homo", vocum significativarum ad placitum alia complexa, ut oratio, alia incomplexa, ut nomen vel verbum. Et sciendum, quod dialecticus (logicus) solum ponit duas partes orationis, scilicet nomen et verbum, reliquas omnes appellat syncathegoreumata, i.e. consignificativas.

K significatio prior est suppositione, et differunt in hoc, quia significatio est vocis, suppositio vero est termini iam compositi ex voce et significatione.

L "*Mens* is een woord van vier letteren" ... "*mens* is een soort van het geslacht zoogdier" ... "die *mens* is mij een ergernis"..."elk *mens* is feilbar". ... Bij een diepgaande analyse van een betoog kunnen dergelijke onderscheidingen inderdaad niet gemist worden. Soortgelijke begrijps-vormingen zijn dan ook door de moderne logici geheel zelfstandig opnieuw ontwikkeld (R. Carnap: "inhaltliche" tegenover "formale Redeweise").

M Appellatio est acceptatio termini pro re existente; dico autem pro re existente, quia terminus significans non ens non appellat, ut Caesar vel chimaera. Differt autem appellatio a signi-ficatione et suppositione, quia appellatio est tantum de re existente, sed suppositio et significatio sunt tam pro re existente quam pro re non existente.

N Propositio exponibilis est propositio habens sensum obscurum expositione indigentem prop-ter aliquod syncategorema in ea positum.

O Omnia autem, quae salvantur ponendo aliquid distinctum ab actu intelligendi, possunt sal-vari sine tali distincto, eo quod supponere pro alio et significare aliud ita potest competere actui intelligendi sicut illi ficto: ergo praeter actum intelligendi non oportet ponere aliquid aliud.

P Quando aliquis profert propositionem vocalem, prius format interius propositionem unam mentalem, *quae nullius idiomatis est,* intantum quod multi formant frequenter interius proposi-tiones aliquas, quas tamen propter defectum idiomatis exprimere nesciunt. Partes talium pro-positionum mentalium vocantur conceptus, intentiones, similitudines, intellectus.

Q Dicimus autem voces esse signa subordinata conceptibus vel intentionibus, non quia, proprie accipiendo hoc vocabulum "signum", ipsae voces significant ipsos conceptus primo et pro-prie, sed quia voces imponuntur ad significandum *illa eadem,* quae per conceptus mentis sig-nificantur.

R Suppositio est pro aliis positio, ita quod quando terminus in propositione stat pro aliquo, utimur illo termino pro illo, etc.

S Oportet autem cognoscere, quod, sicut est suppositio propria, sc. quando terminus supponit praecise pro eo, quod significat proprie, ita suppositio impropria est, quando terminus acci-pitur improprie. Multiplex autem est suppositio impropria, sc. antonomatica, ... alia est synecdochia, ... alia est metaphorica...

T pro illo, quod significative sumptum potest esse subjectum vel praedicatum alicuius proposi-tionis; et hoc modo nullum verbum nec coniunctio nec adverbium nec interiectio est termi-nus; multa enim nomina non sunt termini, ut nomina syncategorematica, quia talia, quamvis possint esse extrema propositionis, si sumantur materialiter vel simpliciter, tamen, quando

sumuntur significative, non possunt esse extrema. ... Quomodo autem et respectu quorum verborum obliquus potest esse subiectum, et respectu quorum non, pertinet ad grammaticum, cuius est constructiones vocum considerare.

U ... termini syncategorematici ... *non* ... *habent finitam significationem et certam,* nec significant aliquas res distinctas a rebus significatis per categorema, *sicut in algorismo cifra per se posita nihil significat,* sed addita alteri figurae facit eam significare.

V ad veritatem propositionis, cuius alterum extremum est terminus obliquus ...; nec est facile in his generalem regulam et certam dare.

W Und zwar ist, was sich bei ihm weiter anbahnt, bereits diejenige Richtung des englischen Subjectivismus, welche das Denken, mit Hobbes zu reden, als ein Rechnen mit Begriffen bezeichnet.

X Als das Wesen des wissenschaftlichen Kennens aber bleibt das übrig, was nachher Hobbes als ein Rechnen mit Begriffen vermittelst der Worte bezeichnete, d.h. mit psychischen Inhalten, welche die Wahrnehmung als Suppositionen ihrer Objekte in die Seele hineinlegte, ohne jede Voraussetzung eines Apriori.

Chapter 5

A Indien iemand niet gelooft in de mogelijkheid van een wedergeboorte, d.w.z. van een wending, die het gehele complex aangaat, die *per saltum* plaats vindt, en *finaal* is, dan zal hij elk beeld in zijn aarzelenden handen zien stukbreken. Hij zal niet alleen het koninkrijk Gods niet zien, maar ook geen enkel koninkrijk deser vereld, ook niet dat der Renaissance. Iriserende sch scherven, glinsterende splinters, dat is alles wat overblijft.

B de overtuiging, dat weliswaar 'elke cultuurvorm, elke gedachte zich wendt op haar tijd', maar dat er toch tijden zijn, waarin zich vele vormen en gedachten wenden, tijden van stroomversnelling, van waterval zelfs, tijden, die 'ruischen van geboorten', tijden, waarin het geloof in dat wedergeboren zijn bergen verzet.

C Tot zulke inzichten komen wij eerder dan de generatie onzer grootouders. De oorzaak daarvan ligt voor de hand. En wij richten onze aandacht op de mogelijkheid van zulk een vernieuwing, want wij kunnen de geest niet missen, die wonderen doet, wij vragen *per saltum* verlost te worden van deze verbrijzeling, wij willen deel hebben aan het geheel nieuwe, waarin de vermoeide wijsheid van de Prediker en van Huizinga's opstel achtergelaten wordt. Dan keert ook in ons terug het „levensgevoel" der Renaissance zelf, die wij weer, beter dan de wijze pluralisten, begrijpen als een wonderlijke wending van de geest, die wij in een dichte reeks van kleinere wendingen, alle minder volkomen, zich zien voltrekken.

D Ich lebe an mir selbst ... die allmähliche Umarbeitung der ästhetischen und absoluten Schätzung des Altertums in die historische und relative durch.

E Der Begriff der *litterae* als „Bildung" im modernen Sinne führt Bruni dazu, ihre Pflege mit kultureller Blüte schlechthin gleichzusetzen.

F videre primum, ut in eorum tantum librorum, qui ab optimis probatissimisque latinae linguae auctoribus scripti sunt, lectione versemur, ab imperite vero ineleganterque scripta ita cavemus, quasi a calamitate quadam et labe ingenii nostri.

G in quibus ut rudem omnino esse non satis decorum, sic etiam ad cacumina illarum evadere nequaquam gloriosum.

H Quid enim prodest multa et pulchra scire, si neque loqui de his cum dignitate neque mandare litteris nisi ridicule possis?

I an vulgus et literati eodem modo atque idiomate Romae locuti sint. ... oratores ipsos aliter scripsisse orationes quam dixerant.

^J aliud est natura, alia disciplina, ut in rhetorica & musica licet intueri. Etsi enim magnis inge-
niis praediti, quidam copiam dicendi sine arte assecuti sunt, ars tamen certior, quam natura.

^K Alle Grundbegriffe der aristotelischen Philosophie werden ... in ein gar ungewöhntes Verhör
genommen und auf die Zeugenaussage des gesunden Sinnes und des Sprachgebrauchs verur-
theilt. ... Im Gebiete des Urtheils eröffnet sich ihm ein weites Feld mehr grammatischer als
logischer Beobachtungen über den Gebrauch der ... Signa. Von demselben Standpunkt der
Sprache erhebt er energischen Einspruch gegen den Mechanismus des Boëthius.

^L Quum saepe mecum nostrorum majorum res gestas, aliorumque vel regum, vel populorum
considero: videntur mihi non modo ditionis nostri homines, verumtamen linguae pro-
pagatione caeteribus omnibus antecelluisse. ... Nullos etiam linguam suam ampliasse, ut
nostri fecerunt: qui per totum penè Occidentem, per Septentrionis, per Affricae non exi-
guam partem brevi spatio *linguam Romanam celebrem, et quasi reginam effecerunt, et velut optimam
quandam frugem mortalibus ad faciendam sementem praebuerunt;* opus nimirum multò praeclarius,
multo speciosius, quàm ipsum imperium propagasse. ... Itaque nostri majores rebus bellicis,
pluribus laudibus caeteros homines superarunt: linguae verò suae ampliatione seipsis supe-
riores fuerunt, tanquam derelicto in terris imperio, consortium deorum in coelo consecuti.
An verò Ceres quòd frumenti, Liber quòd vini, Minerva quod olei inventrix putatur, mul-
tique alii ob aliquam hujusmodi beneficentiam in deos reposti sunt: linguam Latinam
nationibus distribuisse minus erit, optimam frugem, et verè divinam, nec corporis, sed animi
cibum? Haec enim gentes illas, populosque omnes *omnibus artibus,* quae liberales vocantur,
instituit: haec *optimas leges edocuit:* haec *viam ad omnem sapientiam munivit; haec denique praestitit, ne
barbari amplius dici possent.* Quare quis aequus rerum aestimator non eos praeferat, qui sacra
literarum colentes, iis qui bella horrida gerentes clari fuerunt? Ex sermone Latino *non suum
imminui, sed condiri quodammodo* intelligebant: ut vinum posteriùs inventum, aquae usum non
excussit: nec sericum, lanem linumque: nec aurum, caetera metalla de possessione ejecit, sed
reliquis bonis accessionem adjunxit. Et sicut gemma aureo inclusa annulo, non deornamento
est, sed ornamento: ita *noster sermo accedens, aliorum sermoni vernaculo contulit splendorem,* non sus-
tulit.

^M in omne genere excolebant ... ipsis literarum professoribus praemia egregia sanè propone-
bant ... quod hortabuntur provinciales omnes, ut quum Romae, tum in provincia, Romanè
loqui consuescerent.

^N Magnum ergo Latini sermonis sacramentum est, magnum profecto numen, quod apud
peregrinos, apud barbaros, apud hostes, sanctè ac religiosè per tot secula custoditur, ut non
tam dolendum nobis Romanis, quàm gaudendum sit, atque ipso etiam orbe terrarum
exaudiente gloriandum. Amisimus Roman, amisimus regnum, amisimus dominatum, tametsi
non nostrâ, sed temporum culpâ: verumtamen per hunc splendidiorem dominatum in
magnâ adhuc orbis parte regnamus. Nostra est Italia, nostra Gallia, nostra Hispania,
Germania, Pannonia, Dalmatia, Illyricum, multaeque aliae nationes. Ibi namque Romanum
imperium est, ubicunque Romana Lingua dominatur. ... multarum gentium velut una lex,
una est lingua Romana, in qua linguâ disciplinae cunctae libero homine dignae continentur,
quâ vigente, quis ignorat studia omnia, disciplinas vigere, occidente, occidere? Qui enim
summi Philosophi fuerunt, summi Oratores, summi Jurisconsulti, summi denique Scriptores?
Nempe ii qui benè loquendi studiosissimi.

^O non philosophiae studiosi Philosophos, non causidici Oratores, non legulei Jureconsultos, non
caeteri lectores veterum libros perceptos habuerunt, aut habent: quasi amisso Romano impe-
rio, non deceat Romanè nec loqui, nec sapere, fulgorem illum Latinitatis situ, ac rubigine
passi obsolescere. ...
    Verùm enimverò quò magis superiora tempora infelicia fuêre, quibus homo nemo
inventus est eruditus, eò plus his nostris gratulandum est; in quibus confido propediem lin-
guam Romanam virere plus, quàm urbem, et cum ea disciplinas omnes iri restitutum.

P Filologo egli è essenzialmente; ma al suo ingegno fanno difetto cosi la forza sintetica come quel che oggi dicono genialità; è maestro di stile, non stilista; ha squisito il senso di bello, non è artista.

Q Qui è il codice dell'umanesimo, esaltazione di quella lingua che aveva portata nel mondo la piu pura romanità, superiore alla romanità della armi. Qui è fondata una theoria grammaticale e retorica, su esempi concreti ed eletti, all'empirismo grezzo sostituendo una esperienza documentate. ...

   L'umanesimo, aspetto letterario di Rinascimento, è in fine e supra tutto la coscienza del valore umano delle lettere. Se la parola distingue l'uomo dal bruto, la parola che si solleva all'arte, alla creazione, al pensiero, alle scienze sacre è la piu umana ragione dell'uomo, fatto a l'immagine di Dio.

Chapter 6

A De dialectica heeft ... de *argumenten* bijeen te brengen, tegelijk den *tegenstander* èn te ontwijken èn tegemoet te treden en, na zijn telkens weer herhaalden anval te hebben *beantwoord,* hem eindelijk met zijn eigen wapen doodelijk te treffen. De dialectica toch opent den toegang tot alle artes en brengt bepaalde plaatsen voor de „inventio", aanwijzingen waarop men de geest heeft te richten, om in staat te zijn, het voor en tegen van ieder zaak te overwegen. Mij lijkt nog altijd die mening het meest steekhoudend, welke beweert, dat, *wat de Redenaar voor zich opeischt van de Inventio, eigenlijk tot de Dialectica behoort.* Maar rangschikking, opsmukking en polijsting, waarmee de Rhetor *als het ware de laatste hand* aan de redevoering legt, dat behoort *bepaaldelijk tot de Rhetorica.*

B de vindplaatsen van bewijzen, volgens wier aanduiding, wegwijzers gelijk, wij ons nadenken zouden rondvoeren door het gehele gebied der dingen, om zoo te ontdekken, wat er waarschijnlijks in ieder ligt opgesloten en *geschikt voor het doel onzer rede.*

   Zeer vernuftige mannen hebben uit de breede verscheidenheid der dingen die gemeenschappelijke hoofdpunten ... uitgelezen ...

C *Novum Instrumentum omne, diligenter ab Erasmo Roterodamo recognitum & emendatum, non solum ad graecam veritatem, verum etiam ad multorum utriusque linguae codicum, eorumque veterum simul & emendatorum fidem ... una cum Annotationibus ... Quisquis igitur amas veram Theologiam, lege, cognosce, ac deinde iudica.* Basiliae MDXVI.

D Homines erant, quaedam ignorabant, in nonnullis hallucinati sunt. Dormitaverunt alicubi, nonnulla dederunt utcumque vincendis haereticis, quorum contentionibus tunc fervebant omnia.

E Satius est ignorare quaedam Aristotelis dogmata, quam nescire Christi decreta. Denique malim Hieronymo pius esse theologus, quam cum Scoto invictus.

F Sed missam faciamus studiorum collationem. Sit suum cuique pulchrum ... Cui placet scholasticae conflictationes sequatur, quod in scholis receptum est. At si quis magis cupit instructus esse ad pietatem quam ad disputationem, in primis et postissimum versetur in fontibus, verset in his scriptoribus, qui proxime biberunt de fontibus. Quod dimminuitum erit in syllogismis, id pensabit oratio. Et satis invictus fueris theologus, si eo perfeceris, ut ulli succumbas vicio, nullis cedas cupiditatibus, etiam si a disputatione quodlibetica discesseris inferior. Abunde magnus doctor est, qui pure docet Christum.

G Primum illud constat, Grammaticen esse disciplinarum omnium fundamentum, ex cuius neglectu quanta bonorum auctorum ac disciplinarum vel interitus vel corruptela sit profecta, notius est, quam ut hic sit ostendendum. Quum autem Grammaticam dico, non sentio inflexionem nominum ac verborum, et appositi cum supposito congruentiam, sed rationes emendate proprieque loquendi, quae res non contigit, nisi ex multijuga veterum lectione, qui

sermonis elegantia praecelluerunt. Ac nostro quidem seculo iure gratulamur, quod e ludis litterariis penitus sublatum est illud litteratorum genus, qui dum inculcabant modos significandi aliasque commentitias difficultates, idque verbis illotis ac sophisticis, nihil aliud docebant pueros quam barbare loqui, quum Grammatica sit ars emendate loquendi. Videbatur hoc esse compendium, quum revera maximum esset dispendium. Rapiebant pueros ante tempus ad Dialecticam, atque adeo ad Sophisticam. Atqui Dialectica caeca est absque Grammatica. Quidquid enim agit Dialectica, per sermonem agit per hunc enunciat, definit, dividit et colligit. Ad ea requiritur vocabulorum cognitio, quibus singulae res declarantur, tum eorum compositio: quorum ugrumque pendet non ab arbitrio disputantium, sed a consuetudine veterum, qui castigate locuti sunt.

H Verum ut hujusmodi præceptafateor necessaria, ita velim esse quantum fieri possit, quam paucissima, modo sit optima. Nec unquam probavi literatorum vulgus, qui pueros in his inculcantibus complures annos remorantur.

Nam vera emendate loquendi facultas optime paratur, cum ex castigate loquentium colloquio convictuque, tum ex eloquentium auctorum assidua lectione, e quibus ii primum sunt imbibendi, quorum oratio præterquam quod est castigatissima, argumenti quoque illecebra aliqua discentibus blandiatur.

I Hujus adjutus præceptionibus, ipse per te non pauca annotabis. Adjuvabit hoc quoque, si figuras Grammaticas a Donato ac Diomede tradiditas edidiceris, si Carminis leges ac formas omnes tenueris, si Rhetorices summam, hoc est propositiones, locos probationum, exornationes, amplificationes, transitionum formulas in promptu habueris. Conducunt enim haec non solum ad judicandum, verumetiam ad imitandum.

... Ad hæc si quis Dialecticen addendam statuet, non admodum refragatur, modo ab Aristotele eam discat, non ab isto loquacissimo Sophistarum genere, neque rursum ibi desideat, & velut ad scopulos (ut inquit Gellius) Sirenæos consuescat.

Verum illud interim memineris, optimum dicendi magistrum esse stilum. Erit hic igitur in carmine, in oratione libera, in omni argumenti genere diligenter exercandus. Neque negligenda memoria, lectionis thesaurus.

J Jam de formando puerorum ore, deque tradendis, ceu per lusum, jocumque literarum figuris, satis præcepit Fabius. Equidem post tradita elementa prima, malim ad usum loquendi statim vocari puerum. Etenim cum intra pauculos menses, quamvis barbaram linguam ætas ea sonet, quod vetat quo minus idem fiat in lingua Græca sive Latina?

K Sed video te cupere, ut de docendi quoque nonnihil attingamus. Agemos geratur Viterio, quanquam video Fabium hisce de rebus diligentissime præcipuisse, adeo ut post hunc de iisdem scribere prorsus scribere imprudentissimum esse videatur. Ergo qui volet instituere quempiam, debit operam, ut statim optima tradat, verum qui rectissime tradat optima, is omnia sciat necesse est: aut si id hominis ingenio negatum est, certe uniuscujusque disciplinæ præcipua. In hoc non ero sontentum decem illis aut duodecim acutoribus, sed orbem illum doctrinæ requiram, ut nihil ignoret etiam qui minima parat docere. Erit igitur huic per omne scriptorum genus vagandum, ut optimum quemque primum legat, sed ita, ut neminem relinquat ingustatum, etiam si parum bonus sit auctor. Atque id quo cumulatiore fructu faciat, ante locos & ordines quosdam, ac formulas in hoc paratas habeat, ut quicquid usquam inciderit annotandum, id suo adscribit ordini. Sed hoc qua ordine fieri oporteat, in secundo de copia commentario demonstravimus. Verum si cui vel ocium, vel librorum copia defuerit, plurima Plinius unus suppeditabit, multa Macrobius & Athenæus, varia Gellius. Sed in primis ad fontes ipsos properandum, id est, Græcos & antiquos. Philosophiam optime docebit Plato, & Aristoteles, atque hujus discipulus Theophrastus, tum utrinque mixtus Plotinus. Ex Theologis secundum divinas literas, nemo melius Origine, nemo subtilius aut jucundius Chrysostomo, nemo sanctius Basilio. Inter Latinos duo duntaxat insignes in hoc genere, Ambrosius mirus in allusionibus, & Hieronymus in arcanis literis exercitatissimus.

Quod si minus vacabit immorari singulis, omnes tamen censeo degustandos, quorum in præsentia catalogum texere, non est ratio.

L Ut non est aliud vel admirabilius, vel magnificentius, quam oratio, divite quadam sententiarum verborumque copia, aurei fluminis instar, exuberans: ita res est profecto, quae non mediocri periculo affectetur ...

M Quarum altera consistit in Synonymia, in Heterosi, sive Ennallage vocum, in Metaphoris, in mutatione figurae, in Isodynamiis, reliquisque id genus variandi rationibus: Altera in congerendis, amplificandis argumentis, exemplis, collationibus, similbus, dissimilibus, contrariis, atque aliis hoc genus modis, quos suo loco reddemus accuratius, sita est.

N Neque vero mediocriter contulerit haec exercitatio ad extemporalem vel dicendi, vel scribendi facultatem: praestabitque, ne subinde vel haesitemus attoniti, vel turpiter interfileamus. Neque difficile fuerit, vel temere coeptam orationem commode ad id, quod volumus, deflectere, tot formulis in procinctu paratis. Praeterea in enarrandis auctoribus, in vertendis ex aliena lingua libris, in scribendo carmine, non parum adjumenti nobis attulerit. Siquidem in iis, nisi erimus his instructi rationibus, saepenumero reperiemur perplexi, aut duri, aut muti denique.

O hac quidem in parte nonnihil a Quintiliano dissentiens, qui negat eloquentiam esse vocandum, quae non habet admirationem.

P recteque Cicero his ipsis ad Brutum verbis quadam in epistula scribit: nam eloquentiam, quae admirationem non habet, nullam iudico; enadmque Aristoteles quoque petemdam maxime putat.

Q Et in nobis animi speculum est oratio, unde celebratur illud a Socrate dictum: Loquere ut te videam. ... Proinde lingua quae mentitur satanae veneno infecta est, et hinc pernicies quemadmodum a veritate salus. ... Porro mentiendi consuetudo facit, ut frequenter et impudenter mentiaris, non sine gravi periculo ... . Nullum autem sceleratius mendacii genus, quam negare Deum, quod affirmabant Stoici, nec multum dissentiunt Peripatetici, sed hoc quoque sceleratius est fateri Deum esse, nec illi curae esse res mortalium aut certe favere vitiis hominum. Verus pastor erat Christus, verus imitator Christi fuit Paulus ...: "Imitatores mei esote, sicut ego Jesu Christi". Itaque mendaces apostolos ... non posset non odisse Deus ... . Veritas enim philosophorum ac pharisaeorum supercilium habet pro misericordia. Ubi mendacium est, hoc est hypocrisis ..., ibi quantum vis abundent humanae disciplinae, tamen non est scientia Dei...

R exhortatoria, (dis)suasoria, petitioria, monitoria, amatoria, demonstrativa, iudicalis, invectiva, deprecatoria, mandatoria, collaudatoria, lamentatoria, gratulatoria, iocosa, conciliatoria, officiosa, disputatoria.

S Itaque mihi probatur Zexudis exemplum: quod sequutus etiam Quintilianus, imitatori praecipit, nec unum esse legendum, nec omnes, nec quoslibet; sed ex praecipuis deligendos aliquot eximios, inter quos Ciceroni primas tribuit, non solitudinem. Summum enim esse vult inter proceres, non solitarium, exclusis caeteris.

T Cicero non tractavit omnes materias! Ergo si forte dicendum fuerit de his, quas ille non attigit, unde tamen petemus orationis suppellectilem? an profiscemur in campos Elysios, ab ipso percunctari, quibus verbis ille talia fuerit dicturus?

U Reddat is nobis prius Roman illam, quae fuit olim, reddat senatum et curiam, patres conscriptos, equestrem ordinem, populum in tribus et centurias digestum?

V Deus ille princeps ... nullo magis hominem separavit a ceteris, quae quidem mortalia essent, animalibus, quam dicendi facultate. ... Oratio, qua nihil praestantius homini dedit providentia ...

[W] Etenim cum res non nisi per vocum notas cognoscatur, qui sermonis vim non callet, is passim in rerum quoque iudicio caecutiat, hallucinetur, deliret necesse est.

[X] Galenus me docuit, hominem a caeteris animantibus, qua vocamus ἄλογα discerni non ratione, sed oratione.

[Y] Verbum hominis non profertur absque spiritu. ... Caeterum, qualis est sermo noster, talis est spiritus noster. Ut autem supra mentis illius divinae sublimitatem nihil cogitari potest, si tamen illam ullo modo consequi potest humana cogitatio: ita nihil est in homine praestantius mente, qua parte longissime absumus a natura pecudum, referimus quamdam Divinae mentis imaginem ..., sed tamen illud recte perspexerunt hominem non alia re proprius accedere ad naturam aeterni Numinis quam mente et oratione, quam Graeci νοῦν καὶ λόγον appellabant. Mens fons est, sermo imago a fonte promanans. Quemadmodum autem unicum illud Dei Verbum imago est Patris ..., ita humanae mentis imago quaedam est oratio, qua nihil habet homo mirabilius aut potentius!

[Z] Tum dialecticam quis non videt scientiam esse de sermone? quod ostendit ipsa Graeca nominis ratio διαλεκτικὴ καὶ λογικὴ uti est rhetorice, uti et grammatice, jam de quo quaeso sermone est ista vestra dialectica? De Gallico'ne an de Hispano? an de Gothico? an de Vandalico? Nam de Latino certe non est; dialecticus enim iis uti debet verbis, iis enuntiationibus, quas nemo non intelligat qui sciat linguam illam, qua is loquitur, velut Latinam, si latine se dialecticus profitetur disserere, Graecam, si graece; at isti non dico non intelliguntur a doctissimis latine, cum se latine dicant loqui, sed interdum ne ab hominibus quidem ejusdem farinae, seu ejusdem potius furfuris.

[AA] an putat quispiam Aristotilem suam dialecticam ad sermonem, quem ipse sibi confinxerat, et non potius ad vulgarem illum Graecum, quem totus populus loquebatur, accommodasse?

[BB] eodem modo se habet in rhetorice et dialectice: dialectica itaque in hoc vulgari, et qui estomnium in ore sermo, verum, falsum, probabilitatem invenit, rhetorice vero ornamentum splendorem, gratiam.

[CC] Verum isti qui sophistae nominantur, quoniam ingenium eis deerat et eruditio, qua quidvis auditori et contra disputanti verisimiliter probare possent, idque vulgaribus notisque vocabulis atque orationibus, quibus unusquisque uti debet tamquam numis quibus publica forma est, quod erat verum dialectici munus, confinxerunt ipsi sibi nescio quos vocabulorum significatus, contra omnem hominum consuetudinem et usum, ut tunc vicisse videantur, cum non intelligantur.

[DD] non enim arbitrio Parthorum et Indorum significant nomina Romana. ... Est in unaquaque lingua sua loquendi proprietas, quod a graecis ἰδίωμα dicitur.

[EE] Quis quaeso auctoritatem hanc dedit Petro Hispano, ut novas ferret leges in lingua, quam ne de facie quidem norat ... ?

[FF] Aristoteles ne minimam quidem regulam definivit in tota sua dialectica, quae non congrueret cum ipso sermonis graeci sensu. ... praescripsit sensus enuntiationum contra rationem omnem sermonis latini ...

[GG] negatio geminata maiorem habet negandi vim quàm simplex? Quod si in dialectica, aliis linguis tradenda, leges accipere ab ipso usitato sermone, non ferrent, cur in lingua liberrimi populi Romani hanc volunt exercere tyrannidem, ut cogant ipsam a se hominibus infantissimis, et barbarissimis, loquendi leges accipere?

[HH] vim sermonis latini melius novit, quam ipsi omnes! Quis quaeso est iste rigor, quo haec enuntiatio est vera: *Tu homo non es,* haec falsa: *Animal est omnis homo* ...? Iam et de *Incipit* ac *Desinit* pudet loqui ...! Qua in lingua haec excogitata sunt? An in graeca? an in latina? an in hispana? an in gallica? Quis unquam negavit puerum una hora, posteaquam ad scholas ductus est, "incipere" discere? At isti negant. ... Ita in angustum illorum verborum *incipit* et *desinit* significationes contraxerunt, ut iam nullus eorum possit *usus* esse, credamque ad

istorum legem de nulla prorsum re dici posse, quod aut "incipiat" aut "desinat" quicquam vel esse, vel agere. ... Et protinus atque identidem illud objectant: *Loquamur in rigore:* loquantur potius in frigore ... ! quasi vel scirent ipsi quid sit rigor, vel ipsorum esset, etiam si scirent, diffinire rigorem, et veram germanamque vis illius linguae cuius sunt prorsus inscii: cedo isti universi cum suo toto ferreo et gelidissimo rigore, qui latinis hominibus praescribere volunt leges loquendi, intelligant mihi folium ùnum vel Ciceronis, vel Quintiliani ... !

II Prima in homine peritia est loquendi; quae statim ex ratione ac mente tanquam ex fonte profluit. Idcirco bestiae omnes sicut mente, ita et sermone carent. Est etiam sermo societatis humanae instrumentum. ... Ac quemadmodum mentem munere habemus Dei, sic etiam loqui naturale est nobis, hanc vero linguam, aut illam, artis. Itaque et domi a parentibus, et in schola a praeceptore danda est opera, ut patriam linguam pueri bene sonent, quantumque aetas illa patitur, sint facundi.

JJ Et quando aerarium est eruditionis, ac instrumentum societatis hominum, e re esset generis humani unam esse linguam, qua omnes nationes communiter uterentur.

KK nec plus esse Latine, et Graece scire, quam Gallice et Hispane, usu dempto, qui ex linguis eruditis potest accedere.

LL quod si legem unusquisque de verbis feret ut apud se significant, quid attinet, non dico latinam linguam, sed ne ullam prorsus addiscere, quum illud facilius sit verba id demum significare, quod unicuilibet visum fuerit, et quot erant mente concipientes, tam varios habebunt significatus, ita tandem, ut nemo alterum intelligat, quum unusquisque verbis suo more utatur, non communi.

MM quae vera, quae falsa, quae quibus adjunctis sint probabilia, quae pugnantia, quae consequentia, qua lege invenienda, qua lege inventa iudicanda docere, eae demum sunt dialecticae partes.

NN est autem significare, signum facere, indicare aliquid alicui, sic homo homini aliquid signficatlitteris, nutu, manu gesticulatione, ipsa quoque eadem signa nonnihil significant per quae aliquid declaratur, aut ostenditur, velut manus mota, index, nutatio, in viis regiis mercurioli, et quae tenduntur ante cauponas, et tabernas, et officinas omnis generis, quibus admonetur populus adventores recipi, aut hoc vel illud cudi, aut vendi; ex hoc genere sont voces prolatae, et scriptae. ... Praeter interjectiones, reliquae omnes voces significant.

OO neque vero perturbat nos quod Quintilianus naturalem significationem a translatione distinguit, ut, "volare, natura sua, sit avium, translatione animorum"; alia mente ille est locutus ac nos, ut in libris *De dicendi ratione* ostendimus.

PP licet ... non sint entia positiva extra animam, sunt tamen entia positiva in anima ... et sunt entia secundum animam; et quia eorum intelligi est eorum esse, ideo eorum modi intelligendi erunt eorum modi essendi.

QQ Caeterum convenientia quaedam existere debet inter voces et res. Quam inter canones principales collocandam esse omnino censeo, qui ad omnes linguas pariter spectant.

RR Nemo ambigit syllabas in quibus u litera locum consonantis obtinet, ut uafer, uelum, uulnus, crassum et quasi validum sonum edere.

SS Multa enim sparsa leguntur in libris de *Disciplinis* deque *Ratione Studii puerilis,* quae indicant eam cognitionem versatam esse in animo illius viri.

TT Men achtte toenmals nog steeds een uitgebreide, methodische opleiding tot het „bewijslijk spreken" noodzakelijk als pendant van het onderwijs in het „wèl spreken", dat door de rhetorica werd geboden. ... Kennistheorie, in zoveel dialectica's uit de dagen voorkomend, wordt hier niet gegeven. Von de formele logica houdt Valerius zich evenzeer verwijderd. Zijn boek bevat geen abstracte denkleer, maar een practische handleiding ten gebruike bij de oefeningen in het bewijskrachtig redeneeren, van welke oefeningen de Leuvensche pro-

fessor een groot voorstander was Het is een goed voorbeeld van een echt humanistische rhetorische dialectica.Ontdaan van den Middeleeuwschen „ballast"(realistisch-nominalistische strijdpunten, terminisme) en in een zooveel mogelijk zuiver-, d.w.z. Ciceronisch-Latijnischen stijl geschreven, maakte ook dit geschrift grooten opgang.

UU De "artium praecepta" moeten door de studenten worden waargenomen in de werken der goede schrijvers, waarna zij in hun eigen geschriften hebben op te volgen. Ze moeten niet alleen ten behoeve van het aanleeren van een goed Latijn de eloquènte schrijvers lezen, maar ook die, waaruit men een „honesta et liberalis cognitio" van vele zaken verkrijgt, zooals de oude Grieksche en Lateinsche historici en zij die „de rerum natura, de rectè viuendi ratione, de studiis humanitatis, ac de iucunda Philologiae varietate scripserunt".

VV Elocutio est orationis exornandae ratio, seu idoneorum verborum et sententiarum ad res inventas accommodatio; quae fecit, ut Latine, ut plane et dilucide, ut ornate, ut apte dicamus.

WW Ce fut là en effet qu'il puisa, avec une grande estime pour la logique, un dégoût profond pour la manière dont on l'enseignait dans l'école.

XX Parmi tant de jurisconsultes, n'y en aura-t-il un qui entreprenne d'éclaircir et de simplifier ce chaos?

YY le grand point est de mettre une personne le plus tôt qu'on peut dans l'application des règles par un fréquent usage.

Chapter 7

A *De Umbris Idearum, implicantibus artem Quaerendi, Inveniendi, Iudicandi, Ordinandi et Applicandi, ad internam scripturam et non vulgares per memoriam operationes explicatis, ad Henricum III ... protestatio.*

B altior et generalis tum ad omnes animi operationes ordinandas, tum etiam est caput multarum methodarum.

C ... constat enim ex autoritate usuque clarorum scriptorum. Philosophica vero *ratione* constat, et haec scientiam olet. Hanc grammatici vulgares damnant; ... cum vocabula ex rebus, non ex autoribus decerpimus, exsibilant. Scotum, sanctum Thomam, aliosque, qui magis ex rei natura loquuntur, damnant isti.

D Grammatica civilis habet aetatem et illam amplectuntur grammatici: dicunt enim sub Cicerone et Caesare adultam linguam. At (grammatica) Philosophica non agnoscit aetatem linguae, sed rationalitatem: amplectitur vocabula bona omnium temporum ...: voces enim propter res, non res propter voces.

E Quapropter qui novam linguam invenire studet, haec notabit, et quae dicta sunt, dum de partibus orationis loqueremur.

F Plato in Cratilo dixit: Nomen est instrumentum indicans substantiam. ... Tota ergo grammatica instrumentum est ... totius communitatis humanae.

G Het menselijk verstand is trouwens op zich zelf alleen in de wetenschap machtelos, omdat er tussen het verstand en de waarheid geen natuurlijke harmonie bestaat.

H Idola et notiones falsae intellectum humanum jam occuparunt atque in eo alte haerent, non solum mentes hominum ita obsident ut veritati aditus difficilis pateat; sed etiam dato et concesso aditu, illa rursus in ipsa instauratione scientiarum occurent et molesta erunt, nisi homines praemoniti adversus ea se quantum fieri potest muniant.

I Sunt etiam Idola tanquam ex contractu et societate humani generis ad invicem, quae Idola Fori, propter hominum commercium et consortium, appellamus. Homines enim per sermones sociantur; at verba ex captu vulgi imponuntur. Itaque mala et inepta verborum

impositio miris modis intellectum obsidet. Neque definitiones aut explicationes, quibus homines docti se munire et vindicare in nonnullis consueverunt, rem ullo modo restituunt. Sed verba plane vim faciunt intellectui, et omnia turbant; et homines ad inanes et innumeras controversias et commenta deducunt.

J   ut ex omni memoria repetatur, quae doctrinae et artes quibus mundi aetatibus et regionibus floruerint; ... ut ... Genius illius temporis Literarius veluti incantatione quadam a mortuis evocetur.

K   Sunt quidem Idola profundissimae mentis humanae fallaciae. Neque enim fallunt in particularibus, ut caeterae, judicio caliginem offundendo et tendiculas struendo; sed plane ex praedispositione mentis prava et perperam constituta, quae tanquam omnes intellectus anticipationes detorquet et inficit..

L   At Idola Fori molestissima sunt, quae ex foedere tacito inter homines de Verbis et Nominibus impositis se in intellectum insinuarunt. Verba autem plerunque ex captu vulgi induntur, atque per differentias quarum vulgus capax est res secant; cum autem intellectus acutior aut observatio diligentior res melius distinguere velit, verba obstrepunt. Quod vero hujus remedium est (definitiones scilicet) in plurimis huic malo mederi nequit; quoniam et ipsae definitiones ex verbis constent, et verba gignant verba. Etsi autem putemus verbis nostris nos imperare; et illud facile dictu sit: Loquendum esse ut vulgus, sentiendum ut sapientes; quinetiam vocabula artium (quae apud peritos solum valent) huic rei satisfacere videri possint; et definitiones (de quibus diximus) artibus praemissae (secundum prudentiam Mathematicorum) vocabulorum pravas acceptiones corriger valeant; attamen haec omnia non sufficiunt, quo minus verborum praestigiae et incantationes plurimis modis seducant, et vim quandam intellectui faciant, et impetum suum more Tartarorum sagittationis) retro in intellectum (unde profecta sint) retorqueant. Quare altiore et novo quodam remedio ad hoc malum opus est.

M   Patet Hieroglyphica et Gestus semper cum re significata aliquid similitudinis habere et emblemata quaedam esse; unde eas notas rerum ex congruo nominavimus. At Characteres Reales ad placitum tantum efficti [sunt].

N   Tractamus enim hic veluti numismata rerum intellectualium; nec abs re fuit nosse, quod sicut nummi possint confici ex alia materia praeter aurum et argentum, ita et Notae Rerum aliae possint cudi, praeter Verba et Literas.

O   Scientia vero, quae aliis tanquam tela pertexenda traditur, eadem methodo, si fieri possit, animo alterius est insinuando, qua primitus inventa est.

P   vocabulorum artis cuiusque massa et acervus; ad hoc, ut qui voces artis habeant in promptu, etiam artes ipsas perdidicisse existimentur. Huius generis collectanea officinam referunt veteramentariam, ubi praesegimina multa reperiuntur sed nihil quod alicuius sit pretii.

Q   ut dictamina rationis phantasiae applicet et commendet, ad excitandum appetitum et voluntatem.

R   Id enim agit homo in rationalibus, aut ut inveniat quod quaesivit; aut judicet quod invenerit; aut retineat quod judicaverit; aut tradat quod retinuerit.

S   Finis etiam Dialecticae est docere formam argumentorum, ad praesidia intellectus, non ad insidias ... Finis denique Rhethoricae phantasiam implere observationibus et simulacris, quae *rationi* suppetias ferant, non autem eam opprimant.

Chapter 8

A Scopus meus est, ut coelestem machinam dicam non esse instar divini animalis sed instar horologii.

B Toute l'utilité donc que je vois qui peut réussir de cette invention, c'est pour l'écriture, à savoir: qu'il fît imprimer un gros dictionnaire en toutes langues en lesquelles il voudrait être entendu, et mît des caractères communs pour chaque mot primitif, qui répondissent au sens, et non pas aux syllabes, comme un même caractère pour aimer, amare, et φιλεῖν.

C Au reste, je trouve qu'on pourrait ajouter à ceci une invitation, tant pour composer les mots primitifs de cette langue que pour leurs caractères; en sorte qu'elle pourrait être enseignée en fort peu de temps, et ce, par le moyen de l'ordre, c'est à dire, établissant un ordre entre toutes les pensées qui peuvent entrer dans l'esprit humain, de même qu'il y en a un naturellement établi entre les nombres.

D ... comme on peut apprendre en un jour à nommer tous les nombres jusques à l'infini, et à les écrire en une langue inconnue, qui sont toutefois une infinité de mots différents, qu'on pût faire le même de tous les autres mots nécessaires pour exprimer toutes les autres choses qui tombent dans l'esprit des hommes.

E Mais je ne crois pas que votre auteur ait pensé à cela, tant parce qu'il n'y a rien en toutes ses propositions qui le témoigne, que parce que l'invention de cette langue dépend de la vraie Philosophie; car il est impossible autrement de dénombrer toutes les pensées des hommes, et de les mettre par ordre, ni seulement de les distinguer en sorte qu'elles soient claires et simples, qui est à mon avis le plus grand secret qu'on puisse avoir pour acquérir la bonne science.

F Et si quelqu'un avait bien expliqué quelles sont les idées simples qui sont en l'imgination des hommes, desquelles se compose tout ce qu'ils pensent, et que cela fût reçu par tout le monde, j'oserais espérer *ensuite* une language universelle, fort aisée à apprendre et à écrire, et ce qui est le principal, qui aiderait au jugement, lui représentant si distinctement toutes choses, qu'il lui serait presque impossible de se tromper.

G ... au lieu que, tout au rebours, les mots que nous avons n'ont quasi que des significations confuses, auxquelles l'esprit des hommes s'étant accoutumé de longue main, cela est la cause qu'il n'entendent presque rien parfaitement.

H Or je tiens que *cette langue* est possible, et qu'on peut trouver la Science de qui elle dépend, par le moyen de laquelle les paysans pourraient mieux juger de la vérité des choses, que ne font maintenant les philosophes. Mais n'espérez pas de la voir jamais en usage; cela présuppose de grands changements en l'ordre des choses, et il faudrait que tout le Monde ne fût qu'un paradis terrestre, ce qui n'est bon à proposer que dans le pays des romans.

I Philosophia est Effectuum sive Phaenomenon ex conceptis eorum Causis sive Generationibus, et rursus Generationum quae esse possunt, ex cognitis effectibus per rectam ratiocinationem acquisita cognitio.

J notae, quibus et reduci cogitationes praeteritae et suo quaeque ordine tanquam registrari possint.

K antecedentia consequentium et consequentia antecedentium, quoties plerumque ea simili modo praecedere et consequi experti sumus.

L Cum autem philosophiae èt notae èt signa necessaria sunt: nomina utramque rem praestant. Sed notarum prius quam signorum officio funguntur.

M ... nomina per se notae sunt, nam cognita revocant etiam sola; signa vero non sunt, nisi ... in oratione.

N non est homo generis humani nomen, sed uniuscujusque, ut Petri, Johannis et caeterorum hominum seorsim.

O　est nomen universale non rei alicuius existentis in rerum natura, neque ideae, sive phan-
tasmatis alicuius in animo formati, sed alicuius semper vocis sive nominis nomen.

P　huiusmodi signorum usum esse homini non propter se, sive ad scientiam propria meditatione
acquirendam, sed propter alios, id est, ad docendum, et ad conceptus suos aliis significandos.

Q　Veritas in dicto non in re consistit. Nam etsi verum opponatur aliquando apparenti, vel
ficto, id tamen ad veritatem propositionis referendum est.

R　Causae autem universalium manifestae sunt per se sive naturae (ut dicunt) nota; causa
eorum enim omnium universalis una, est motus.

S　inserviunt tamquam notae ad memoriam, non ut verba ad significandum: itaque homo
solitarius philosophus fieri sine magistro potest. Adamus potuit! Sed docere, hoc est
demonstrare, supponit duos, orationemque syllogisticam.

T　Sermo sive oratio est vocabulorum contextus arbitrio hominum constitutorum, ad signi-
ficandam seriem conceptuum earum rerum quas cogitamus. Itaque ut vocabulum est ad
ideam sive conceptum unius rei, ita est sermo ad discursum animi.

U　Est enim intellectus imaginatio quidem, sed quae oritur ex verborum significatione consti-
tuta.

V　Les Genres ne font rien dans la Grammaire Philosophique, mais les cas répondent aux
prépositions, et souvent la préposition y est envelopée dans le nom et comme absorbée, et
d'autres particules sont cachées dans les flexions des verbes. ... Au reste je n'aurois point esté
faché, Monsieur, que vous fussiés entré un peu plus avant dans le détail des tours de l'esprit,
qui paroissent à merveille dans l'usage des parrticules.Mais puisque nous avons sujet de nous
hâter pour achever cette recherche des mots et pour retourner aux choses, je ne veux point
vous y arrester d'avantage, quoyque je croye véritablement, que les langues sont le meilleur
miroir de l'esprit humain, et qu'une analyse exacte de la signification des mots feroit mieux
connoistre que toute autre chose les operations de l'entendement.

W　Cependant quoique cette langue dépend de la vraie philosophie, elle ne dépend pas de sa
perfection. C'est à dire cette langue peut être établie, quoique la philosophie ne soit pas
parfaite: et à mesure que la science des hommes croîtra, cette langue croîtra aussi. En atten-
dant elle sera d'un secours merveilleux et pour se servir de ce que nous savons, et pour voir
ce qui nous manque, et pour inventer les moyens d'y arriver, mais surtout pour exterminer
les controverses dans les matières qui dépendent du raisonnement. Car alors raisonner et
calculer sera la même chose.

X　Catalogus notionum primararium, seu earum quas nullis definitionibus clariores reddere
possumus. / Catalogus eorum quae per se concipiuntur, et quorum combinatione ceterae
ideae nostrae exsurgunt.

Y　si ses termes fondamentaux Unum, Verum, Bonum, Magnitudo, Duratio, Potentia, Sapien-
tia, Voluntas, Virtus, Gloria n'estoient pas vagues et par conséquent servoient seulement à
parler et point de tout à découvrir la vérité.

Z　il n'est pas douteux que son invention la plus célèbre, celle du Calcul infinitésimal, ne
procède de sa recherche constante de symbolismes nouveaux et plus généraux et qu'inver-
sement elle n'ait beaucoup contribué à le confirmer dans son opinion sur l'importance
capitale d'une bonne caractéristique pour les sciences déductives.

AA　Il est vrai que ces Charactères présupposeraient la véritable philosophie, et ce n'est que pré-
sentement que j'oserais de les fabriquer.

BB　Si nous l'avions telle que je la conçois, nous pourrions raisonner en métaphysique et en
morale a peu près comme en géometrie et en analyse.

^{CC} complexus ordo, qui rebus convenit. Nam etsi characteres sint arbitrarii, eorum tamen usus et connexio habet quiddam quod non est arbitrarium, scilicet proportionem quandam. ... Et haec proportio sive relatio est fundamentum veritatis.

^{DD} car sous la Logique ils comprenaient encore, comme vous faites, tout ce qu'on rapporte aux paroles et à l'explication de nos idées.

^{EE} Tout ce qui peut entrer dans la sphère l'entendement humain est ou la nature des choses en elles-mêmes; ou en second lieu l'homme en qualité d'Agent, tendant à sa fin et particulièrement à sa félicité; ou en troisième lieu les moyens d'aquérir et de communiquer la connoissance.

^{FF} 1° la Physique ou la Philosophie naturelle, 2° la Philosophie pratique ou la morale, 3° la Logique ou la connaissance, car logos signifie parole. Et nous avons besoin des signes de nos idées pour pouvoir nous entrecommuniquer nos pensées, aussi bien que pour les enregîtrer pour notre propre usage. ... Et ces trois espèces, la Physique, la Morale et la Logique sont comme trois grandes provinces dans le monde intellectuel, entièrement séparées et distinctes l'une et l'autre.

^{GG} Cependant il y a de la difficulté là dedans; car la science de raisonner, de juger, d'inventer paroît bien différente de la connoissance des Etymologies des mots et de l'usage des langues, qui est quelquechose d'indéfini et d'arbitraire.

^{HH} A ces deux dispositions il faudroit joindre la troisième suivant les termes, qui en effet ne seroit qu'une espèce de répertoire, soit systématique, rangeant les termes selon certains prédicamens, qui seroient communs à toutes les nations; soit alphabétique selon la langue reçue parmi les savans.

^{II} Cette ancienne division va fort bien, pourvu qu'on l'entende comme je viens d'expliquer des dispositions, c'est à dire, non pas comme des sciences distinctes, mais comme des arrangemens divers des mêmes vérités.

^{JJ} Ce n'est pas dans l'objet, mais dans la modification de la connoissance de l'objet, que les monades sont bornées. Elles vont toutes confusément à l'infini, au tout, mais elles sont limitées et distinguées par les degrés des perceptions distinctes.

^{KK} Cette autre méthode, c'est justement la Caractéristique, qui fournit à l'esprit un fil conducteur et un appui matériel, et assure sa démarche régulière et ordonnée ... par des régles pratiques et mécaniques semblables à des régles de calcul ... Ainsi, c'est la Caractéristique qui, déjouant les ruses du malin génie, nous garantit de toute erreur de mémoire et nous fournit un critérium "mécanique" et "palpable" de la vérité.

^{LL} non in quodam cogitandi actu, sed facultate consistit. ... Idea ergo postulat propinquam quandam cogitandi de re facultatem sive facilitatem.

Chapter 9

^A Wolffs System ist die erste Form, worin die moderne, auf den neuen mathematisch-naturwissenschaftlichen Forschungen und den neuen rechts- und staatswissenschaftlichen Anschauungen beruhende Philosophie von den Lehrstühlen der Universitäten Besita ergriffen hat.

^B Jedes Wort muß eine Bedeutung haben. ... im Reden dencket man nicht stets an die Bedeutung der Wörter. / daß man mit einander reden und einander verstehen und doch keiner einen Begriff von dem haben kann, was er redet, oder höret, indem von lauter nichts geredet wird. / Wörter können etwas bedeuten, davon wir keinen Begriff haben. ... [B]ekommen wir die Merckmale, dadurch die Sache, so diesen Nahmen führet, von andern unterschieden wird.

^C Ich habe schon in einem andern Orte erinnert, daß, uneracht daß die metaphysischen Wahrheiten von einer ganz andern Beschaffenheit sind, ... man doch durch Exempel aus der Mathematik, sonderlich der Algebra, die metaphysischen Begriffe nicht wenig erläutern könne ...

^D Ein Zeichen ist ein Ding, daraus ich entweder die Gegenwart, oder die Ankunfft eines andern Dinges erkennen kan, das ist, daraus ich erkenne, daß entweder etwas würcklich an einem Orte vorhanden ist, oder daselbst gewesen, oder auch etwas daselbst entstehen werde. Z. E.: Wo Rauch aufsteiget, da ist Feuer.

^E Alles, was wir außer dem Wesen eines Dinges in ihm antreffen, sind entweder seine Eigenschaften, oder seine Veränderungen, oder sein Verhalten gegen andere.

^F Die Verbindung des Wesens mit seinen Eigenschafften und Veränderungen, auch seinem Verhalten gegen andere anzudeuten, brauchet man das Haupt-wort *seyn:* welches man daher das Verbindungs-Wort nennet. ... Da alle Urtheile entweder eine Verbindung oder Trennung zweier Begriffe sind; so sollte das Verbindungs-Wort und zwar in dem anderen Falle mit dem Verneinungs-Worte jederzeit anzutreffen seyn, wenn man ein Urtheil aussaget: dergleichen *Aussage* auch ein *Satz* genennet wird. Allein der Kürtze halber hat man das Verbindungs-Wort in die Haupt-Wörter mit *verstecket*, und muß daher in den meisten Fällen darunter verstanden werden. Denn z. E. ich sage: Das Eisen glüet, an statt das Eisen ist glüend.

^G die allgemeine Sprach- und Redekunst; so bin ich hier damit vergnüget, daß ich nur den Grund der verschiedenen Arten der Wörter gezeiget, der uns zu besserem Verstande einiger Sachen von der Seele dienlich ist.

^H Es ist nehmlich zu mercken, daß die Worte der Grund von einer besondern Art der Erkänntniß sind, welche wir die figürliche nennen. Denn wir stellen uns die Sache entweder selbst, oder durch Wörter, oder andere Zeichen vor.

^I Endlich dienen einige Zeichen zum *Erfinden,* dergleichen man in der *Algebra* antrifft, und davon *auch einigermaßen die Ziffern* ein Exempel geben. Und zu der letzten Absicht haben die Zeichen *gar viel zu sagen,* und sind noch mehr als die übrige an Regeln gebunden, welche für eine besondere Wissenschafft gehören, die ich die *Zeichen-Kunst* nenne, bißher aber noch unter dasjenige rechnen muß, was man *suchet.*

^J Absonderlich dienen die Wörter und Zeichen der Deutlichkeit in Urtheilen. Denn da es hauptsächlich darauf ankommt, wenn man urtheilet, daß man die Eigenschaft, oder Veränderung, oder Würckung, oder das Verhalten gegen andere, so einem Dinge zugeeignet oder abgesprochen wird, von ihm unterscheidet, und dieser beyden unterschiedenen Dinge Verknüpffung erweget, und daher zur Deutlichkeit des Urtheils in der anschauenden Erkänntniß nicht allein erfordert wird, daß man sich den Unterschied der Begriffe, die entweder getrennet oder verknüpffet werden, sondern auch die Würckung der Seele, dadurch sie dieses erweget, ordentlich vorstellet; die Wörter aber die Verknüpffung und Trennung der Begriffe an sich zeigen: *so zeiget sich in der figürlichen Erkänntniß der Unterschied der Urtheile und blosser Begriffe klärer, als in der anschauenden und ist demnach die Deutlichkeit grösser.*

^K Daher geschiehet es auch, daß, sobald wir einen allgemeinen Begriff von einer Art Dinge, davon wir eines sehen, oder sonst empfinden, formiren oder auch nur etwas deutliches mercken, oder von einem Dinge einen Urtheil für uns fällen wollen, wir von der anschauenden Erkänntniß zu der figürlichen schreiten, und zu uns selbst reden, oder wenigstens die dazu nöthige Worte gedencken.

^L Es ist möglich, daß auch in die figürliche *Erkänntniß* eine Klarheit und Deutlichkeit gebracht wird, und sie eben dasjenige gleichsam für Augen stellet, was in einer Sache anzutreffen ist, und dadurch man sie von andern unterscheidet, dergestalt, daß, wenn nach diesem zusammengesetzte *Zeichen,* die den Begriffen gleichgültig sind, gegen einander gehalten werden,

man auch das Verhalten der Dinge gegen einander daraus ersehen kan. Exempel hiervon hat man *in der Algebra,* wie sie heute zu Tage von Verständigen abgehandelt wird, und in den Nahmen von den Arten der Schlüsse. Allein die Kunst die Zeichen zu verbinden, die man die *Verbindungs-Kunst der Zeichen* nennen kann, ist so wenig als die Zeichen-Kunst zur Zeit *erfunden,* wie denn auch keine von der andern abgesondert werden kan, wenn man sie gründlich abhandeln soll. Derowegen da noch zur Zeit wenige sind, die von dieser Kunst sich einen Begriff machen können, am allerwenigsten aber die Wissenschafften in einem solchen Zustande sind, daß man ihre Begriffe von allen Bildern der Sinnen und Einbildungs-Krafft gäntzlich absondern und auf blosse Zeichen bringen kann, *durch deren geschickte Verknüpffung alle mögliche Wahrheit heraus zu bringen stehet;* so lässet sich an diesem Orte hiervon nicht reden. Es scheinet aus einem Brieffe des Herrn von Leibniz an Oldenburgen von A. 1675 bey dem Wallis im dritten Theile seiner Wercke s. 621, daß er einen Begriff von dieser Kunst gehabt, indem er daselbst einer Artis Characteristicae combinatoriae gedencket, die von der gewöhnlichen *Arte combinatoria* unterschieden seyn soll: wozu er sonder Zweiffel durch die Algebra gelanget. Und in Miscellaneis Berolinensibus p. 20 zeiget er deutlich, daß er einen Begriff davon gehabt. Allein der gegenwärtige unvollkommene Zustand der Wissenschaften hat ihn an keine Probe von dieser Kunst dencken lassen. Er nennet sie auch Speciosam generalem (und hat in einem Brieffe an Remonden in Franckreich vermeinet, wenn er jünger wäre, weniger zu thun hátte und andere geschickte Leute ihm beystünden, so getrauete er sich eine Probe davon zu geben. Vid. Recueil de diverses pièces par Mrs Leibniz, Clarke, Newton, Tom. 2. p. 130. Er hält es aber gleichwohl in einem Brief vom 14. Mart. 1714 an ihn p. 139 für etwas schweeres vor sich, und ist daher kein Wunder, daß er sich nicht daran gemacht, ob er gleich schon *A.* 1675 daran gedacht.

M   ... da also weder die Nachahmung noch die Noth zur Erfindung und zur Verbesserung der Sprache zureichend haben seyn können, gleichwohl aber in der Sprache Ordnung und Vollkommenheit befindlich ist ..., der Hazard aber gar nicht zur Entstehung einer Sprache kann angenommen werden, so bleibt nichts übrig, als daß man zu Gott, als dem Schöpfer, seine Zuflucht nehme, womit denn auch die Mosaische Erzählung von der ersten Weltgeschichte übereinkommt.

N   daher denn folgt, daß der Mensch als der Erfinder der Sprache sich bereits im Gebrauch einer Sprache *vor* der Erfindung derselben müßte befunden haben.

O   insonderheit dem *Gedächtniß* angemessen, so, daß auch Kinder nicht nur selbige leicht lernen und reden, sondern auch *rechnen* können.

P   die göttliche Decadic wodurch die an sich schwere Wüurkung der Seele beym Rechnen ganz ungemein erleichtert wird / ... ähnliche Wörter [sind] auf eine ähnliche Weise bestimmet / ... mit einem ungemein künstlichen *Gebäude,* worinn *Vollkommenheit* und *Ordnung,* eine vortreffliche *Proportion, Eurithmie* und *Symmetrie* anzutreffen [ist]. / ... *durch dessen fertigen Gebrauch der Messch zur Vernunft gelanget.*

Q   Durch Wörter als Zeichen wird das uns angebohrne Vermögen der Vernunft brauchbar gemacht und ausgewickelt. Dadurch gelangen wir zur *Deutlickeit* der Begriffe, zu abgezogenen und allgemeinen Begriffen, zum *Ratiociniren;* durch die Sprache wird der Mensch vernünftig, klug und Herr der Welt.

R   Die tägliche Erfahrung bestättiget es auch, daß die Vernunft eines Menschen dem Grade der fertigkeit im Gebrauch der Sprache proportioniret sey.

S   worinn erwiesen wird, daß der Gebrauch der Sprache oder anderer gleichgültiger Zeichen zum Gebrauch der Verbunft nothwendig sey.

T   Zum Ueberfluß will ich diesen Beweis noch *mit den Worten des berühmten Hobbes bestättigen;* er druckt sich hierüber also aus: Apparet hic, *rationem non esse,* sicut sensus et memoria, *nobiscum natam;* neque sola, ut prudentia, experientia acquisitam sed industria; scilicet, apta inprimis impositione nominum; deinde methodo recta, procedendo a nominibus ad propositiones et

a propositionibus ad syllogismos. *Infantes igitur actum rationis, antequam sermonis usum acquisi-verunt, non habent;* vocantur autem animalia rationalis propter potestatem tantum.

U Ich könnte noch mehrere Schriftsteller anführen, allein sie haben doch nur eben das gesagt, was die oberwehnte gesagt haben. Der bekannte *Thomas Hobbes* leugnet zwar, daß die Sprachen nicht aus einem Vertrag oder Verabredung (*ex instituto*) herrührten; er behauptet auch, daß der Mensch von Natur blos das Vermögen, nicht aber den Gebrauch der Vernunft habe: glaubt aber dennoch, daß die Sprachen durch Noth und das gesellschaftliche Leben der Menschen, allmälich wären gebildet worden.

V Ob die Sprache, in die er [der Mensch] durch Mißverstand, Unbestimmtheit und Viel-deutigkeit sie unkenntlicher und zweifelhafter mache, oder andere Hindernisse im Wege lege?

W Man hat sich in den Vernunftlehren bereits viele Mühe gegeben, zu diesen Wissenschaften beyzutragen. Es hat aber fürnehmlich nur das betroffen, was ich hier zur Dianoiologie rechne, wenn man ausnimmt, was *Locke* in seinem Wercke von dem menschlichen Verstande, wo er die Begriffe etwas sorgfältiger anatomirt, über den Gebrauch und Mißbrauch der Wörter sagt, *Wolff* hingegen, dem wir eine genauere Analyse der Begriffe und der Methode zu verdanken haben, ist in Absciht auf den Gebrauch der Wörter in seinen beyden Vernunftlehren kurz, *und folget überhaupt einem ganz andern Leitfaden.*

X In der Semiotic wird man sehr viele und verschiedene Absichten finden, und wo ich nicht irre, alle, die man sich in Ansehung der Sprache und Zeichen vorstellen kann. In dem ersten Hauptstücke erweise ich die ganz natürliche Nothwendigkeit der Rede zur Bezeichnung der Gedanken und Dinge, und nachdem ich darinn das eigene Merkmal wissenschaftlicher Zeichen angegeben, daß nemlich ihre Theorie statt der Theorie der Sache selbst sollte dienen können, so durchgehe ich jede bisher bekannte Arten der Zeichen, wodurch wir etwas vorstellen, und beurtheile sie nach diesem Merkmale. Zugleich auch werden die Fälle auf eine nähere Art kenntlich gemacht, wo man mehr oder minder wissenschaftliche Zeichen anbringen kann. Die übrigen Hauptstücke gehen sämmtlich auf die Sprache, und zwar auf mögliche und wirkliche Sprachen bald ohne Unterschied. Es wird dabey untersucht, was in den Sprachen willkührliches, natürliches, nothwendiges und zum theil auch wissenschaft-liches vorkömmt, und wie sich das metaphysische in den Sprachen von dem characteri-stischen und bloß grammatischen unterscheide. Und dieses wird, je nachdem es die Sache mit sich bringt, ohne Unterschied auf die Philologie, Critic, Sprachlehre und Philosophie bezogen. Besonders aber wird aller Orten angemerckt, wieferne die Sprachen mehr meta-physisches und characteristisches hätten haben können, wenn sie minder gelegentlich entstanden wäen. Die Anmerkung, daß nicht alle Wörter gleich willkührlich sind, wird von Wichtigkeit, wenn dieSprachen wissenschaftlicher sollen gemacht, oder auch nur das wissen-schaftliche darinn aufgesucht werden. Nimmt man die Wurzelwörter willkührlich an, so sind die abgeleiteten und zusammengesetzten Wörter bereits schon auf eine characteristische Art wissenschaftlich, und jede metaphorische Bedeutungen sind es auf eine metaphysische Art. Bey einer durchaus wissenschaftlichen Sprache aber würde selbst auch das willkührliche der Wurzelwörter, sowohl in Absicht auf die Sachen, als in Absicht auf die Buchstaben und ihre Ordnung, wegfallen. Da aber die wirklichen Sprachen so philosophisch nicht sind, so bliebe in dem letzten Hauptstücke fürnehmlich das hypothetische in der Bedeutung der Wörter aufzusuchen, und zugleich darauf zuzusehen, wie die Bedeutung fortgesetzt werden könne, weil dieses bey den sogenannten Nominaldefinitionen nothwendig wird, als welche nicht ins unendliche können fortgesetzt werden. In dieser Absicht ließen sich die sämmtlichen Wörter der Sprache in drey Classen theilen, von welchen die erste gar keine Definitionen fordert, weil man die Sache selbst im Ganzen vorzeigen, und folglich Wort, Begriff und Sache unmit-telbar miteinander verbinden kann. Die andere Classe, welche die Wörter der ersten meta-phorisch macht, gebraucht statt der Definition eine Bestimmung des *tertii comparationis.* Die dritte begreift die Wörter, welche müssen definirt werden, und zwar so fern man die Wörter

der beyden ersten Classen dazu gebrauchen kann, und so dann die Wörter der dritten Classe, die auf diese Art definirt sind, selbst wiederum zu Definitionen gebraucht. Es ist für sich klar, daß auch die Wörter der dritten Classe wiederum metaphorisch werden können, und es großentheils an sich schon sind. Diese Betrachtungen werden nun in bemeldtem Hauptstücke auf die Theorie der Wortstreite angewandt. Man weiß, daß besonders in abstracten Wissenschaften ein großer Theil der Verschiedenheit in den Meynungen, wenn man sie näher betrachtet, auf bloße Wortstreite hinauslaufen.

Da die Sprache nicht nur an sich nothwendig, und ungemein weitläuftig ist, sondern bey jeden andern Arten von Zeichen ebenfalls vorkömmt, so wird man sich nicht wundern, daß ich den übrigen Zeichen das erste Hauptstück der Semiotic gewiedmet, hingegen die Betrachtung der Sprache durch die neun folgende Hauptstücke ausgedehnt habe. Denn die übrigen Arten der Zeichen sind viel zu special, als daß ich von jeder eine besondere Theorie hätte geben sollen, die aber, wie z. E. in der Music, Choreographie, Arithmetic, Algeber schon großentheils vorhanden ist. Hingegen bleibt die Sprache immer *das allgemeine Magazin unserer ganzen Erkenntniß,* und faßt wahres, irriges und scheinbares ohne Unterschied. Um desto mehr mußte sie besonders und in jeden Absichten betrachtet werden.

Y ... nach demjenigen Begriffe, den ich mir von einer philosophischen Sprachlehre gebildet habe, müssen alle ihre Lehrsätze aus der Art und Weise unsres Denkens eben so hergenommen werden, wie ich die Regeln, wornach ich verschiedene von einem und ebendemselben Originale abkopirte Gemälde beurtheilen sollte, aus der Beschaffenheit des Originals hernehmen würde. Denn alle Sprachen sind in der That nichts anders als so viele von einem und eben demselben Originale, welches unser Denken ist, aufgenommene Kopien. Folglich müssen ihre Lehrsätze auf dem Wege der Meditation *a priori* und keineswegs *a posteriori* gefunden werden, und wenn sie erfunden worden sind, dann müssen sie erst gegen die Erfahrung verglichen und durch sie bestätiget werden. Dieser gedoppelte Weg der Meditation, worauf die Regeln der Sprachkunst erfunden werden können, macht eben den Unterschied zwischen einer harmonischen und philosophischen Sprachlehre aus. Beide haben dieses mit einander gemein, daß sie beide Lehrsätze und Regeln enthalten, so mehrerern Sprachen gemeinschaftlich sind; sie unterscheiden sich aber dadurch von einander, daß die philosophische Sprachlehre ihre gemeinschaftliche Regeln aus der allgemeinen Beschaffenheit des menschlichen Denkens; die harmonische aber aus der Vergleichung etlicher Sprachen gegen einander hernimmt, indem sie das, worinnen die verglichenen Sprachen mit einander übereinstimmen, in Regeln verfasset, ohne sich dabei um den Grund dieser Uebereinstimmung zu bekümmern. Demnach ist eine philosophische Sprachlehre zwar allezeit harmonisch, und muß es auch natürlicher Weise sein, aber darum ist eine harmonische nicht gleich auch philosophisch. Die harmonische überzeuget nut, daß etliche Sprachen unterschiedene Eigenschaften und also auch einerlei Regeln mit einander haben; die philosophische aber unterrichtet uns von dem Grunde, warum diese Eigenschaften und Regeln gemeinschaftlich sein müssen.

Z Die Einerleiheit des Originals! Ich betrachte *zuvörderst das Original* nach allen seinen Eigenschaften, und nachdem ich das Mannichfaltige darinnen entdecket habe, es mögen wesentliche oder zufällige Stücke sein, so sammle ich das Wesentliche und sondere es von dem Zufälligen ab; dann schließe ich also: wenn von diesem Originale Abdrücke vorhanden sind, so müssen sich an diesen Abdrücken alle diese Eigenschaften befinden, die ich an dem Originale gefunden habe, *wenn anders die Abdrücke getreu verfertiget sind.*

AA Freilich können die Abdrücke in Ansehung der Vollkommenheit sehr von einander unterschieden sein; und einige mehr, andere weniger dem Originale entsprechen. Ich untersuche also nunmehr die Kopien nach dem Originale und sehe, ob die Eigenschaften des Originals, die ich zuvor ausgesucht und aus einander gesetzet habe, sich auch alle in den Kopien ausgedrücket finden; dies ist das Verfahren der philosophischen Sprachlehre.

BB Beide Sprachlehren können ihre Regeln und Lehrsätze mit Beispielen aus verschiedenen Sprachen erläutern. Wer nun in Beurtheilung einer solchen philosophischen Sprachlehre, wie ich sie hier beschrieben habe, bloß bei den angeführten Exempeln stehen bleibt, der kann gar leicht die philosophische Sprachlehre mit der harmonischen verwechseln, aber auch eben hierdurch jene weit unter ihren wahren Werth erniedrigen.

CC nach welchem ich aus einer genauern Betrachtung des Originals der Sprachen, der menschlichen Denkungsart, dasjenige erst aufsuchte, was ich in den Sprachen zu suchen hätte, und alsdenn bei angestellter Vergleichung, zu meinem großen Vergnügen, ja auch ofters zu meiner Verwunderung, auch wirklich fand, mir ungemeines Vergnügen verschaffte.

DD aus dem Unterschied der Sprachen, der ... bloß in einem größern oder mindern Grad der Deutlichkeit oder der Bestimmtheit zu suchen ist, auf die mehr oder minder erleuchtete Denkungsart der Völker richtig schließen, und also diese philosophische Betrachtung der Sprachen auch zugleich als eine Geschichte des menschlichen Verstandes annehmen konnte. Denn weil die Sprache eine sinnliche Abbildung unserer Gedanken ist, so kann man ja aus der zunehmenden Vervollkommnung der Sprache immer auf die vorausgegangene Vervollkommnung der Denkungsart eines Volkes sicher zurücke schließen.

EE In welcher partikulären Sprache wir einen beträchtlichen Zuwachs an Vollkommenheit gewahr werden, deren ihrer Nation kann man auch sicher einen vorzüglichen Grad von erleuchteter Denkungsart beilegen.

FF Zur richtigen Bildung eines Satzes sind zweierlei Wörter erfordert: (I) Solche, die unselbständige Dinge bezeichnen und sie auch als unselbständig vorstellen; deren gibt es zweierlei: (A) Verba ... , (B) Adjektiva.

GG Verba, die etwas unselbständiges bezeichnen und zugleich die *Copulam propositionis* mit in sich schließen; Adjektiva, die zwar, wie die Verba, etwas unselbständiges bezeichnen, aber nicht so, wie die Verba, *eine Copulam propositionis* in sich schließen.

HH damit der Zuhörer und Leser genöthigt wird, mit seiner Aufmerksamkeit fort zu eilen, bis er zu dem regierenden komme.

Chapter 10

A die allgemeine, mit der bald die philosophische zusammenrinnt, und die vergleichende, oder ... harmonische. Die erste sucht festzustellen, was vermöge der Natur des menschlichen Geistes allen Sprachen zukommen müsse. ... Die harmonische Sprachforschung untersucht die gegenseitigen Beziehungen der empirischen Sprachmaterialien, sie ist wesentlich etymologisch und genealogisch gerichtet.

B „*Rationem reddere*" war das Schlagwort und man war stolz, wenn man den einzelnen Fall auf irgeneinen allgemeinen Satz zurückführen konnte, unbekümmert darum, innerhalb welcher örtlichen und zeitlichen Grenzen er galt.

C *Grammaire générale et raisonnée contenant les fondemens de la'rt de parler, expliqués d'une manière claire et naturelle. Les raisons de ce qui est commun à toutes les langues, et des principales différences qui s'y rencontrent; et plusieurs remarques nouvelles sur la langue Françoise.*

D Parler est expliquer ses pensées par des signes que les hommes ont inventées à ce dessein; les plus commodes de ces signes étaient les sons et les voix.

E que la connaissance de ce qui passe dans notre esprit, est nécessaire pour comprendre les fondemens de la Grammaire; et que c'est de là que dépend la diversité des mots qui composent le discours.

F Et ainsi la plus grande distinction de ce qui se passe dans notre esprit, est de dire qu'on y peut considérer l'object de notre pensée, et la forme ou la maniére de notre pensée, dont

la principale est le jugement: mais on y doit encore rapporter les conjonctions, disjonctions, et autres semblables opérations de notre esprit, et tous les autres mouvements de notre âme, comme les désirs, le commandement, l'interrogation, etc.

G So leitet Shaftesbury mit seinem Rufe: Zurück zur Natur und zur Antike, vom Althumanismus (Erasmus) zum Neuhumanismus (Herder, Schiller) hinüber. Er verlangt auch eine ästhetische, d.i. natürlich-vernünftige, Erziehung der Jugend, im Sinne eines idealistischen Naturalismus, dessen Pflicht aus dem Wesen der Persönlichkeit hervorwächst. ... Der Grundzug von Shaftesbury's praktischer Philosophie ist die Begeisterung für das Wahre, Gute und Schöne. ... Durch einen natürlichen Instinkt fühlt sich der Mensch mit seinen Mitmenschen verbunden. ... Sein Ideal ist die harmonische Ausbildung der Persönlichkeit, die kalokagathia der Griechen, also ein wesentlich ästhetischen. ... Diese ästhetisehe Stimmung gibt uns auch die Kraft, tugendhaft zu handeln.

H Jedenfalls hält er sich davon frei, dem empirischen Sprachmaterial Zwang anzutun, wodurch er sich vorteilhaft von späteren und modernen Autoren unterscheidet, die gewisse kategoriale Schemata gewaltsam in die Sprache hineinzupressen versuchen.

I Seine ersten Versuche, mehrere Sprachen verschiedener Völker auf verschiedenen Stufen der Kultur mit einander zu vergleichen, werden immer Vorarbeiten eines Meisters bleiben.

J qui contribue le plus à rendre l'sprit lumineux, précis & étendu, et qui, par conséquent, doit le préparer à l'étude de toutes les autres, c'est la Métaphysique.

K L'une, ambitieuse, veut percer tous les mystères; la nature, l'essence des êtres, les causes les plus cachées, voilà ce qui la flatte & et ce qu'elle se promet de découvrir: l'autre, plus retenue, proportionne ses recherches à la foiblesse de l'esprit humain; &, aussi peu inquiète de ce qui doit lui échapper, qu'avide de ce qu'elle peut saisir, elle sçait se contenir dans les bornes qui lui sont marquées. La première fait de toute la nature une espèce d'enchantement qui se dissipe comme elle: la seconde, ne cherchant à voir les choses que comme elles sont en effect, est aussi simple que la vérité même.

L (un) miroir vivant de l'univers; et par la puissance qu'ils lui donnent de représenter tout ce qui existe, ils se flattent d'en expliquer l'existence, la nature et toutes les propriétés.

M (non) pour en découvrir la nature, mais pour en connoître les opérations, observer avec quel art elles se combinent, et comment nous devons les conduire, afin d'acquérir toute l'intelligence dont nous sommes capables. ...J'ai été obligé, pour développer mon principe, non seulement de suivre les opérations de l'ame dans tous leurs progrès, mais encore de rechercher comment nous avons contracté l'habitude des signes de toute espèce, et quel est l'usage que nous en devons faire.

N j'ai commencé au langage d'action. On verra comment il a produit tous les arts qui sont propres à exprimer nos pensées; l'art des gestes, la danse, la parole, la déclamation, l'art de la noter, celui des pantomimes, la musique, la poësie, l'éloquence, l'écriture et les différens caractères des langues. Cette histoire du langage montrera les circonstances où les signes ont été imaginés, elle en fera connoître le vrai sens, apprendra à en prévenir les abus, et ne laissera, je pense, aucun doute sur l'origine de nos idées.

O Toute langue est une méthode analytique, et toute méthode analytique est une langue. Ces deux vérités, aussi simples que neuves, ont été démontrées; la première, dans ma grammaire; la seconde, dans ma logique.

P A Condillac appartient la gloire d'avoir dit, le premier, que l'art de penser, l'art d'écrire et l'art de raisonner, ne sont qu'un seul et même art.

Q l'usage des signes: L'usage de ces signes étendit peu à peu l'exercice des opérations de l'ame; et, à leur tour, celles-ci ayant plus d'exercice, perfectionnèrent les signes, et en rendirent l'usage plus familier. Aussitôt que la mémoire est formée, et que l'exercice de l'imagination est à notre pouvoir, les signes que celle-là rappelle, et les idées que celle-ci réveille, com-

mencent à retirer l'ame de la dépendance où elle étoit de tous les objects qui agissoient sur elle.

R   Si l'on se rappelle que l'exercice de l'imagination et de la mémoire dépend entièrement de la liaison des idées, et que celle-ci est formée par le rapport et l'analogie des signes; on reconnoîtra que moins une Langue a de tours analogues, moins elle est prête à la mémoire et à l'imagination.

S   Les premières expressions du langage d'action sont données par la nature, puisqu'elles sont une suite de notre organisation: les premières étant données, l'analogie fait les autres, elle étend ce langage; peu-à-peu il devient propre à représenter toutes nos idées de quelque espèce qu'lles sont.

T   l'analogie est proprement un rapport de ressemblance. Lorsqu'un peuple choisit mal les analogies, il fait sa langue sans précision et sans goût, parce qu'il défigure ses pensées par des images qui ne leur ressemblent pas, ou qui les avilissent. Sa langue se fait mal, par la même raison qu'on parle mal dans une langue bien faite, lorsqu'on ne saisit pas l'analogie qui donneroit le terme propre).

L'analogie: voilà donc à quoi se réduit tout l'art de raisonner, comme tout l'art de parler; et dans ce seul mot, nous voyons comment nous pouvons nous instruire des découvertes des autres, et comment nous en pouvons faire nous-mêmes. Les enfans n'apprennent la langue de leurs pères, que parce qu'ils en sentent de bonne heure l'analogie; ils se conduisent naturellement d'après cette méthode, qui est bien plus à leur portée que toutes les autres.

U   On y verra de ces sortes de démonstrations, qui ne produiesent pas une certitude aussi grande que celles de la Géometrie, et qui mesme en diffèrent beaucoup, puisque au lieu que les Géometres prouvent leurs Propositions par des Principes certaines et incontestables, icy les Principes se vérifient par les conclusions qu'on en tire.

V   Die menschliche Ideenwelt wird vollständig in sich isoliert und Wahrheit besteht nur für die innerhalb des Denkens durch die „Zeichen" ausdrückbaren Gleichungen.

W   eine Aufbau von Gleichungen unter Vorstellunsinhalte nach dem Prinzip *Le même est le même.*

X   Il ne s'agit pas de parler comme les autres, il faut parler d'après la plus grande analogie pour arriver à la plus grande précision; et ceux qui ont fait cette langue ont senti que la simplicité du style en fait toute l'élégance: vérité peu connue dans nos langues vulgaires. Dès que l'algébre est une langue que l'analogie fait, l'analogie, qui fait la langue, fait les méthodes: ou plutôt la méthode d'invention n'est que l'analogie même. ... Les mathématiques sont une science bien traitée, dont la langue est l'algébre. Voyons donc comment l'analogie nous fait parler dans cette science, et nous saurons comment elle doit nous faire parler dans les autres. Voilà que je me propose. Ainsi les mathématiques, dont je traiterai, sont dans cet ouvrage un objet subordonné à un objet bien plus grand. Il s'agit de faire voir comment on peut donner à toutes les sciences cette exactitude qu'on croit être le partage exclusif des mathématiques.

Y   Les langues ne sont pas un ramas d'expressions prises au hasard, ou dont on ne se sert que parce qu'on est convenu de s'en servir. Si l'usage de chaque mot suppose une convention, la convention suppose une raison qui fait adopter chaque mot, et l'analogie, qui donne la loi, et sans laquelle il seroit impossible de s'entendre, ne permet pas un choix absolument arbitraire. Mais, parce que différentes analogies conduisent à des expressions différentes, nous croyons choisir,et c'est une erreur: car plus nous nous jugeons maîtres du choix, plus nous choisissons arbitrairement, et nous en choisissons plus mal.

Z   aucune langue connue n'a été formée en bloc et tout d'un coup; il n'y a point de langage nouveau qui ne soit l'altération d'une autre plus ancien. ... il faut rechercher par l'examen de la nature comment elle procéderoit à la formation d'une langue primitive.

AA en exposant les effets résultans de la fabrique de chaque partie de l'instrument vocal, je cherchois à pénétrer le méchanisme interne et primitif du langage quelconque.

BB la langue primitive, si nous en pouvons discerener les traces, nous donnera les racines des termes habituels. ... Cherchons à présent à saisir l'instant où les premiers mots naissent des premiéres sensations.

CC Examinons-les sous ce coup d'œil: nous verrons qu'elles sont les premiers mots de la langue primitive, et nous les trouverons les mêmes chez tous les peuples.

DD Telle est la connoissance métaphysique qu'on peut tirer de l'examen des interjections. Elles nous démontrent qu'il y a certains rapports ... dont on ne peut qu'assez difficilement assigner les causes, mais dont on voit clairement les effets. Elles nous donnent les premières traces d'une liaison nécessaire, indépendante de toute convention. ...

EE Les exemples sont en si grande nombre qu'il faut que quelque nécessité cachée ait ici cooperé à la formation des mots. Par exemple, pourqui la fermeté et la fixité sont-elles le plus souvent désigneées par le caractère ST? ... Pourquoi le creux et l'excavation le sont-ils le caractère SC?

FF de ce que la structure machinale de certaines organes les approprie naturellement à nommer certaines classes de choses du même genre; ... ce qui vient au fond de ce que les choses contenues dans cette classe ont quelque qualité ou quelque mouvement semblable à celui qui est propre à l'organe. C'est donc la nature qui maîtrise ici.

GG Il y a de l'arbitraire à la vérité dans cette méthode; cependant la nature, à ce qu'il semble, n'y en souffre que le moins qu'elle peut.

HH Une fleur n'a rien que la voix puisse figurer, si ce n'est sa mobilité qui en rend la tige flexible à tout vent. La voix saisit cette circonstance et figure l'objet à l'oreille avec son inflexion FL que la nature lui a donnée pour caractéristique de choses fluides et mobiles.

II le vagissement de la nature: on examine son enfance, son adolescence, sa maturité ...; puis les causes qui contribuent à son altération, à son déclin et à sa perte.

JJ Tout mot est dérivé d'un autre, s'il n'est radical par organisation ou par onomatopée ... nul terme n'est sans étymologie, à moins qu'il n'ait été produit en original d'une manière nécessaire.

KK Quand nous dirons qu'un tel mot est la racine d'un tel autre, c'est une manière abrégée d'en indiquer la filiation prochaine. On peut appeler un mot primitif, lorsque dans sa langue ou dans les voisines on n'en trouve plus d'autres dont il sorte. Cette dénomination sert à le distinguer des dérivés qui s'y rapportent. Mais la plûpart de ces racines ne sont telles qu'improprement, étant elles-mêmes dérivées.

LL l'accroissement des primitives, par terminaison, préposition et composition; des formules grammaticales, et de leur valeur significative. ... Chaque langue, selon son génie, étend ses mots au-dessus ou au-dessous du générateur, mais plus souvent au-dessus; elle pourroit même les étendre au milieu.

MM qu'elles ont leur origine dans certaines racines, qui seules et isolées exprimoient fondamentalement certaines idées ou objets.

NN elles sont elles-mêmes racines primitives; mais je n'ai pas trouvé qu'il fût posssible d'assigner la cause de leur origine: tellement, que j'en crois la formation purement arbitraire. Je pense de même des particules, des articles, des pronoms, des relatifs, des conjonctions ...

OO il ne faut pas s'étonner qu'on ne puisse pas toujours rendre rzison du procédé, ni exiger qu'on ramène tous les dérivés à leur racine primitive et organique ...

PP on ne devroit proprement donner ce nom qu'à l'autre espèce de racines, comprenent les sons vocaux, nés de la conformation de l'organe indépendamment de toute convention

arbitraire, propres à peindre par imitation l'existence physique de l'objet exprimé, ou à montrer les rapports généraux, qui se trouvent entre certaines impressions et certaines organes. Celles-ci sont véritablement des racines absolues et primordiales; telles enfin, qu'elles semblent données par la nature qui paroît les avoir appropriées à désigner tout un genre d'idées, toute une espèce de modification des êtres. C'est ainsi que nous avons reconnu ci-dessus, par une analyse soutenue, que SR peignoit la fixité; SC l'excavation; FL le liquide et la fluidité ...etc.

QQ une clef ou germe radical servant ä nommer la classe des choses rapides, rudes, ruineuses, rompues, qui ont des inégalités ou rugosités, etc.

RR Le nombre de ces racines monosyllabes quoique grand, ne l'est point assez, pour n'être pas facilement écrit sur un seul carré de papier.

SS Les racines ou clefs radicales sont presque toujours inusitées dans le langage commun, et doivent l'être. Les hommes n'ont et ne peuvent presque point avoir d'idées si parfaitement simples, qu'il ne se joigne quelque circonstance ou considération accessoire que la parole exprime avec l'idée simple, par une *extension* du mot formé sur la clef radicale, désignatrice de l'idée simple. ... Aussi les clefs radicales ne sont-elles, pour la plûpart, que des signes abstraits, exprimant, en général, toute une modalité d'idées, et applicables dans la composition des mots, comme étant leur germe.

TT L'ancienne langue indienne des Brachmanes va fournir un exemple excellent et fort clair de ce que je pose par-tout ici comme un principe de fait, confirmé par mes observations sur la fabrique du langage: sçavoir, que les hommes appliquent un petit signe vocal à toute une classe d'idées, à toute une manière de considérer les choses; que ce signe leur sert constamment de primitif, pour former là-dessus une infinité de dénominations des objets extérieurs, parce qu'ils viennent à les envisager abstraitement sous une certaine face, et à se servir de cette racine comme d'un noyau autour duquel ils rassemblent toutes les circonstances de leur pensée, relatives à l'objet dénommé; que ce signe ne nommant pas un objet physique, mais indiquant seulement la forme de son existence, il s'ensuit de-là que, pris seul, il doit être inusité dans le langage où il ne pourroit exister séparément du sujet dont il n'est que la forme.

UU de simples articulations d'organe, qui n'ont servi que comme exemplaires pour fabriquer promptement un grand nombre de termes d'usage, des points communs. ... la voix a peint: FL, le langage a dérivé de cette articulation les mots *flatus, flumen, flamma.*

Chapter 11

A Mais les Sanctius, les Wallis, les Arnauld, les du Marsais, ont montré par leurs excellents ouvrages, que la science de la parole ne diffère guères de celle de la pensée, qui est si honorable, si utile, si propre à l'homme; que la Grammaire, qui ne peut éclairer l'une que par l'autre, est accessible à la Philosophie; que l'on peut en raisonner les principes, les généraliser, les séconder, en un mot faire un corps de science de cette partie de la littérature.

B Quelque système de formation qu'on imagine, en supposant l'homme né muet, on ne peut qu'y rencontrer des difficultés insurmontables, et se convaincre de l'impossibilité que les langues ayent pu naître et s'établir par des moyens purement humains. Le seul système qui puisse prévenir les objections de toute espèce, me semble être celui qui établit, que Dieu donna tout à la fois à nos premiers pères la faculté de parler et une language toute faite.

C M. du Marsais soudivise les Noms appellatifs en Noms génériques ou de genre et en noms spécifiques ou d'espèce). ... Cette division ne peut être d'aucune utilité dans la Grammaire générale ... ; on ne peut assigner aucune règle de Grammaire qui soit fondée sur la diffé-

rence de ces deux espèces, comme on peut en assigner qui portent sur la différence des Noms appellatifs et des Noms propres.

D Si l'on pouvoit bien fixer la nature des idées, qu'on pût les ranger dans un order qui répondît à leur priorité, à leur généralité, à leur limitation, il ne seroit pas impossible d'établir des caractères qui eussent des rapports correspondants aux rapports des idées. Ces caractères établis, seroient non seulement des secours pour la mémoire, mais encore des instructions pour l'esprit: et cette écriture philosophique mériteroit d'être l'écriture ou la Langue universelle.

E mais leur universalité n'est due qu'au petit nombre et à la simplicité des idées qu'elles expriment. Et il ne paroît guère possible de traiter dans de telles Langues d'autres sujets que l'étendue, les nombres, ou les sons. ...

F ... langage formé, je les distingerois par quelques marques et pourrois me contenter de ces expressions A & B pour les mêmes choses que j'entends aujourd'hui, lorsque je dis: je vois un arbre, je vois un cheval.

G Et, comme les Langues une fois formées peuvent induire dans plusieurs erreurs, et altérer toutes nos connoissances, il est de la plus grande importance de bien connoître l'origine des premières propositions, ce qu'elles étoient avant les Langages établis, ou ce qu'elles seroient si l'on avoit établi d'autres Langages. Ce que nous appellons nos sciences dépend si intimement des manières dont on s'est servi pour désigner les perceptions, qu'il me semble que les questions et les propositions seroient toutes différentes si l'on avoit établi d'autres expressions des premières perceptions (§12).

Il me semble qu'on n'auroit jamais fait ni questions, ni propositions, si l'on s'en étoit tenu aux premières expressions simples A, B, C, D, etc. ... Il me semble qu'aucune des questions qui nous embarrassent tant aujourd'hui ne seroit jamais même entrée dans notre esprit; et que, dans cette occasion plus que dans aucune autre, on peut dire que la mémoire est opposée au jugement. Après avoir composé, comme nous avons dit, les expressions de différentes parties, nous avons méconnu notre ouvrage: nous avons pris chacune des parties des expressions pour des choses; nous avons combiné les choses entre elles, pour y découvrir des rapports de convenance ou d'opposition; et delà est né ce que nous appellons nos sciences!

H destinations des signes aux différentes parties des perceptions ... une fois faite de telle ou telle manière, jette dans telle ou telle proposition, ... a des influences continuelles sur toutes nos connoissances. ... *Il y a un arbre.* Cette dernière proposition transporte pour anisi dire sa réalité sur son objet, et forme une proposition sur l'existence de l'arbre comme indépendante de moi.

I Il ne faut pas demander de qui est cet ouvrage. La petitesse du volume, la précision géométrique qui y règne, et les doutes métaphysiques dont il est rempli, en décèlent assez l'Auteur, et feroient soupçonner que ses recherches sur l'origine des Langues n'en sont que le prétexte.

J Je ne me laisse point prendre par ce début. Tout ce que dit M. Boindin d'avantageux pour moi tourneroit contre, si ce qu'il insinue étoit fondé. Plus un ouvrage de cette nature auroit de précision et de Géométrie, plus il pourroit être pernicieux! etc.

K sa gigantesque entreprise de faire connaître le monde primitif dans sa langue primitive, dans tous ses dialectes, dans ses hiëroglyphes, son écriture, sa mythologie, son calendrier, son culte, son histoire, ses antiquités; le bonheur admirable dont on jouissait dans ce vieux monde; enfin, d'expliquer tout cela par les grands principes du besoin et de l'ordre naturel, et de reproduire ce même bonheur au milieu de nous par une moral, une religion, une politique agricoles.

L La parole est née avec l'homme; elle lui a été donée par la nature. Ainsi les règles qui en dirigent l'usage, ne sont point arbitraires; ce ne sont que des modifications de principes

immuables. De cette grammaire générale ou universelle devait découler les grammaires comparatives des différentes langues ...

Tout mot a eu sa raison prise dans sa nature. C'est sur cette base que Gébelin fonde l'art étymologique. Suivant lui, les voyelles représentent les sensations, et les consonnes les idées. Passant delà a l'écriture, il pense qu'elle a d'abord été hiéroglyphique, mais qu'ensuite les peuples commerçans en ont tiré l'alphabet, en sorte que chacune des lettres qui le composent représente un objet pris dans la nature.

Chapter 12

A   quand on n'avoit point encore l'usage des verbes, le nom de l'objet dont on vouloit parler se prononçoit dans le moment même qu'on indiquoit, par quelque action, l'état de son âme: c'étoit le le moyen le plus propre à se faire entendre. ... Ainsi l'ordre le plus naturel des idées vouloit qu'on mît le régime avant le verbe: on disoit, par exemple, *fruit vouloir*.

B   Ces trois états sont *l'état de naissance;* celui *de formation,* et l'état *de perfection.* La Langue *naissante* étoit un composé de mots et de gestes où les adjectifs sans genre ni cas, et les verbes sans conjugaisons ni régimes conservoient partout la même terminaison; dans la langue *formée,* il y avoit des mots, des cas, des genres, des conjugaisons, des régimes, en un mot les signes oratoires nécessaires pour tout exprimer, mais il n'y avoit que cela. Dans la langue *perfectionnée,* on a voulu de plus de l'harmonie, parce qu'on a crû qu'il ne seroit pas inutile de flatter l'oreille en parlant à l'esprit. Mais comme on préfère souvent l'accessoire au principal, souvent aussi l'on a renversé l'ordre des idées pour ne pas nuire à l'harmonie.

C   J'ai vû sous la langue formée, l'esprit enchaînée par la syntaxe, et dans l'impossibilité de mettre entre ses Concepts l'ordre qui regne dans les Périodes Grecques et Latines. D'où j'ai conclu; 1°. que, quel que soit l'ordre des termes dans une langue ancienne ou moderne, l'esprit de l'écrivain a suivi l'ordre didactique de la syntaxe Françoise, 2°. que cette syntaxe étant la plus simple de toutes, la Langue Françoise avoit à cet égard, et à plusieurs autres, l'avantage sur les langues anciennes. ... En suivant le passage de l'état de langue formée à l'état de langue perfectionnée, j'ai rencontré l'harmonie.

D   Je persiste dans mon sentiment et je pense toujours que le François a sur le Grec, le Latin, l'Italien, l'Anglois, etc. l'avantqage de l'utile sur l'agréable. ... Mais ... si notre langue est admirable dans les choses utiles elle sçait aussi se prêter aux choses agréables. Y a-t-il quelque caractère qu'elle n'ait pris avec succès? Elle est folâtre dans Rabelais; naïve dans la Fontaine et Brantome; harmonieuse dans Malherbe et Flechier; sublime dans Corneille et Bossuet, Racine, Voltaire, et une foule d'autres Ecrivains en vers et en prose? Ne nous plaignons donc pas. Si nous sçavons nous en servir, nos ouvrages seront aussi précieux pour la Postérité que les ouvrages des Anciens le sont pour nous. Entre les mains d'un homme ordinaire le Grec, le Latin, l'Anglois, l'Italien ne produiront que des choses communes; le François produira des miracles sous la plume d'n homme de génie. Et quelque langue que ce soit, l'ouvrage que le Génie soûtient ne tombe jamais!

E   Je ne vois dans tout animal qu'une machine ingénieuse ... avec cette différence que la Nature seule fait tout dans les opérations de la Bête, au-lieu que l'homme concourt aux siennes, en qualité *d'agent libre.* ... tout animal a des idées ...; ce n'est donc pas tant l'entendement qui fait parmi les animaux la distinction spécifique de l'homme, que sa qualité d'agent libre. ... L'Homme Sauvage, livré par la Nature au seul instinct ... commencera donc par les fonctions purement animales. ... Les Passions, à leur tour, tirent leur origine de nos besoins, et leur progrès de nos connaissances. ... Les seuls biens, qu'il connoisse dans l'Univers, sont la nourriture, une femelle, et le repos; les seuls maux qu'il craigne, sont la douleur et la faim. Quel progrès pourroit faire le genre humain épars dans les bois parmi les Animaux. ... Qu'on songe de combien d'idées nous sommes redevables à l'usage de la parole; ... et qu'on pense aux peines inconcevables, et au temps infini qu'a

dû couter la premiére invention deslangues; ... et l'on jugera combien il eût fallu de milliers de Siècles, pour développer successivement dans l'Esprit humain les opérations dont il étoit capable. Qu'il me soit permis de considérer un instant lea embarras de l'origine des Langues. Je pourrois me contenter de citer ou de répéter ici les recherches que Mr. l'Abbé de Condillac a faites sur cette matière, qui toutes confirment pleinement mon sentiment, et qui, peut-être, m'en ont donné la première idée. Mais la manière dont ce Philosophe résout les difficultés qu'il se fait à lui-même sur l'origine des signes institués, montrant *qu'il a supposé ce que je mets en question, savoir une sorte de société déjà établie entre les inventeurs du langage; je crois*, en renvoyant à ses réflexions, *devoir y joindre les miennes*, pour exposer les mêmes difficultés dans le jour qui convient à mon sujet.

F ... Hommes n'ayant nulle correspondance entre eux, ni aucun besoin d'en avoir, on ne conçoit ni la nécissité de cette invention, si elle ne fur pas indispensable.

G *Comment elles purent s'établir?* Nouvelle difficulté pire encore que la précédente; car si les Hommes ont eu besoin de la parole pour apprendre à penser, ils ont bien plus besoin encor de savoir penser pour trouber l'art de la parole.

H Le premier langage de l'homme, le langage le plus universel, le plus énergique, et le seul dont il eut besoin, avant qu'l fallût persuader des hommes assemblés, est le cri de la Nature. Comme ce cri n'étoit arraché que par une sorte d'instinct dans les occasions pressantes, pour implorer du secours dans les grands dangers, ou du soulagement dans les maux violens, il n'étoit pas d'un grand usage dans le cours ordinaire de la vie. ... Quand les idées des hommes commencèrent à s'étendre et à se multiplier, et qu'il s'établit entre eux une communication plus étroite, ils cherchèrent des signes plus nombreux et un langage plus étendu: Ils multiplièrent les inflexions de la voix, et y joignirent les gestes, qui, par leur nature, sont plus expressifs, et dont le sens dépend moins d'une détermination antérieure. Ils exprimoient donc les objets visibles et mobiles par des gestes, et ceux qui frappent l'ouie, par des sons imitatifs: mais comme le geste n'indique guères que les objets présens, ou faciles à décrire, et les actions visibles; qu'il n'est pas d'un usage universel, puisque l'pbscurité, ou l'interposition d'un corps le rendent inutile, et qu'il exige l'attention plûtôt qu'il ne l'excite; on s'avisa enfin de lui substituer les articulations de la voix, qui, sans avoir le même rapport avec certaines idées,sont plus propres à les représenter toutes, comme signes institués; substitution qui ne put se faire que d'un commun consentement, et d'une manière assez difficile à pratiquer pour des hommes dont les organes grossiers n'avoient encore aucun exercice; et plus difficile encore à concevoir en elle-mème, puisque cet accord unanime dut être motivé, et que la parole paroît avoit été fort nécessaire pour établir l'usages de la parole.

I ... je laisse à qui voudra l'entreprendre la discussion de ce difficile Problème: Lequel a été le plus nécessaire, de la Société déjà liée, à l'institution des Langues; ou des Langues déjà inventées, à l'établissement de la Société. Quoiqu'il en soit de ces origines, on voit du moins, au peu de soin qu'a pris la Nature de rapprocher les Hommes par des besoins mutuels, et de leur faciliter l'usage de la parole, combien elle a peu préparé leur sociabilité.

J On entrevoit un peu mieux ici comment l'usage de la parole s'établit ou se perfectionne insensiblement dans le sein de chaque famille. ... On conçoit qu'entre des hommes ainsi rapprochés, et forcés de vivre ensemble, il dût se former un Idiome commun, plûtôt qu'entre ceux qui erroient librement dans les forêts de la Terre ferme.

K Celui qui chantoit ou dansoit le mieux; le plus beau, le plus adroit ou le plus éloquent devint le plus considéré; et ce fut-là le premier pas vers l'inégalité, et vers le vice en mêmetemps ...

L L'on n'a besoin ni d'art ni de figure pour dire: *tel est mon plaisir.* Quels discours restent donc à faire au peuple assemblé? Des sermons. ... Les sociétés ont pris leur dernière forme: on n'y change plus qu'avec du canon et des écus; et comme on n'a plus rien à dire au peuple,

sinon: *donnez de l'argent,* on le dit avec placards au coin des rues, ou des soldats dans les maisons.

M   Il y a des langues favorables à la liberté; ce sont les langues sonores, prosodiques, harmonieuses, dont on distingue le discours de fort loin. Les nôtres sont faites pour le bourdonnement des Divans.

N   La parole étant la prémiére institution sociale,ne doit sa forme qu'à des causes naturelles. ... Sitôt qu'un homme fut reconnu par un autre pour un Être sentant semblable à luï, le desir ou le besoin de lui en communiquer ses sentiments et ses pensées lui en fit chercher les moyens.

O   ... Les inventeurs du langage ne firent pas ce raisonnement, mais l'instinct leur en suggéra la conséquence. Les moyens généraux par lesquels nous pouvons agir sur les sens d'autrui se bornent à deux, savoir, le mouvement et la voix.

P   Ouvrez l'histoire ancienne vous la trouverez pleine de ces maniéres d'arguments aux yeux; ... le langage le plus énergique est celui où le Signe a tout dit avant qu'on parle.

Q   Il paroit encore ... que l'invention de l'art de communiquer nos idées dépend moins des organes qui nous servent à cette communication, que d'une faculté propre à l'homme, qui lui fait employer ses organes à cet usage, et qui, si ceux-là lui manquoient, lui en feroit employer d'autres à la même fin.

R   Quoi qu'il en soit, par cela même que les unes et les autres de ces langues sont naturelles, elles ne sont pas acquises; les animaux qui les parlent les ont en naissant, ils les ont tous, et partout la même; ils n'en changent point, ils n'y font pas le moindre progrès. La langue de convention n'appartient qu'à l'homme.

S   En suivant avec ces distinctions la trace des faits, peut-être faudroit-il raisonner sur l'origine des langues tout autrement qu'on n'a fait jusqu'ici.

T   les passions rapprochent les hommes que la nécessité de chercher à vivre force à se fuir. Ce n'est ni la faim, ni la soif, mais l'amour, la haine, la pitié, la colère, qui leur ont arraché les premières voix;... pour émouvoir un jeune cœur, pour repousser un agresseur injuste, la nature dicte des accens, des cris, des plaintes. Voilà les plus anciens mots inventés, et voilà pourqui les premières langues furent chantantes et passionnées avant d'être simples et méthodiques.

Comme les premiers motifs qui firent parler l'homme furent des passions, ses premières expressions furent des tropes. Le langage figuré fur le premier à naître; le sens propre fut trouvé le dernier. On n'appela les choses de leur vrai nom que quand on les vit sour leur véritable forme. D'abord on ne parla qu'en poésie; on ne s'avisa de raisonner que longtemps après.

U   je sens bien qu'ici le lecteur m'arrête, et me demande comment une expression peut être figurée avant d'avoir un sens propre. ... la passion nous fascine les yeux et ... la prémiére idée qu'elle nous offre n'est pas celle de la vérité.

V   La peinture des objets convient aux peuples sauvages; les signes des mots et des propositions aux peuples barbares, et l'alphabet aux peuples policés.

W   L'écriture, qui semble devoir fixer la langue, est précisément ce qui l'altère; elle n'en change pas les mots, mais le génie; elle substitue l'exactitude à l'expression. L'on rend ses sentimens quand on parle, et ses idées quand on écrit. En écrivant, on est forcé de prendre tous les mots dans leur acception commune; mais celui qui parle varie les acceptions par les tons, il les détermine comme il lui plaît; moins gêné pour être clair, il donne plus à la force; et il n'est pas possible qu'une langue qu'on écrit garde long-temps la vivacité de celle qui n'est que parlée. On écrit les voix et non pas les sons: or, dans une langue accentuée, ce sont les sons, les accens, les inflexions de toute espèce qui font la plus grande énergie du langage, et rendent une phrase, d'ailleurs commune, propre seulement au lieu où elle est. Les moyens

qu'on prend pour suppléer à celui-là étendent, allongent la langue écrite, et passant des livres dans le discours, énerevent la parole même. En disant tout comme on l'écriroit, on ne fait plus que lire en parlant.

[X] Nous n'avons aucune idée d'une langue sonore et harmonieuse, qui parle autant par les sons que par les voix. Si l'on croit suppléer à l'accent par les accens on se trompe; on n'invente les accens que quand l'accent est déjà perdu. ...

Tout ceci mène à la confirmation de ce principe, que, par un progrès naturel, toutes les langues lettrées doivent changer de caractére, et perdre de la force en gagnant de la clarté, que, plus on s'attache à perfectionner la grammaire et la logique, plus on accélére ce progrès, et que pour rendre bientôt une langue froide et monotone, il ne faut qu'établir des académies chez le peuple qui le parle. ...

... Il seroit aisé de faire avec les seules consonnes une langue fort claire par écrit, mais qu'on ne sauroit parler. L'algèbre a quelquechose de cette langue-là.

[Y] ... dans les climats doux, dans les terreins fertiles, il fallut toute la vivacité des passions agré-ables pour commencer à faire parler les habitans. Les prémiéres langues, filles du plaisir et non du besoin, portérent long-temps l'enseigne de leur pére; leur accent séducteur ne s'effaça qu'avec les sentimens qui les avoient fait naitre, lorsque de nouveaux besoins, introduits parmi les hommes, forcérent chacun de ne songer qu'à lui-même et de retirer son cœur au dedans de lui.

A la longue tous hommes deviennent semblables, mais l'ordre de leur progrès est différent. Dans les climats méridionaux où la nature est prodigue les besoins naissent des passions; dans les pays froids, où elle est avare, les passions naissent des besoins, et les langues, tristes filles de la nécessité se sentent de leur origine. ... le premier mot ne fut pas chez eux, *aimez-moi*, mais *aidez-moi*.

[Z] Celles [les langues] du Midi durent être vives, sonores, accentuées, éloquentes, et souvent obscures à force d'énergie: celles du Nord durent êre sourdes, rudes, articulées, criardes, monotones. ... Nos langues valent mieux écriters que parlées ... Juger du génie des Orientaux par leurs livres c'est vouloir peindre un homme sur son cadavre.

[AA] Avec les prémiéres voix se formérent les prémiéres articulations ou les prémiers sons, selon le genre de la passion qui dictoit les uns ou les autres. La colére arrache des cris menaçans, que la langue et le palais articulent: mais la voix de la tendresse est plus douce, c'est la glotte qui la modifie, et cette voix devient un *son*. ...

Une langue qui n'a que des articulations et des voix n'a donc que la moitié de sa richesse; elle rend des idées, il est vrai; mais pour rendre des sentimens, des images, il lui faut encore un rhytme et des sons, c'est-à-direune mélodie: voila ce qu'avoit la langue grecque et ce qui manque à la nôtre. ... — comme les sentimens qu'excite en nous la peinture ne viennent point des couleurs, l'empire que la musique a sur nos ames n'est point l'ouvrage des sons. ... C'est le dessin, c'est l'imitation qui donne à ces couleurs de la vie et de l'âme. ... — La mélodie fait précisément dans la musique ce que fait le dessin dans la peinture; c'est elle qui marque les traits et les figures, dont les accords et les sons ne sont que les couleurs.

[BB] Les plus beaux chants à nôtre gré, toucheront médiocrement une oreille qui n'y sera point accoutoumée; c'est une langue dont il faut avoir le Dictionnaire.

La mélodie en imitant les inflexions de la voix exprime les plaintes les cris de douleur ou de joye, les menaces, les gémissemens; tous les signes vocaux des passions sont de son ressort. Elle imite les accens des langues, et les tours affectés dans chaque idiome à certains mouvemens de l'ame: elle n'imite pas seulement, elle parle, et son langage inarticulé mais vif ardent passionné a cent fois plus d'énergie que la parole même. Voila d'où nait la force des imitations musicales; voila d'où naît l'empire du chant sur les cœurs sensibles. L'har-monie y peut concourir en certains sistêmes, en liant la succession des sons par quelques loix de modulation; en rendant les intonations plus justes; en portant à l'oreille un témoinage assuré de cette justesse; en rapprochant et fixant à des intervalles consonans et liés des

inflexions inappréciables. Mais en donnant aussi des entraves à la mélodie, elle lui ôte l'éner-gie et l'expression; elle efface l'accent passionné pour y substituer l'ntervalle harmonique.

CC ce siécle où l'on s'efforce de matérialiser toutes les opérations de l'âme, et d'ôter toute moralité aux sentimens humains ...

DD Tant qu'on ne voudra considérer les sons que par l'ébranlement qu'ils excitent dans nos nerfs, on n'aura point de vrais principes de la musique et de son pouvoir sur les cœurs. ... Les sons dans la mélodie n'agissent pas seulement sur nous comme sons, mais comme signes de nos affections, de nos sentimens; c'est ainsi qu'ils excitent en nous les mouvemens qu'ils expriment, et dont nous y reconnoissons l'image.

EE C'est un des grands avantages du musicien de pouvoir peindre les choses qu'on ne sauroit entendre. ...Il ne répresentera pas directement ces choses, mais il excitera dans l'âme *les mêmes* sentimens qu'on éprouve en les voyant.

FF A mesure que la langue se perfectionoit, la mélodie, en s'imposant de nouvelles régles, per-doit insensiblement de son ancienne énergie, et le calcul des intervalles fut substitué à la finesse des inflexions.

La mélodie commençant à n'être plus si adhérente au discours, prit insensiblement une existence à part, et la musique devint plus indépendante des paroles. Alors aussi cessérent peu à peu ces prodiges qu'elle avoit produits lorsqu'elle n'étoit que l'accent et l'harmonie de la pöesie [*sic*], et qu'elle lui donnoit sur les passions cet empire que la parole n'exerça plus dans la suite que sur la raison. Aussi, dès que la Grèce fut pleine de sophistes et de philosophes, n'y vit-on plus ni pöetes ni musiciens célébres. En cultivant l'art de convaincre on perdit celui d'émouvoir. Platon lui-même, jaloux d'Homére et d'Euripide décria l'un et ne put imiter l'autre.

GG Les langues lettrées ["les langues des sçavants"] doivent perdre de la force en gagnant de la clarté.

HH Le langage figuré fut le prémier à naitre. ... D'abord on ne parla qu'en pöesie; on ne s'avisa de raisoner que longtems après.

Chapter 13

A non modo tironibus linguae latinae ad artem illam uno trimestri perfecte addiscendam, sed et latine doctissimis ad reddendam eorum rationem, quae legunt et scribunt, in primis utilis, vel necessaria.

B *Orthoepeia* seu regulae de literarum pronuntiatione, *Prosodia* seu regulae de syllabarum quanti-tate, *Etymologia* de singularum vocum accidentium et partibus, *Syntaxis* seu regulae de vocum debita inter ipsas compositione.

C Grammatica esse scientia non potest: quia, finis eius non est *cognitio*, sed *opus:* materia item non res necessariae, sed contingentis: ut diximus. Loquor autem de Grammatica cuiusque linguae propria: non omnium linguarum communi. Nam Communis illa ... tota est naturalis, non arbitraria. ... Haec quo minus scientia proprie dicatur, nihil impedit; seu finem, seu materiam spectes. Nam ut natura loquelae, quae hominis est affectio, melius perfectiusque cognoscatur, in materiam orationis inquirit et affectiones eius ex naturae principiis demonstrat. Nos cum Grammaticen per scientiam posse definiri negamus, de Grammatica loquimur non naturali, sed artificiali; non communi omnium hominum, sed propria huius, vel illius linguae. ...

D Non est quod antiquis multum tribuamus propter antiquitatem, sed nos potius iis antiquiores dicendi. Jam enim senior est mundus quam tunc, majoremque habemus rerum experientiam.

E Ad Grammaticam naturalem pertinet quid sit litera, syllaba, nomen, verbum etc. Ad propriam vero referendum, quod vox aliqua hoc vel illo modo inclinetur, hunc illumve casum consequatur. — Analogiam quam, ... ut Varro scribit ..., Crates olim oppugnavit, ac defensitavit Aristarchus, in grammatica naturali esse, mero meridie clarius est. De propria res aliquanto septuosior obscuriorque. Non tamen adeo sinuosa est ut ampliare, et rem quasi in suspenso habere cogamur. Siquidem, non, quia analogia in quibusdam vocibus non est, idcirco tollenda est; verum quia in ceteris est, ponenda est.

F Dit philosophisch karakter van Perizonius' wetenschap komt ook tot uiting in zijn taalkunde. Ook hierin heeft hij ons echter geen gepaald systeem gegeven, doch slechts losse observationes in zijn editie van Scnctius' bekend werk: *Minerva;* hij beweerde geen tijd te hebben om er een geheel van te maken. Deze belangrijke observationes, waaraan tot nu toe weinig aandacht geschonken is, doen ons Perizonius als een onmiddelijken voorloper van Hemsterhuis kennen. In zijn opvattingen over het wezen en doel van de taal vertoont hij overeenkomst met Cartesius, zonder nochtans een cartesiaan genoemd te kunnen worden, hetgeen ook in strijd zou zijn met z'n eclecticisme. Volgens zijn mening wordt de grondslag eener taal gevormd door de *ratio;* de „usus" is ook van belang, doch veronderstelt *ratio,* daar het anders een „abusus" zou zijn. De ratio overheerscht meer in een geleerdentaal, zooals het Latijn, de usus daarentegen in de veranderlijke volkstalen.

G Perizonius staat, zooals reeds gezegd, tusschen de vroegere polyhistorie en de latere critische philologie. ... Wij moeten bij Perizonius nogmaals aan Boeckh denken, als wij hem in zijn leidsche oratie hooren zeggen, dat de *philologie* niet gelijk gesteld mag worden met grammatica in engeren zin, want ze is niet tot de letteren beperkt, doch bestrijkt alle wetenschappen.

H Omdat voor Perizonius de *ratio* het scheppend beginsel eener taal is, zoekt hij de taalverschijnselen door *analogie* te verklaren. ... Hier hebben wij dus de principen, door Perizonius nog incidenteel toegepast, maar door Hemsterhuis na hem tot een vast system opgetrokken, daarbij uitgaande van de gedachte: hoe ouder een taal, hoe eenvoudiger.

I Observo Analogiam in linguis dici, vocabulorum, quae linguam constituunt, omnium, in certa genera distributorum, et significationum, iis adjunctarum, ac denique phrasium, totius constructionis, aptem inter se, et constantem similtudinem atque convenientiam.

J notiones, singulis verborum formis adjunctae, tam propriae, quam metaphorica, tum etiam universa orationis construendae ratio.

K De eerste acht van Valckenaer's Observationes, korte opmerkingen van enkele regels, bevatten de volgende theses: de verba simplicia zijn *primitiva* of *derivata;* primitiva nu zijn er maar weinig, doch derivata vele; de primitiva zijn van twee lettergrepen en bestaan uit twee, drie of vier letters, maar van twee letters zijn er slechts vijf nl. αω, εω, ιω, οω, en υω. Derivata zijn van meer dan twee lettergrepen en hebben vier of vijf letters; om de primitiva van derivata te onderscheiden moet men zich kunnen indenken in de „simplicitas veteris aevi" of „simplicitas naturae"; in dien ouden tijd bezat men immers nog de kunst om door letterverbindingen primitiva te maken. — Observatio IX is een samenvatting van het voorafgaande en geeft ons voorbeelden van *primitiva.* Bij degenen, die met een α beginnen, is maar één van twee letters, doch elf van drie letters, waarvan de middelste bestaat uit een der elf medeklinkers. Bovendien vinden wij nog primitiva quadrilittera, maar allen die, welke met een consonant aanvangen, want, als de eerste letter een klinker is, dan zijn het geen primitiva, doch derivata. — De observationes X tot en met XVI bespreken het ontstaan der *derivata,* verdeeld in derivata simplicissima en derivata simplicia magis producta door middel van de vijf klinkers α, ε, ι, ο en υ.

L Hoc principium analogiae internum omnibus est infixum; ... hij verstaat hieronder niet alleen een *lex certissima,* die de schepping van taalvormen bestuurt, sed etiam, ut tota ora-

tionis *structura* ita sit comparata, ut optime respondeat cogitationibus nostris interpretandis et cum alliis communicandis.

M Haec est lex prima in explicandis ut sinum ipsius linguae, in qua versamur, excutiamus. Ea ratio analogiae cognita nos vetat ad linguas plane diversas confugere.

N Ce qui doit supprendre ... c'est l'idée qu'ils se faisent encore des racines—ils comptent l'ω parmi les lettres radicales: *p.e.* λ-ε-γ-ω, racine quadrilitère. ... ils font servir les désinences grammaticales à l'explication des dérivés. ... l'identité des infinitifs Sanscrits en *-tum,* comme *sthâtum, dâtum* avec les supins latins comme *statum, datum.*

O Seine Theorie erklärt nichts und konnte nichts erklären. Sie begründet nichts, denn auf ihr ließ sich nichts fortbauen.

P jede Wurzel ... ein lebendiger Keim / die Struktur ... des Indischen ist durchaus *organisch* durch innere Veränderungen und Umbiegungen des Wurzellautes in allen seinen Bedeutungen ramificiert / beim Indischen verschwindet vollends der letzte Schein einer solchen Möglichkeit, [i.e.] als wären die Biegungssylben aus in das Wort verschmolzenen Partikeln und Hülfsworten ursprünglich entstanden ... / nicht bloß mechanisch durch angehängte Worte und Partikeln *zusammengesetzt ... ,* wo denn die Wurzel selbst eigentlich unverändert und unfruchtbar bleibt.

Q Warum sollte die Sprache accessorische Begriffe nicht auch durch accesorische, an die Wurzel herangezogene Wörter bezeichnen? ... Die Nomina beabsichtigen Personen oder Sachen darzustellen ... ; und am naturgemäßesten hat man daher in den Wortbildungsele- menten Pronomina zu erwarten, als Träger der Eigenschaften, Handlungen, Zustände ...

R Il s'attacha à montrer, par la comparaison des autres idiomes indo-européeens, que l'apophonie, telle qu'elle existe dans les langues germaniques, n'a rien de primitif, que les modifications de la voyelle n'entraînaient, à l'origine, aucun changement dans le sens, et que ces variations du son étaient dues à des contractions et à des *lois d'équilbre.*

S Si, contrairement à mon opinion, l'on admet avec Grimm que le changement de la voyelle dans la conjugaison germanique a une *signification grammaticale,* et si, par exemple, l'*ä* du prétérit gothique *band,* "je liai", est regardé comme l'exoression du passé, en opposition avec l'*i* du présent *binda,* "je lie", on sera autorisé à dire que cet *a* est doué d'une force *dynamique.*

BIBLIOGRAPHY

ABELARD, PETER (1836). *Ouvrages inédits d'Abélard,* ed. V. Cousin. Paris: Imprimerie Royale.

——— (1919–1933). *Peter Abaelards Philosophische Schriften,* ed. Bernhard Geyer. *Beiträge zur Geschichte der Philosophie des Mittelalters,* Bd. 21 (Heft 4 [1933]: *Die Logica „Nostrorum Petitioni Sociorum'; Die Glossen zu Porphyrius*).

AGRICOLA, RODOLPHUS (1511). *Oratio in laudem philosophiæ* (R. Agricola, *Nonnulla opuscula* (ed. Petrus Egidius), Antwerp: Theodoricus Martinus.

——— [?1540]. *De Inventione Dialectica libri omnes integri & recogniti juxta autographi, nuper Alardi Amstelredami opera in lucem educti fidem ... emendati.* Cologne: H. Alopecius.

ALDRIDGE, ALFRED OWEN (1945). "Lord Shaftesbury's literary theories". *Philological Quarterly* 24, 46–64.

ALLERS, RUDOLF (1936). *Anselm von Canterbury.* Vienna: Thomas-Verlag.

ANSELM, *Saint* (1938). *Opera Omnia,* I (ed. Franciscus Salesius Schmitt). Seccovii [Seckau, Styria]: Benedictine Abbey. (Photographic reprint, Edinburgh: Nelson, 1946).

ARNAULD, ANTOINE & CLAUDE LANCELOT (1660). *Grammaire générale et raisonnée de Port-Royal.* Paris: Pierre le Petit. [(1810). Paris: Bossaye et Masson, etc.]

——— (1846) *Grammaire générale et raisonnée de Port-Royal.* With the *Remarques* of Duclos and the Supplement (*Reflexions*) of Fromant. Paris: Hachette.

AYER, *Sir* ALFRED JULES (²1948). *Language, Truth and Logic.* London: Gollancz.

BACON, FRANCIS, *Lord* VERULAM (1857–1884). *The Works of Francis Bacon,* ed. John Spedding, Robert Leslie Ellis & Douglas Denon Heath. 14 vols. London: Longman & Co. etc.

BAILLY, ANATOLE (1869). *Manuel pour l'étude des racines grecques et latines.* Paris: A. Durand & P. Lauriel.

BALLY, CHARLES (²1944). *Linguistique générale et linguistique française.* Berne: Francke.

BALZ, ALBERT GEORGE ADAM (1918). *Idea and Essence in the Philosophies of Hobbes and Spinoza.* New York: Columbia University Press.

BARON, HANS (1928). *Leonardi Bruni Aretino. Humanistisch-philosophische Schriften.* Leipzig: Teubner.

BATTEUX, CHARLES (1746). *Les beaux arts réduits à un même principe.* Paris: Durand. [* Nouvelle impression ... avec une introduction par Barrie E. Bartlett. Stuttgart-Bad Cannstadt: Frommann, 1974].

BAUMGARTEN, ALEXANDER GOTTLIEB (1750-58). *Aesthetica.* Frankfurt a.d. Oder: Kloyb. [* Repr. Hildesheim: Olms, 1961].

BAUR, FRANK et al. (1939, in continuation). *Geschiedenis van de Letterkunde der Nederlanden.* The Hague: Teulings & Malmberg; Brussels: Standaardboekhandel.

BEAUZÉE, NICOLAS (1767). *Grammaire générale, ou exposition raisonnée des éléments néces-saires au langage.* Two parts. Paris: Barbou.

BECK, FRANZ (1912). *Studien zu Leonardo Bruni.* Berlin & Leipzig: W. Rothschild.

BELLAAR SPRUYT, CORNELIS (1904). *Geschiedenis der Wijsbegeerte.* (Compiled from lecture notes). Haarlem: V. Loosjes.

BENFEY, THEODOR (1869). *Geschichte der Sprachwissenschaft und orientalischen Philologie in Deutschland seit dem Anfange des 19. Jahrhunderts mit einem Rückblick auf die früheren Zeiten.* Munich: Cotta *(Geschichte der Wissenschaften in Deutschland).*

BETH, EVERT WILLEM (1944). *Geschiedenis der logica.* The Hague: Servire.

BIBLIANDER, THEODOR (GEORG BUCHMANN) (1548). *De Ratione Communi omnium Linguarum et Litterarum Commentarius.* Zürich: Frosch.

BILLETER, GUSTAV (1911). *Die Anschauungen vom Wesen des Griechentums.* Leipzig & Berlin: Teubner.

BINSWANGER, LUDWIG (1926). "Zum Problem von Sprache und Denken". *Schweizer Archiv für Neurologie und Psychiatrie* 18, 247-283.

BLACK, MAX (1949). *Language and Philosophy. Studies in Method.* Ithaca, N. Y.: Cornell University Press.

BLOCH, BERNARD & GEORGE LEONARD TRAGER (1942). *Outline of Linguistic Analysis.* Baltimore: Linguistic Society of America.

BLOOMFIELD, LEONARD (1933). *Language.* New York: Holt, Rinehart & Winston [(1935). London: Allen & Unwin].

BLUDAU, AUGUST (1902). *Die beiden ersten Erasmus-Ausgaben des neuen Testaments und ihre Gegner.* Freiburg im Breisgau: Herdersche Verlagsbuchhandlung.

BOLL, MARCEL & JACQUES REINHART (1948). *Les étapes de la logique.* Paris: Presses Universitaires de France.

BOPP, FRANZ (1820). "Analytical Comparison of the Sanskrit, Greek, Latin and Teutonic Languages, shewing the original identity of their grammatical struc-ture". *Annals of Oriental Literature* 1, 1-64. [*Ed., with introduction by Friedrich Techmer. *Internationale Zeitschrift für allgemeine Sprachwissenschaft* (1889) 4, 14-60. This edition, with additional material, republished by E. F. K. Koerner). Amster-dam: Benjamins (1974; [2]1989). *(Amsterdam Classics in Linguistics, 1800–1925,* 3).]

——— ([2]1857-1861). *Vergleichende Grammatik des Sanskrit, Send, Armenischen, Griechischen, Lateinischen, Litauischen, Altslavischen, Gotischen und Deutschen.* Berlin: Dümmler.

——— ([3]1884-1889). *Grammaire comparée des langues indo-européennes. Comprenant le san-scrit, le zend, l'arménien, le grec, le latin, le lithuanien, l'ancien slave, le gothique et l'allemand.* Ed. Michel Bréal. Paris: Imprimerie nationale.

BOUTROUX, ÉMILE (1929). *La philosophie allemande au XVIIe siècle. Les prédecesseurs: Bacon, Descartes, Hobbes, Spinoza, Malebranche, Locke et la philosophie de Leibniz.* Paris: Librairie philosophique J. Vrin.

BRÉHIER, ÉMILE (1926). *Histoire de la philosophie.* Paris: Alcan.

BRINK, JAN TEN (1897). *Geschiedenis der Nederlandsche Letterkunde.* Amsterdam: Elsevier.

BRITTON, KARL (1939). *Communication. A Philosophical Study of Language.* London: Kegan Paul, Trench & Trübner.

BRØNDAL, VIGGO (1943). *Essais de linguistique générale.* Copenhagen: Munksgaard.

BROSSES, CHARLES DE (1765). *Traité de la formation méchanique des langues et des principes physiques de l'étymologie.* (Two parts). Paris: Saillant.

BRUNET, PIERRE (1926). *Les physiciens hollandais et la méthode expérimentale en France au XVIIIe siècle.* Paris: Blanchard.

BRUNI, LEONARDO (1724). *Epistolarum libri VIII, praemissa Pogii Florentini oratione recussi* (ed. Johannes Albertus Fabricius). Hamburg: Felginer.

BRUNO, GIORDANO (1588). *Articuli centum et sexaginta contra mathematicos et philosophos.* Prague: s.n.

―――― (1889). *Opera latine conscripta.* II, i. *De Umbris idearum* ed. by Vittorio Imbriani & C. M. Talliarigo. Naples: Morano, etc.

BUCK, RUDOLF (1939). *Rousseau und die deutsche Romantik.* Berlin: Junker & Dünnhaupt.

BUFFON, GEORGES LOUIS LECLERC, *Comte* (1753). *Discours sur le style prononcé dans l'Académie Française.* s.l. (Also among *Discours prononcés* ... Paris: Brunet).

BÜHLER, KARL ([1920] 1918). "Kritische Musterung der neueren Theorien des Satzes". *Indogermanisches Jahrbuch* 6, 1–20.

―――― (1927). *Die Krise der Psychologie.* Jena: Gustav Fischer.

―――― (1934) *Sprachtheorie. Die Darstellung der Sprache.* Jena: Gustav Fischer (*English trans. by Donald Fraser Goodman, as *Theory of Language. The Representational Function of Language.* Amsterdam & Philadelphia: Benjamins, 1990.)

BURCKHARDT, JAKOB CHRISTOPH (1855). *Der Cicerone.* Basel: Schweighauserische Verlagsbuchhandlung.

―――― (1869). *Die Kultur der Renaissance in Italien.* Leipzig: E. A. Seemann.

BURGER, EWALD (1925). *J. G. Hamann. Schöpfung und Erlösung im Irrationalismus.* Göttingen: Vandenhoek & Ruprecht.

BURGER, OTTO (1914). *Erasmus von Rotterdam und der Spanier Vives. Eine pädagogische Studie.* [Kempten: Koesel].

BURSIAN, CONRAD (1883). *Geschichte der klassischen Philologie in Deutschland.* Munich: Akademie der Wissenschaften. Historische Kommission.

BUYSSENS, ERIC (1943). *Les langues et le discours. Essai de linguistique fonctionelle dans le cadre de la sémiologie.* Brussels: Lebegue (Collection Lebegue. Sér. 3, no. 27)..

CAMPANELLA, TOMMASO (1638). *Rationalis philosophiae; videlicet, logicorum libri tres, iuxta propria dogmata.* Pars secunda. Paris: apud Tussanum Dubray.

CAREY, WILLIAM (1806). *A Grammar of the Sungskrit Language composed from the works of the most esteemed Grammarians...* Serampore: The Mission Press.

CARNAP, RUDOLF (1934). *Logische Syntax der Sprache.* Vienna: Springer.

CARON, WILLEM JOHANNES HUBERTUS (1947). *Klank en teken bij Erasmus en onze oudste grammatici.* Groningen: Wolters [*Repr. in *Klank en Teken. Verzamelde taalkundige Studies.* Groningen: Wolters, 1972].

CASSIRER, ERNST (1906). *Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit.* I. Berlin: Bruno Cassirer.

———— (1923). *Philosophie der symbolischen Formen.* 1. Teil. *Die Sprache.* Berlin: Bruno Cassirer.

——— (1929). *Philosophie der symbolischen Formen.* 3. Teil. *Phänomenologie der Erkenntnis.* Berlin: Bruno Cassirer.

——— (1932). *Die Sprache und der Aufbau der Gegenstandswelt.* Gustav Kafka (ed.), *Bericht über den XII. Kongreß der Deutschen Gesellschaft für Psychologie.* Jena: Gustav Fischer.

——— (1933). "Le langage et la construction du monde des objets". *Journal de psychologie normale et pathologique* 30, 18–40. (Numéro exceptionel: *Psychologie du langage.*)

CATALOGUS (1937). *Catalogus van Geschriften over Leven en Werken van Desiderius Erasmus aanwezig in de Bibliotheek der Gemeente Rotterdam.* Rotterdam: Bibliotheek der Gemeente.

CHRIST, WILHELM von & OTTO STÄHLIN ([5/6]1912). *Geschichte der griechischen Literatur.* Bearbeitet von Wilhelm Schmid. Munich: Beck.

CLERVAL, [JULES] ALEXANDRE (1895). *Les écoles de Chartres au moyen-âge.* Paris: Picard.

COLEBROOK, H. T. (1805). *A Grammar of the Sanscrit Language,* I (no more issued). Calcutta: The Honorable [East India] Company's Press.

COLSON, FRANCIS HENRY, ed. (1924). *M. Fabii Quintiliani Institutiones Oratoriae* lib. I. Cambridge: Cambridge University Press.

CONDILLAC, ÉTIENNE BONNOT DE (1746). *Essai sur l'origine des connoissances humaines.* Amsterdam: Pierre Mortier.

——— (1771). *Traité des systêmes.* Amsterdam & Leipzig: Arkstée & Merkens

——— (1798[?]). *La langue des calculs.* Basle: J. J. Tourneisen; Paris: Volland l'aîné. * Ed. A. M. Chouillet. Lille. Presses universitaires, 1981.

——— *(1947). Œuvres philosophiques.* Ed. by G. Le Roy. 3 vols. Paris: Presses universitaires de France.

COUSIN, VICTOR. *see* Abelard

COURT DE GÉBELIN, ANTOINE (1816). *Histoire naturelle de la parole, ou grammaire universelle à l'usage des jeunes gens.* Avec un discours préliminaire, et des notes, par M. le comte Lanjuinais. Paris: Plancher.

COUTURAT, LOUIS (1901). *La logique de Leibniz d'après des documents inédits.* Paris: Alcan.

———— (1903). *Opuscules et fragments inédits de Leibniz.* Paris: Alcan.

CROCE, BENEDETTO (1930). *Ästhetik als Wissenschaft vom Ausdruck und allgemeine Sprachwissenschaft, Theorie und Geschichte.* Tübingen: Mohr. (*Gesammelte philosophische Schriften in deutscher Übertragung*, ed. Hans Feist, I.)

———— (1911). *La filosofia di Giambattista Vico.* Bari: Laterza. (Trans. into German from the 2nd ed. by Erich Auerbach & Theodor Lieks as *Die Philosophie Giambattista Vicos.* Tübingen: Mohr, 1927 (*Gesammelte philosophische Schriften*, Reihe 2. *Kleinere philosophische Schriften*, I.)

CURTIUS, GEORG (⁴1859). *Griechische Schulgrammatik.* Prague: Tempsky.

DALGARNO, GEORGE (1661). *Ars Signorum vulgo Character Universalis et Lingua Philosophica.* London: For the Author.

DAM, RUDOLF JAN (1930). *De Analogia. Observationes in artem grammaticorum.* Kampen: Kok.

DANGEAU, LOUIS DE COURCILLON, *Abbé* DE (1694-1711). *Réflexions sur toutes les parties de la grammaire.* Paris: Coignard.

———— (1694). *Essais de grammaire contenus en trois lettres d'un académicien à un autre académicien.* Paris: Coignard.

———— (1927). *Opuscules sur la grammaire par l'abbé de Dangeau.* Réédités ... par Manne Ekman. Uppsala: Almqvist & Wiksell.

DAWES, RICHARD (1781). *Miscellanea Critica.*

DELBRÜCK, BERTHOLD (⁶1916). *Einleitung in das Studium der indogermanischen Sprachen. Ein Beitrag zur Geschichte und Methodik der vergleichenden Sprachforschung.* Leipzig: Breitkopf & Härtel. [(¹1880) as *Einleitung in das Sprachstudium.*]

DEMPE, HELLMUTH (1930). *Was ist Sprache?* Weimar: Böhlau.

DESCARTES, RENÉ (1637). *Discours de la méthode.* Leiden: Maire. Dutch trans. by Helena C. Pos as *Vertoog over de Methode,* with introduction by Hendrik Josephus Pos. Amsterdam: Wereldbibliotheek, 1937.

———— (1936-1963). *Correspondances* (8 vols., ed. Charles Adam & Gérard Milhaud). Paris: Presses Universitaires de France.

DESMARAIS, FRANÇOIS SÉRAPHIN RÉGNIER (1706). *Traité de grammaire françoise.* Paris: Coignard; Brussels: Fricx.

DESPAUTERIUS, JOHANNES (1551). *Rudimenta.* Paris: Matthaeus David.

DIDEROT, DENIS (1751). *Lettre sur les sourds et muets, à l'usage de ceux qui entendent. s.l.* [? Paris] *e.n.*

DILTHEY, WILHELM (1914). *Gesammelte Schriften.* 2. Band. *Weltanschauung und Analyse des Menschen seit Renaissance und Reformation..* Leipzig & Berlin: Teubner.

DOOYEWEERD, HERMAN (1935). *De Wijsbegeerte der Wetsidee.* 3 vols. Amsterdam: H. J. Paris. [*English trans. by David H. Freeman et al. as *A Critique of Theoretical*

Thought. Amsterdam: H. J. Paris; Philadelphia: Presbyterian & Reformed Publishing Co., 4 vols. 1953-1958.]

———— (1949). *Reformatie en scholastiek in de wijsbegeerte*, I (*Het Grieksche Voorspel*). Franeker: Wever.

DUCLOS, CHARLES PINOT. *See* Arnauld.

DUIJKER, HUBERTUS CARL JOHANNES (1946). *Extralinguale elementen in de spraak*. (diss. Amsterdam) Amsterdam: Noord-Hollandsche Uitgeverij.

DUMARSAIS, CÉSAR CHESNEAU (1753). *Traité des tropes pour servir d'introduction à la rhétorique et à la logique*. Nouvelle éd., publiée par M^r. Formey. Leipzig: Chez la veuve G. Fritsch.

———— (1792). *Principes de logique et de grammaire*. Paris: Barrois.

DUNS SCOTUS, JOHANNES (1902). *Grammatica Speculativa*. Ed. by M. F. Garcia. Quaracchi (Tuscany): Collegium S. Bonaventurae. The work is now acknowledged to be by Thomas of Erfurt, *whom see*.

EGGER, ÉMILE (1869). *L'Hellénisme en France*. Paris: Didier.

EISENRING, MAX E. (1942). *J. H. Lambert und die wissenschaftliche Philosophie der Gegenwart*. (Diss. Zürich, E.T .H.). Zürich: Müller, Werder & Co.

ENDRES, J. (1947). "Die Schichtengedanke bei N. Hartmann". *Divus Thomas. Jahrbuch für Philosophie und spekulative Theologie*. 3. Serie. 25, 84–96.

EPPELSHEIMER, HANNS WILHELM (1933). "Das Renaissance-Problem". *Deutsche Vierteljahrsschrift für Litteraturwissenschaft und Geistesgeschichte* 11, 477–500.

ERASMUS, DESIDERIUS (1624). *Lingua, sive de Linguae Usu atque Abusu*. Leiden: A. Cloucquius.

———— ([1516] 1662). *De Utraque Verborum ac Rerum Copia Libri II*. Amsterdam: Jan Jansson.

———— (1515). *Novum Instrumentum omne, diligenter ab Erasmo Roterodamo recognitum & emendatum*. Basle: Froben.

———— (1643). *Dialogus Ciceronianus sive De optimo genere dicendi*. Leiden: Joannes Maire.

———— (1703-1706). *Opera Omnia*. Ed. by Jean Leclerc (Clericus). 10 vols. in 11. Leiden: Pieter van der Aa.

ERDMANN, JOHANN EDUARD ([1861] ⁴1896). *Grundriß der Geschichte der Philosophie*. Berlin: Hertz.

FIESEL, EVA (1927). *Die Sprachphilosophie der deutschen Romantik*. Tübingen. Mohr.

FISCHER, JOSEPH (1911). *Die Erkenntnislehre Anselmus' von Canterbury*. Münster: Aschendorff. (*Beiträge zur Geschichte der Philosophie des Mittelalters*. Texte und Untersuchungen, 10. Bd. 3. Heft).

FLORA, FRANCESCO (1948). *Storia della letteratura italiana*. Edizione minore. Vol. I. Milan: Mondadori.

FOISSET, JOSEPH THÉOPHILE (1842). *Le président de Brosses*. Paris: Olivier-Fulgance. (*Histoire des lettres et des parlements au XVIIIe siècle*).

FREGE, GOTTLOB (1884). *Grundlage der Arithmetik. Eine logische mathematische Unter-suchung über den Begriff der Zahl.* Breslau: W. Koebner.

FREYER, HANS (1927). "Sprache und Kultur". *Die Erziehung* 3, 65-78.

FROMANT, *Abbé* (1756). *Réflexions sur l'art de parler pour servir d'éclaircissement et de suppléer à la Grammaire Générale et Raisonnée.* Paris: Prault fils.

FUNKE, OTTO (1926). "Sprachphilosophische Probleme bei Bacon". *Englische Studien* 61, 24-56.

———— (1934) *Englische Sprachphilosophie im späteren 18. Jahrhundert.* Berne: Francke.

———— (1927) *Studien zur Geschichte der Sprachphilosophie.* Berne: Francke.

GALILEO (GALILEO GALILEI) (1623). *Il Saggiatore. Nel quale ... si ponderono le cose contenuta nella Libra Astronomica e filosofica di Lotario Sarsi Sigensono, scritto in forma di lettera.* Rome: Giacomo Mascardi.

———— (1638). *Discorsi e dimostrationi matematice, intorno a due nuove scienze attenenti alla mecanica e movimeni locali.* Leiden: Elsevier.

GARDINER, *Sir* ALAN HENDERSON (²1951). *The Theory of Speech and Language.* Oxford: Clarendon.

GEMMINGEN, OTTO, *Freiherr von* (1918). *Vico, Hamann und Herder. Eine Studie zur Er-neuerung des deutschen Geisteslebens im 18. Jahrhundert* (Diss. Munich). Borna/Leipzig: R. Noske.

GERRETZEN, JAN GERARD (1940). *Schola Hemsterhusiana. De herleving der grieksche studiën aan de nederlandsche universiteiten in de achtiende eeuw van Perizonius tot en met Valckenaer.* Nijmegen & Utrecht: Dekker & van de Vegt.

GEYER, BERNHARD (1913). "Die Stellung Abaelards in der Universalienfrage nach neuen handschriftlichen Texten". Matthias Baumgärtner (ed.), *Studien zur Ge-schichte der Philosophie.* Festgabe zum 60. Geburtstag Clemens Bäumker gewidmet von seinen Schülern und Freunden. Münster: Aschendorff. (*Beiträge zur Geschichte der Philosophie des Mittelalters.* Supplementband.)

———— (1933). *Peter Abaelards Schriften,* II. *Beiträge zur Geschichte der Philosophie des Mittelalters,* Band 2, Heft 4.

GIBSON, JAMES (1917). *Locke's Theory of Knowledge and its Historical Relations.* Cam-bridge: Cambridge University Press.

GILLIES, ALEXANDER (1945). *Herder.* Oxford: Blackwell.

GIRARD, GABRIEL (1747). *Les vrais principes de la langue françoise.* Amsterdam: J. Wet-stein. [* Repr., with an introduction by Pierre Swiggers. Geneva: Droz, 1982.]

GLÖCKNER, GOTTFRIED (1889). *Das ideal der Bildung und Erziehung bei Erasmus von Rotterdam.* Dresden: Bleyl & Kaemmerer.

GOMPERZ, THEODOR (1903-1909). *Griechische Denker. Eine Geschichte der antiken Philosophie.* Leipzig: Veit.

GOROPIUS BECANUS, JOHANNES (1569). *Origines Antwerpianae.* Antwerp: Plantin.

GRABMANN, MARTIN (1937) *Die Introductiones in Logicam des Wilhelm von Shyreswood. Literaturhistorische Einleitung und Textausgabe.* Munich: *Sitzungsberichte der Bayerischen Akademie der Wissenschaften.* Philosophisch-historische Abteilung, Heft 10.

———— (1936). *Mittelalterliches Geistesleben.* Munich: Hueber.

———— (1943). *Thomas von Erfurt und die Sprachlogik des mittelalterlichen Aristotelismus.* Munich: *Sitzungsberichte der Bayerischen Akademie der Wissenschaften.* Philosophisch-historische Abteilung, Heft 2.

GRAVES, FRANCIS PIERREPONT (1912). *Peter Ramus and the Educational Reformation of the Sixteenth Century* (Diss. Columbia University). New York: Macmillan.

GREITEMANN, N. (1936). "Erasmus als Exegeet". *Studia Catholica* 12, 294–305; 365–387.

GRIMM, JACOB [WILHELM KARL] (1832–1837). *Deutsche Grammatik.* Göttingen: Dieterich.

GROOT, ALBERT WILLEM DE (1931). "Phonologie und Phonetik als Funktionswissenschaften". *Travaux du cercle linguistique de Prague* 4, 116–140.

GUDEMAN, ALFRED (1907). *Grundriß der Geschichte der klassischen Philologie.* Leipzig & Berlin: Teubner.

HAECHT, LOUIS VAN (1947). *Taalphilosophische Beschouwingen.* Louvain: Hoger Instituut vor Wijsbegeerte.

HAMANN, JOHANN GEORG (1760). "Versuch über eine akademische Frage". *Wöchentliche Königsbergische Frag- und Anzeigungsnachrichten.* 14 & 21 Jan. Repr. in J. G. Hamann. *Kreuzzüge des Philolgen.* [Königsberg: Kanter] (1762), 1–18.

———— (1762). "Aesthetica in nuce". *Kreuzzüge des Philologen* (as last), 158–220.

HAMEL, ANTON GERARDUS VAN (1945). *Geschiedenis der Taalwetenschap.* The Hague: Servire.

HANKAMER, PAUL (1927). *Die Sprache, ihr Begriff und ihre Deutung im sechzehnten und siebzehnten Jahrhundert. Ein Beitrag zur Frage der literturhistoriscvhe Gliederung des Zeitraums.* Bonn: F. Cohen.

HARFORD, JOHN S. (1840). *The Life of Thomas Burgess, D.D.* London: Longman, Orme, Brown, Green & Longmans.

HARNOIS, GUY (1928) *Les théories du langage en France de 1660 à 1821.* Paris: Les belles lettres.

HARRIS, JAMES (1751). *Hermes: or, a Philosophical Enquiry concerning Universal grammar.* London: J. Nourse et al. [(³1771). London: Nourse & Vaillant].

———— (1744). *Three Treatises. The first concerning Art. The second concerning Music, Painting, and Poetry. The third concerning Happiness.* London: Nourse & Vaillant.

HARTFELDER, KARL (1886). "Unedierte Briefe von Rudolf Agricola. Ein Beitrag zur Geschichte des Humanismus". *Festschrift der badischen Gymnasien. Gewidmet der Universität Heidelberg zur Feier ihres 500jährigen Jubiläums,* 1–36. Karlsruhe: Braunsche Hofbuchdruckerei.

HARTMANN, NICOLAI (1935). *Zur Grundlegung der Ontologie.* Berlin: de Gruyter.

———— (1938). *Möglichkeit und Wirklichkeit*. Berlin: de Gruyter.

———— (1940). *Der Aufbau der realen Welt*. Berlin: de Gruyter.

———— (1942). "Neue Wege der Ontologie". N. Hartmann (ed.), *Systematische Philoso-phie*. Stuttgart & Berlin: Kohlhammer.

HARVEY, WILLIAM (1628). *De motu cordis et sanguinis in animalibus anatomica exercitatio*. Frankfurt: Fitzer.

HEIDEGGER, MARTIN (1916). *Die Kategorien- und Bedeutungslehre des Duns Scotus*. (Habilitationsschrift, Freiburg im Breisgau). Tübingen: Mohr.

HEINEKAMP, HERBERT (1936). *Das Weltbild J. G. Hamanns* (Diss. Bonn). Düsseldorf: Nolte.

HEMSTERHUIS, TIBERIUS (s.a.). "Lectio publica de originibus linguae Graecae". Justus Hiddes Halbertsma, *Letterkundige Naoogst*, II. Deventer: de Lange.

HERDER, JOHANN GOTTFRIED (1767).

———— (1772). *Abhandlung über den Ursprung der Sprache, welche den von dere Königl. Academie der Wissenschaften für das Jahr gesetzten Preis erhalten hat*. Berlin: Voss.

———— (1799). *Eine Metakritik zur Kritik der reinen Vernunft*. Leipzig: [Hartknoch].

HOBBES, THOMAS ([1651] 1904). *Leviathan, or the Matter, Forme and Power of a Common-wealth, ecclesiasticall and civill*. Ed. by A. R. Waller. Cambridge: Cambridge University Press.

———— (1839). *Opera Philosophica Omnia*. Ed. by William Molesworth. 5 vols. London: Bohn.

———— (1915). *Thomas Hobbes. Grundzüge der Philosophie*. In Auswahl übersetzt und herausgegeben von Max Frischeisen-Köhler. Vol. I (Vols. II & III, 1918). Leipzig: F. Meiner (Philosophische Bibliothek, Vols. 157–158).

HOCKETT, CHARLES FRANCIS (1942). "A System of Descriptive Phonology". *Language* 38, 1–21.

HOFER, JOHANN MICHAEL (1910). *Die Stellung des Desiderius Erasmus und des Johann Ludwig Vives zur Pädagogik des Quintilian* (Diss. Erlangen). Erlangen: Junge & Sohn.

HÖNIGSWALD, RICHARD (²1925). *Die Grundlagen der Denkphilosophie. Studien und Analy-sen*. Leipzig: Teubner.

———— (1914). *Die Skepsis in Philosophie und Wissenschaft*. Göttingen: Vandenhoek & Ruprecht.

———— (1937). *Philosophie und Sprache*. Basle: Haus zum Falken.

HORNE TOOKE, JOHN. *See* Tooke.

HOWELL, W. S. (1934). "Nathaniel Carpenter's place in the controversy between rhetoric and dialectic". *Speech Monographs* 1, 20-41.

HUIZINGA, JOHAN (²1925). *Erasmus*. Haarlem: Tjeenk Willink.

———— (1919). *Herfstij der Middeleeuwen. Studie over levens- en gedachtenvormen der veertiende en vijftiende eeuw in Frankrijk en de Nederlanden*. Haarlem: Tjeenk Willink.

———— (1923). *Waning of the Middle Ages. A study of the forms of Life, Thought and Art in France and the Netherlands in the XIVth and XVth centuries*. London: Arnold.

———— (1926). "Het probleem der Renaissance". Johan Huizinga, *Tien Studiën*. Haarlem: Tjeenk Willink.

———— (1948–1953). *Verzamelde Werken* (9 vols.). Haarlem: Tjeenk Willink.

HUNT, HERBERT JAMES (1938). "Logic and Linguistics. Diderot as 'grammarien-philosophe' ". *Modern Language Review* 33, 215–233.

HUSSERL, EDMUND (1891). *Philosophie der Arithmetik*, I. Halle: Pfeffer.

———— (1922). *Logische Untersuchungen*. Halle a. d. Saale: Niemeyer.

INTERNATIONAL CONGRESS OF LINGUISTS (1939). *Rapports et Réponses au Questionnaire du Ve Congrès International des Linguistes, Bruxelles 28 août — 2 septembre 1939*. (1 pamphlet, with a supplement). Bruges: Imprimerie Sainte Catherine.

IORDAN, IORGU (1937). *An Introduction to Romance Linguistics, its Schools and Scholars*. revised, trans. and in parts recast by John Orr. London: Methuen.

IPSEN, GUNTHER (1930). *Sprachphilosophie der Gegenwart*. Berlin: Junker & Dünnhaupt.

JANET, PIERRE (1935). *Les débuts de l'intelligence*. Paris: Flammarion.

JELLINEK, MAX HERMANN (1913). *Geschichte der neuhochdeutschen Grammatik von den Anfängen bis auf Adelung*. Heidelberg: Winter.

JESPERSEN, [JENS] OTTO [HARRY] (['1922] 1949). *Language. Its Nature, Development and Origin*. London: Allen & Unwin.

JOHANSEN, SVEND (1950). "Glossematics and Logistics". *Acta Linguistica* 6, 17–30.

JOHNSON, SAMUEL (1755). *Dictionary of the English Language*. London: J. & P. Knapton, T. & T. Longman, et al.

KAINZ, FRIEDRICH (1946). *Einführung in die Sprachphilosophie*. Vienna: Sexl.

———— (1941, 1943). *Psychologie der Sprache*. 1. Band: *Grundlagen der allgemeinen Sprachphilosophie*, 2. Band: *Vergleichende Sprachphilosophie*. Stuttgart: Enke.

KALFF, GERRIT (1906–1912). *Geschiedenis van de Nederlandsche Letterkunde* (7 vols.) Groningen: Wolters.

KANT, IMMANUEL ([1790] 1878). *Kritik der Urtheilskraft. Text der Ausgabe* 1790 (A) *mit Beifügung sämtlicher Abweichungen der Ausgaben* 1793 (B) *und* 1799 (C).. Leipzig: Reclam.

KIRCHER, ATHANASIUS (1669). *Ars Magna Sciendi in XII libros digesta, qua nova et universali methodo per artificiosum combinationum contextum de omni re proposita plurimis & prope infinitis rationibus disputari, omniumque summaria quaedam cognition comparari potest*. Amsterdam: Jan Jansson.

KOOIMAN, KLAAS (1922). "Erasmus en de Volkstaal". *De Nieuwe Taalgids* 16, 161–167.

KRETSCHMER, PAUL (1923). *Sprache*. Alfred Gercke & Eduard Norden. *Einleitung in die Altertumswissenschaft*, I. Heft 6. Leipzig: Teubner.

KROLL, WILHELM (1909). *Geschichte der klassischen Philologie*. Leipzig: Göschen [(²1919). Berlin: de Gruyter (Sammlung Göschen, 367)].

KUIPER, GERRIT (1941). *Cornelius Valerius en Sebastianus Foxius Morzillus als Bronnen von Coornhert.* (Diss. Amsterdam) Harderwijk: "Flevo", for Free University of Amsterdam (Orbis Artium et Renaissance, 1).

KUYPERS, KAREL (1934). *Der Zeichen- und Wortbegriff im Denken Augustins.* Amsterdam: Swets & Zeitlinger.

LACY, PHILLIP HOWARD DE (1939). "The Epicurean Analysis of Language". *American Journal of Philology* 60, 85–92.

LAGUNA, GRACE ANDRUS DE (1927). *Speech. Its Function and Development.* New Haven Yale University Press; London: Oxford University Press.

LAIRD, JOHN (1934). *Hobbes.* London: Benn.

LAMBERT, JOHANN HEINRICH (1764). *Neues Organon oder Gedanken über die Erforschung und Bezeichnung des Wahren und dessen Unterscheidung vom Irrthum und Schein.* Leipzig: J. Wendler.

LAMPRECHT, KARL (1897). "Herder und Kant als Theoretiker der Geisteswissenschaft". *Jahrbücher für Nationalökonomie und Statistik,* 3. Folge: 14, 160–203.

LANCELOT, CLAUDE (1719). *Jardin des racines grecques, mises en vers françois avec un traité des prépositions et autres particules indéclinables et un recueil alphabétique des mots françois tirés de la langue greque.* Paris: P. Esclassam & C. L. Theboust; J. & J. Barbou.

LANDRY, BERNARD (1930). *Hobbes.* Paris: Alcan.

LANGER, SUSANNE KATHERINA (1948). *Philosophy in a New Key.* New York: Mentor. (¹1942, Cambridge, MA: Harvard University Press).

LANGEVELD, MARTINUS JAN (1934). *Taal en Denken. Eeen theoretiese en didaktiese bijdrage tot het onderwijs in de moedertaal op de middelbare school, insonderheid tot dat der grammatica.* (Diss. Amsterdam) Groningen: Wolters.

—————— (1936). Review of Reichling 1935. *Museum* 43, 251–252.

LEFMANN, SALOMON (1897). *Franz Bopp. Sein Leben und seine Wissenschaft.* Berlin: G. Reimer.

LEIBNIZ, GOTTFRIED WILHELM, *Freiherr von* (1875–1890). *Die philosophischen Schriften.* Ed. by Carl Immanuel Gerhardt. 7 Vols. Berlin: Weidmannsche Buchhandlung.

—————— (1840). *Meditationes de Cognitione, Veritate et Ideis.* In *Opera philosophica quae extant latina, galica, germanica omnia.* Ed. by J. E. Erdmann. Berlin: Eichler, 79ff.

—————— ([1703, first published 1765] 1840). *Nouveaux essais sur l'entendement humain par l'auteur du système de l'harmonie préétablie.* ibid., 194ff.

—————— ([1697] 1916). *Unvorgreifliche Gedanken betreffend die Verbesserung der deutschen Sprache.* Ed. by Walther Schmied-Kowarzik. Leipzig:

—————— (1903). *Opuscules et fragments inédits de Leibniz,* ed. Louis Couturat. Paris: Alcan [(1961). Repr. Hildesheim: Olms (Olms Paperbacks, 27).

LENNEP, JOHANNES DANIËL VAN, *see Scheidius.*

LEWIS, CLARENCE IRVING (1918). *A Survey of Symbolic Logic.* Berkeley: University of California Press.

LINDEBOOM, JOHANNES 1909). *Erasmus. Onderzoek naar zijn Theologie en zijn godsdienstig Gemoedsbestaan.* (Diss. Leiden) Leiden: Adriani.

———— (1913). *Het Bijbelsch Humanisme in Nederland.* Leiden: Adriani.

LOCKE, JOHN ([1690] [27]1829). *An Essay Concerning Human Understanding.* London: (*Ed. Peter H. Nidditch. Oxford: Clarendon, 1975.)

LULL, RAMÓN (1515). *Arbor Scientiae.* [Leiden]: s. n.

———— (1598). *Raymundi Lulii Opera ea quae ad inventam ab ipso artem universalem pertinent. Vt et in eandem quorundam interpretum scripti comentarij: quae munia ... sunt.* Ed. L. Zetzner. Strasbourg: Zetzner.

———— (1706). *Ars Lulliana, hoc est facillima methodus docendi, discendique sermonis Latini ... denuo in lucem edita a F. R.* Erfurt: Müller.

MANDERS, WILHELMUS JOHANNES ARNOLDUS (1949). "Kunsttalen". *Levende Talen* 148, 25–42.

MANTHEY, FRANZ (1937). *Die Sprachphilosophie des hl. Thomas von Aquin und ihre Anwendung auf Probleme der Theologie.* Paderborn: Schöningh.

MARITAIN, JACQUES (1932). *Distinguer pour unir ou les degrés du savoir.* Paris: Desclée, de Brouwer.

*MARTINUS, DE DACIA (1952). *Die Modi significandi des Martinus de Dacia,* ed. H[einrich] Roos. *Forschungen zur Geschichte der Sprachlogik im Mittelalter.* Copenhagen: Frost Hansen; Münster: Aschendorff (*Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters,* Bd. 37, Heft 2).

MARTY, ANTON (1908). *Untersuchungen zur Grundlegung der allgemeinen Grammatik und Sprachphilosophie.* Halle a. d. Saale: Niemeyer.

MERCIER (? = J. B. LEMERCIER) (1806). *Lettre sur la possibilité de faire de la grammaire un art-science, aussi certain dans ses principes, aussi rigoureux dans ses démonstrations, que les arts-sciences physico-mathématiques. Écrite à J. B. Lemercier.*

MAUPERTUIS, PIERRE LOUIS MOREAU DE (1756a). "Dissertation sur les différents moyens dont les hommes se sont servis pour exprimer leurs idées". Berlin: *Histoire de l'académie Royale des Sciences et Belles Lettres.* Classe de philosophie spéculative. Année MDCCLIV. Berlin: Haude & Spener.

———— (1756b). *Reflexions philosophiques sur l'origine des langues et la signification des mots.* In *Œuvres de Mr de Maupertuis.* 4 vols. Lyons: Bruyset.

MEILLET, ANTOINE (1922). *Introduction à l'étude comparative des langues indoeuropéennes.* Paris: Hachette.

MEINER, JOHANN WERNER (1781). *Versuch einer an der menschlichen Sprache abgebildeten Vernunftlehre oder philosophische Sprachlehre.* Leipzig: Gottlob.

MESSER, AUGUST ([2]1922). *Psychologie.* Stuttgart & Berlin: Deutsche Verlags-Anstalt.

MESTWERDT, PAUL (1917). *Die Anfänge des Erasmus. Humanismus und „Devotio moderna".* Leipzig: Haupt.

METZKE, ERWIN (1934). *J. G. Hamanns Stellung in der Philosophie des 18. Jahrhunderts.* Halle a. d. Saale: Niemeyer.

MICHEL, HERMANN (1903). *Heinrich Knaust. Beitrag zur Geschichte des geistigen Lebens in Deutschland um die Mitte des XV. Jahrhunderts.* (Diss. Berlin). Berlin: Pass & Garleb.

MONBODDO, JAMES BURNET(T), *Lord* (1773). *Of the Origin and Progress of Language.* Vol. I (first of 6 vols.). Edinburgh: Kincaid & Creech; London: Cadell.

—— (1784-5). (German trans. of Vols. I–III of the above by E. A. Schmid): *Des Lord Monboddo Werk von dem Ursprung und Fortgange der Sprache* (with an introduction by J. G. Herder), 2 vols. Riga: Hartknoch.

MONRAD, DITLEV GOTHARD (1881). *Laurentius Valla und das Konzil zu Florenz.* [Half-title: *Die erste Kontroverse über den Ursprung des apostolischen Glaubensbekenntnisses*]. (Trans. from the Danish by A. Michelsen). Gotha: A. Perthes.

MONTAIGNE, MICHEL EYQUEM *Seigneur de* (1865-6). *Essais* (Ed. by Joseph Victor Le Clerc). 4 vols. Paris: Garnier. (Chefs d'œuvre de la littérature française).

MOODY, ERNEST ADDISON (1935). *The Logic of William of Ockham.* London: Sheed & Ward.

MORRIS, CHARLES [WILLIAM] (1946). *Sign, Language and Behavior.* New York: Prentice-Hall.

MULLER, H. C. A. (1938). "Bruno's kijk op de Beschaving der 16e Eeuw". *Historia,* 4, 45ff.

MÜLLER, LUCIAN (1869). *Geschichte der klassischen Philologie in den Niederländen.* Leipzig: Teubner.

NIZOLIUS, MARIUS (1555). *Marii Nizolii ... in M. T. Ciceronem observationes utilissimæ, omnia illius verba, universamque dictionem alphabeti ordine complectens.* Venice: Berigus.

NIZOLIUS, MARIUS ([1553]). *De Veris Principiis et Vera Ratione Philosophandi contra Pseudo Philosophicos.* In Leibniz, *Philosophische Schriften* (ed. Gerhardt) IV (1880), 111-127.

NORDEN, EDUARD (1898). *Die antike Kunstprosa vom 6. Jahrhundert vor Chr. bis in die Zeit der Renaissance.* Leipzig & Berlin: Teubner.

D'OLIVET, PIERRE-JOSEPH THORELLIER (1740). *Poetarum ex Academia Gallica qui Latinè aut Graecè scripserunt, carmina.* The Hague: van Duren.

OGDEN, CHARLES KAY & IVOR ARMSTRONG RICHARDS ([3]1930). *The Meaning of Meaning.* London: Kegan Paul, Trench & Trübner.

OOSTHOEK ([4]1947-1957).*Oosthoek's Encyclopaedie.* Utrecht: Oosthoek.

OSTLENDER, HEINRICH (1936). "Die Sentenzbücher der Schule Abaelards". *Theologische Quartalschrift* 107, 208-252.

OTTO, ERNST (1943). "Sprache und Sprachbetrachtung. Eine Satzlehre unter Berücksichtigung der Wortart". *Abhandlungen der Deutschen Akademie der Wissenschaften in Prag.* Philosophische-historische Klasse, Heft 7. Prague: Verlag der deutschen Akademie der Wissenschaften.

OYEN, HENDRIK VAN (?1949). *Philosophia. Beknopt Handboek tot de Geschiedenis van het Wijsgerig Denken.* (2 vols.) Utrecht: de Haan.

PAETOW, LOUIS JOHN (1914). *The Battle of the Seven Arts. A French Poem by Henry d'Andeli.* Ed. and trans., with introduction and notes by L. J. Paetow. Berkeley, CA: University of California Press.

PARAIN, BRICE (1945). "Le langage et l'existence". In *L'Existence. Essais par Albert Camus ...* [et al.]. Paris: Gallimard. (Collection de Métaphysique, I).

———— (1942). *Recherches sur la nature et les fonctions du langage.* Paris: Gallimard.

PAULHAN, FRÉDÉRIC (1929). *La double fonction du langage.* Paris: Alcan (Bibliothèque de philosophie contemporaine).

PAULSEN, FRIEDRICH ([1885] ³1919–1921). *Geschichte des gelehrten Unterrichts auf den deutschen Schulen und Universitäten vom Ausgang des Mittelalters bis zur Gegenwart, mit besonderer Rücksicht auf den klassischen Unterricht.* Herausgegeben und in Anhang fortgesetzt von Dr. Rudolf Lehmann. Leipzig: Veit.

PICAVET, FRANÇOIS (1891). *Les Idéologues. Essai sur l'histoire des idées et des théories scientifiques ... en France depuis 1789.* Paris: Alcan.

PEERS, EDGAR ALISON (1946). *Fool of Love. The Life of Ramon Lull.* London: S.C.M. Press.

PLUCHE, NOËL (1751). *La mécanique des langues, et l'art de les enseigner.* Paris: Veuve Estienne & Fils.

PONS, JEAN FRANÇOIS (1743). *Lettres édifiantes et curieuses, écrites des missions étrangères, par quelques missionaires de la Compagnie de Jésus,* 28, 281–258.

PORZEZINSKI, VIKTOR [KARLOVICH] ([1897] 1910). *Einleitung in die Sprachwissenschaft.* Translated from the Russian by Erich Boehme. Leipzig: Teubner.

POS, HENDRIK JOSEPHUS (1933). "De taal als symbolische functie". L. E. J. Brouwer et al. *De uitdrukkingswijze der wetenschap,* Groningen: Noordhoff, 16–29.

———— (1926). *Inleiding tot de Taalwetenschap.* Haarlem: De erven F. Bohn.

———— (1922). *Zur Logik der Sprachwissenschaft.* Heidelberg: Winter.

PRANTL, CARL VON (1861; 1867). *Geschichte der Logik im Abendlande* ([I, 1855]; II, 1861; III, 1867; [IV, 1870]). Leipzig: S. Hirzel.

PRIESTLEY, JOSEPH (1762). *A Course of Lectures on the Theory of Language and Universal Grammar.* London: W. Eyres.

PRINSEN JACOB (³1928). *Handboek tot de Nederlandsche Letterkundige Geschiedenis.* The Hague: Martinus Nijhoff.

RAMUS, PETRUS (1565, 1572). *Rudimenta Grammaticae Latinae.* Paris: ?Wechel.

———— (1611). *Arithmetices Libri duo.* Hanoviae [Hanau]: apud Haeredes Guilelmi Antonii.

———— (1619). *Dialecticae Libri duo.* Bremen: Typis Thomae Villeriani.

———— (1612) *Geometriae Libri XXVII.* Hanau: as above.

———— (1612) *Rudimenta Grammaticae Latinae.* Hanau: as above.

———— (1572) *Rhetoricae distinctiones in Quintiliano.* Paris: Wechel [(1619). Hanau: as above].

RAPPORTS (1939). See International Congress of Linguists.

REHM, WALTHER (1929). "Der Renaissance-Kult um 1900 und seine Überwin-
    dung". *Zeitschrift für deutsche Philologie* 54, 296–328.
REICHLING, ANTON JOANNES BERNARDUS NICOLAUS (1935). *Het Woord. Een Studie
    omtrent de Grondslag van taal en taalgebruik* (Diss. Utrecht). Nijmegen: Berkhout.
——— (1947). *Wat is algemene Taalwetenschap?* Groningen: Wolters.
REISIG, CHRISTIAN KARL (1881). *Vorlesungen über lateinische Sprachwissenschaft.* Mit den
    Anmerkungen von F. Haase, I. Berlin: Calvary [* Repr. Walluf bei Wiesbaden:
    Sändig & Schann, 1984].
REMUSAT, CHARLES FRANÇOIS MARIE, *Comte de* (1845). *Abélard.* Paris: Ladrange.
RENAUDET, AUGUSTIN (1926). *Érasme. Sa pensée religieuse et son action d'après sa corres-
    pondance (1518–1521).* Paris: Alcan.
——— (1939). *Études Érasmiennes.* Paris: Droz.
RICHTER, JEAN PAUL (1883). *The Literary Works of Leonardo da Vinci, composed and edited
    from the original manuscripts. Scritti letterari di Leonardo da Vinci cavati dagli autografi* (2
    vols.). London: Sampson, Low, Marston, Searle & Rivington [(1939). 2nd enl.
    and rev. ed. by J. P. & Irma Richter. London & Oxford: Oxford University
    Press. Repr. London: Phaidon, 1970].
RIES, JOHN (1931). *Was ist ein Satz?* Prague: Taussig & Taussig.
RIESSEN, HENDRIK VAN (1949). *Filosofie en Techniek.* Kampen: J. H. Kok.
RODEMANN, WILHELM (1922). *Hamann und Kierkegaard.* (Diss. Erlangen). Gütersloh:
    Bertelsmann.
ROOS, H. (1946). "Martinus de Dacia und seine Schrift De Modis Significandi. Ein
    Beitrag zur Geschichte der dänischen Sprachlogik im Mittelalter". *Classica et
    Mediaevalia. Revue Danoise de Philologie et d'Histoire* 8, 87–115.
ROSSI, VITTORIO ([1897–1898] ⁴1945–1949). *Il quattrocento.* Milan: F. Vallardi (*Storia
    letteraria d'Italia scritta da una società di professori ...*).
ROTHACKER, ERICH ([1926] 1947) *Logik und Systematik der Geisteswissenschaften.* Bonn:
    Bouvier.
ROTTA, PAOLO (1909). *La filosofia del linguaggio nella patristica e nella scholastica.* Turin:
    Fratelli Bocca.
ROUSSEAU, JEAN-JACQUES (1755). *Discours sur l'origine et fondemens de l'inégalité parmi
    les hommes.* Amsterdam: Rey.
——— (*[1781] 1968): *Essai sur l'origine des langues* (ed. Charles Porset). Bordeaux:
    Ducros.
RUSSEL, L. J. (1939). "Note on the term 'Σημειωτική' in Locke". *Mind* 48, 405–
    406.
RUSSELL, BERTRAND [BERTRAND WILLIAM, *3rd Earl* RUSSELL]. (1900). *A Critical
    Exposition of the Philosophy of Leibniz.* London: Allen & Unwin.
SACY, ANTOINE ISAAC *Baron* SILVESTRE DE (1799). *Principes de grammaire générale, mis
    à la portée des enfans et propre à servir d'introduction à l'étude de toutes les langues.* Paris:
    Belin.

SAHLIN, GUNVOR (1928). *César Chesneau du Marsais et son rôle dans l'évolution de la grammaire générale*. Paris: Presses universitaires de France.

SAISSET, ÉMILE [EDMOND] (1862). *Précurseurs et disciples de Descartes*. Paris: Didier.

SANCTIUS, FRANCISCUS ([1587] 1664). *Minerva, sive de Causis Linguae Latinae*. Amsterdam: Pluymer.

SANDFORD, W. P. (1931). *English Theories of Public Address*. Mimeographed diss. Columbus, OH.

SANDYS, Sir JOHN EDWIN (²1906). *A History of Classical Scholarship*. I. *From the Sixth Century B.C. to the end of the Middle Ages*. Cambridge: Cambridge University Press.
———— (1908). ———— ———— II. *From the Revival of Learning to the end of the Eighteenth Century in Italy, France, England and the Netherlands*. Cambridge: Cambridge University Press.

SAPIR, EDWARD (1921). *Language. An Introduction to the Study of Speech*. New York: Harcourt Brace.

SASSEN, FERDINAND LÉON RUDOLPHE (²1932a). *Geschiedenis der Wijsbegeerte van de Grieken en Romeinen*. Antwerp: Standaard & Nijmegen: Dekker & Van der Vegt.
———— (²1932b). *Geschiedenis der patristische en middeleeuwsche Wijsbegeerte*. Antwerp: Standaard & Nijmegen: Dekker & Van der Vegt.
———— (²1946). *Geschiedenis van de nieuwere Wijsbegeerte tot Kant*. Antwerp: Standaard.

SAUSSURE, FERDINAND DE (1916). *Cours de linguistique générale* publié par Charles Bally ... et Albert Sechehaye ... avec la collaboration de Albert Riedlinger. Lausanne & Paris: Payot.

SAUTEBIN, HIPPOLYTE (1899). *Un linguiste français du XVIII ͤ siècle, le Président de Brosses*. Berne: Staempfli.

SCALIGER, JULIUS CÆSAR (1623). *Adversus D. Erasmum*. Toulouse: D. Bosc & P. Bosc.
———— (1540). *De Causis Linguae Latinae*. Leiden: apud Seb. Gryphium.

SCALIGER, JOSEPHUS JUSTUS (1610). *Diatriba de Europaeorum Linguis*. Isaac Casaubon (ed.), *Iosephi Iusti Scaligeri ... Opuscula varia antehac non edita*. Paris: Drouart.

SCHÄCHTER, JOSEF (1935). *Prolegomena zu einer kritischen Grammatik*. Vienna: Springer. (Schriften zur wissenschaftlichen Weltauffassung, Bd. 10).

SCHANZ, MARTIN VON (1898-1920). *Geschichte der römischen Literatur bis zum Gesetzgebungswerk des Kaisers Justinian*. 4 vols. in 7. Munich: Beck.

SCHEID[IUS], EVERARD (1790) (ed.). *L. C. Valckenarii observationes Academicae ... et Io. Dan. a Lennep Praelectiones Academicae*. Utrecht: Paddenburg; London: Emsley, etc.

SCHILFGAARDE, PAUL VAN (1944). *De Logica van Aristoteles*. The Hague: Servire.

SCHLEGEL, [KARL WILHELM] FRIEDRICH VON (1808). *Über die Sprache und Weisheit der Indier*. Heidelberg: Mohr & Zimmer.

SCHMALENBACH, HERMANN (1921). *Leibniz*. Munich: Drei Masken.

SCHMIDT, HEINRICH (1934). *Philosophisches Wörterbuch*. Leipzig: Kröner.

SCHRIJNEN, JOSEF (1924). *Handleiding bij de Studie der vergelijkende Indogermaansche Taalwetenschap vooral met betrekking tot de Klassieke en Germaansche Talen*. Leiden: Sijthoff.

SCHULTE NORDHOLT, HENDRIK (1948). *Het Beeld der Renaissance,* Amsterdam: Querido.

SCHWAHN, WALTHER (1896). *Lorenzo Valla. Ein Beitrag zur Geschichte des Humanismus* (Diss. Rostock). Berlin: Meyer & Müller.

SCIOPPIUS, GASPARDUS (KASPAR SCHOPPE) (1659). *Grammatica Philosophica.* Amsterdam: Pluymer.

SEGERSTEDT, TORGNY TORGNYSSON ([1946]). *Die Macht des Wortes. Eine Sprachsoziologie.* Zürich: Pan-Verlag. (Internationale Bibliothek für Psychologie und Soziologie, herausgegeben von Paul Reiwald, Bd. 3; trans. of *Ordens makt. En studie i språkets psykologi.* Stockholm: Natur och Kultur, 1944.)

SELZ, OTTO (1941). "Die phänomenalen Grundlagen des Zahlbegriffs". *Nederlandsche Tijdschrift voor Psychologie* 2,

SERRUS, CHARLES (1933). *Le parallélisme logico-grammatical.* Paris: Alcan.

SHAFTESBURY, *Lord* (ANTHONY ASHLEY COOPER, *3rd Earl of* SHAFTESBURY) (⁴1727). *Characteristicks of Men, Manners, Opinions, Times.* London: [J. Danby].

SHARPE, GREGORY (1751). *Two Dissertations.* I. *Upon the Construction, Division and Relation of Languages,* II. *Upon the Original Powers of Letters; wherein is proved from the Analogy of Alphabets, and the Proportion of Letters, that the Hebrew ought to be read without Points.* London: John Millan.

SIEBECK, HERBERT (1897). "Occam's Erkenntnißlehre in ihrer historischen Stellung". *Archiv für Geschichte der Philosophie* 10, 317-339.

SIEGEL, CARL (1907). *Herder als Philosoph.* Stuttgart & Berlin: Cotta.

SIGER OF COURTRAI, ed. Gaston Wallerand (1913). *Les Œuvres de Siger de Courtrai. Étude critique et textes inédits.* Louvain: Institut supérieur de philosophie de l'Université. (*Les Philosophes belges,* tome 8). [*Sigerus de Cortraco. *Summa modorum significandi. Sophismata.* New ed., on the basis of G(aston) Wallerand's editio prima, wirh additions, critical notes and index of terms by Jan Pinborg. Amsterdam: Benjamins, 1977 (*Studies in the History of the Language Sciences,* 14).]

SIMONIN, H. H. (1930). *Archives d'histoire doctrinale et littéraire du moyen âge,* V. Paris: Vrin.

SMITH, ADAM (1767). *Considerations concerning the First Formation of Languages and the Different Genius of Original and Compound Languages.* Appendix to the 3rd and subsequent eds. of *The Theory of Moral Sentiments,* London: Millar; Edinburgh: Kincaid & Bell.

SMITH, PRESERVED (1923). *Erasmus. A Study of his Life, Ideals and Place in History.* New York & London: Harper & Brothers.

SMITH, RONALD GREGOR (1944). "The Living and Speaking God. A Study of Hamann's Doctrine of 'The Word' ". *Hibbert Journal* 42, 198-203.

SPAIER, ALBERT (1927). *La pensée et la quantité. Essai sur la signification et la réalité des grandeurs.* Paris: Alcan.

STAMMLER, GERHARD (1923). *Leibniz.* Munich: E. Reinhardt (*Geschichte der Philosophie in Einzeldarstellungen.* Abt. IV. *Die Philosophie der neueren Zeit,* I. Band 19).
———— (1930). *Leibniz.* Leipzig & Berlin:

STEINTHAL, HEYMANN (1863). *Geschichte der Sprachwissenschaft bei den Griechen und Römern.* Berlin: Dümmler.

STENZEL, JULIUS (1934). *Philosophie der Sprache.* Munich & Berlin: Oldenbourg.

STEPHAN, HORST (ed.) (1906). *Herders Philosophie. Ausgewählte Denkmäler aus der Werdezeit der neuen deutschen Bildung.* Leipzig: Meiner. (Philosophische Bibliothek, Band 112).

STERN, [NILS] GUSTAF (1931). *Meaning and Change of Meaning (with special Reference to the English Language).* Gothenburg: Elander. (Göteborgs Högskolas Årsskrift, 38).

STOCKUM, THEODOOR CORNELIS VAN (1947). "De scholastiek en Mystiek. Van Oyen, *Philosophia. Beknopt Handboek tot de Geschiedenis van het Wijsgierig Denken,* I. Utrecht:

STREITBERG, WILHELM (1909). "Kant und die Sprachwissenschaft". *Indogermanische Forschungen* 26, 382–422.

STURTEVANT, EDGAR HOWARD (1947). *An Introduction to Linguistic Science.* New Haven: Yale University Press.

STUTTERHEIM, CORNELIS FERDINAND PETRUS (1941). *Het Begrip Metaphoor.* (Diss. Amsterdam). Amsterdam: H. J. Paris.
———— (1949). *Inleiding tot de Taalphilosophie.* Antwerp: Standaard Boekhandel & Nijmegen: Dekker & Van der Vegt.

SUREDA BLANES, FRANCISCO (1944). "La simbología en el pensamiento filosófico Luliano. Personificaciones y valores". *Revista de Filosofía* [Madrid: Consejo de investigaciones científicas patronato "Raimundo Lulio"] 3, 469–507.

SÜSSMILCH, JOHANN PETER (1766). *Versuch eines Beweises, daß die erste Sprache ihren Ursprung nicht vom Menschen, sondern allein vom Schöpfer erhalten habe.* Berlin: Buchladen der Realschule.

THOMAS, *of Erfurt* (1972). *Grammatica Speculativa,* ed. G. L. Bursill-Hall. London: Longmans (The Classics of Linguistics).

THOMSEN, VILHELM LUDVIG PETER (1927). *Geschichte der Sprachwissenschaft. Kurzgefaßte Darstellung der Hauptpunkte.* Halle a. d. Saale: Niemeyer (trans. by Hans Pollak of *Sprogvidenskaabens historie. En kortfattet fremstilling.* Copenhagen, Gad: 1902).

THUROT, CHARLES (1868). *Notices et extraits de divers manuscrits latins pour servir à l'histoire des doctrines grammaticales.* Paris: Imprimerie Impériale (*Notices et extraits des manuscrits de la Bibliothèque Impériale,* XXII, ii).

TOFFANIN, GIUSEPPE (1941). *Geschichte des Humanismus.* Amsterdam: Akademische Verlagsanstalt Pantheon (trans. of *Storia dell'umanesimo dal XII al XVI secolo.* Naples: Peralla, 1934).

TÖNNIES, FERDINAND (1896). *Hobbes' Leben und Lehre.* Stuttgart: F. Frommanns Verlag (E. Hauff).

———— (1887). "Leibnitz und Hobbes". *Philosophische Monatshefte* 23, 557-553.

TOOKE, JOHN HORNE (1796). Ἔπεα πτερόεντα, or *The Diversions of Purley*, Part I. London: J. Johnson [(²1798-1805). (2 vols.). London: J. Johnson.

TRENDELENBURG, FRIEDRICH ADOLPH (1860). ["Das Element der Definition in Leibnizens Philosophie"]. *Monatsberichte der Preußischen Akedemie der Wissenschaft* 374-386. (Subject announced on p. 375 in the course of a birthday oration in honour of Leibniz.)

TROUBETZKOY, NICOLAS S., *Prince* (1939a). "Wie soll das Lautsystem einer künstlichen internationalen Hilfssprache beschaffen sein?" *Travaux du Cercle Linguistique de Prague* 8, 5-21.

———— (1939b). *Grundzüge der Phonologie. (Travaux du Cercle linguistique de Prague,* 7) [Trans. by J. Cantineau as *Principes de Phonologie*. Paris: Klincksieck, 1949].

ÜBERWEG, FRIEDRICH (1915-1928). *Grundriß der Geschichte der Philosophie*. 5 vols. Berlin: Mittler.

UNGER, RUDOLF (1905). *Hamanns Sprachtheorie im Zusammenhang seines Denkens. Grundlegung zu einer Würdigung der geistesgeschichtlichen Stellung des Magus im Norden*. Munich: Beck.

———— (1911). *Hamann und die Aufklärung*. Jena: Diederichs.

URBAN, WILBUR MARSHALL (1939). *Language and Reality. The Philosophy of Language and the Principles of Symbolism*. London: Allen & Unwin.

USENER, HERMANN KARL (1887). *Epicurea edidit Hermannus Usener*. Leipzig: Teubner.

VAHLEN, JOHANNES (1879). *Lorenzo Valla. Ein Vortrag*. Berlin: F. Vahlen.

VALLA, LORENZO (1688). *De Linguae Latinae Elegantia*. Cambridge: Edward Hall.

———— (1869). *Opuscula tria*. Ed. J. Vahlen. *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften* (Vienna), 61, 7-66; 93-149; 357-441.

VANSTEENBERGHE, E. (1936). "Un traité inconnu sur la doctrine de Lullus". *Revue des sciences religieuses,* 441 ff.

VELDEN, HENDRIKUS EDUARDUS JOSEFUS MARIA VAN DER ([1911]). *Rudolphus Agricola (Roelof Huusman). Een Nederlandsch Humanist der vijftiende Eeuw*. Pt. I. Leiden: Sijthoff.

VENDRYÈS, JOSEPH (1950). *Le Langage. Avec un nouvel appendice bibliographique*. Paris: A. Michel. (*L'Évolution de l'humanité*. Synthèse collective, I, sect. 3).

VERBURG, PIETER ADRIANUS (1951). "Enkele Lijnen en Feiten in de Ontwikkeling der Taaltheorie". *Wetenschappelijke Bijdragen door Leerlingen van Dr. D. H. Th. Vollenhoven*. Franeker: Vever.

———— (1942). Review of Karl Vossler, "Benedetto Croces Sprachphilosophie" [*Deutsche Vierteljahrsschrift für Literaturwissenschaft und Geistesgeschichte* 19), 121-138]. *Correspondentiebladen van de Vereniging voor Calvinistische Wijsbegeerte* 7, 113-116.

———— (1950). "The Background to the Linguistic Conceptions of Bopp." *Lingua* 2, 438-468.

VERNIER, LÉON (1888). *Étude sur Voltaire grammairien et la grammaire au XVIIIe siècle.* Paris: Hachette.

VICO, GIAMBATTISTA ([1725] 1849). *Principi di una scienza nuova.* Florence.

VIVES, JUAN LUIS (1636). *De Disciplinis Libri XII: septem de corruptis artibus; quinque de tradendis disciplinis.* Leiden: J. Maire.

—————— (1782-1790). *Opera Omnia,* distributa et ordinata ... a Gregorio Majansio ... Valencia: Benedict Montfort.

VLITIUS, JANUS (JAN VAN VLIET) (16??). *Onse Vader in XX Oude Duytsche en Noorder Taalen.* Doordrecht.

VLOEMANS, ANTOON ([4]1947). *Voorbereiding tot de Wijsbegeerte.* The Hague: Leopold.

VOELLMY, ERWIN (1949). "Psychologisches um kleine und große Zahlen". *Schweizerische Zeitschrift für Psychologie* 8, 231-253.

VOIGT, GEORG ([3]1893). *Die Wiederbelebung des klassischen Alterthums oder das erste Jahrhundert des Humanismus,* 2 vols. Berlin: Reimer.

VOLKMANN, RICHARD EMIL ([2]1885). *Die Rhetorik der Griechen und Römer.* Leipzig: Teubner.

VOLLENHOVEN, DIRK HENDRIK THEODOOR (1950). *Geschiedenis der Wijsbegeerte.* I, *Grieksche Philosophie voor Platoon en Aristoteles.* Franeker: Vever.

—————— (1948). *Hoofdlijnen der Logica.* Kampen: Kok.

VOOYS, CORNELIS GERRIT NICOLAAS DE (1931). *Geschiedenis van de Nederlandse Taal in hoofdtrekken geschetst.* Groningen: Wolters.

VORLÄNDER, KARL (1927). *Geschichte der Philosophie,* 3 vols. Leipzig: Meiner.

VOSSIUS, GERARDUS JOANNES (1695). *Aristarchus sive De Arte Grammatica Libri Septem.* Amsterdam: P. & I. Blaeu.

WADDINGTON, CHARLES TZAUNT (1855). *Ramus, sa vie, ses écrits et ses opinions.* Paris: Meyrueis. [*Repr. Dubuque, Iowa: W. C. Brown, 1970.]

WALCH, J. L. (1943). *Nieuw Handboek der Nederlandsche Letterkundige Geschiedenis (tot het einde van der 19e eeuw).* The Hague: Martinus Nijhoff.

WALLACE, KARL RICHARDS (1943). *Francis Bacon on Communication & Rhetoric, or: The Art of Applying Reason to Imagination for the Better Moving of the Will.* Chapel Hill: University of North Carolina Press.

WALLERAND GASTON. *See* Siger of Courtrai.

WARNACH, VIKTOR (1938). "Das äußere Sprechen und seine Funktionen nach der Lehre des hl. Thomas von Aquin". *Divus Thomas. Jahrbuch für Philosophie und spekulative Theologie,* 3. Serie. 16, 393-419. See also *Bulletin Thomiste* 6, 197-199.

WATERINK, JAN (1936). *Inleiding tot de Theoretische Paedagogiek.* II. *De Geschiedenis der Paedagogiek.* Kampen: Kok.

WATSON, FOSTER (1914). "The Humanists of Louvain". *The Nineteenth Century and After* 76, 765-775.

WEBER, HANNA (1939). *Herders Sprachphilosophie. Eine Interpretation in Hinblick auf die moderne Sprachphilosophie.* Berlin: Ebering. (Germanische Studien, Heft 214).

WEBER, H. E. (1917). "Zwei Propheten des Irrationalismus. Hamann und Kierke-
    gaard. *Neue Kirchliche Zeitschrift* 28, 23–58; 77–105.
WEISGERBER, LEO (1933). "Die Stellung der Sprache im Aufbau der Gesamtkultur".
    I. *Wörter und Sachen* 15, 25–58; (II, *Wörter und Sachen* 16, 97–236).
WILAMOWITZ-MOELLENDORF, ULRICH VON (1921). *Geschichte der Philologie*. Leipzig:
    Teubner. (*Einleitung in die Altertumswissenschaft*, ed. A. Gercke & E. Norden, Bd. 1).
WILKINS, *Sir* CHARLES (1808). *A Grammar of the Sanskrita Language*. London: Black,
    Parry, & Kingsbury, Booksellers to the Honourable The East India Company.
WILKINS, JOHN (1668). *An Essay towards a Real Character, and a Philosophical Language*.
    London: Gellibrand & Martyn, for the Royal Society.
WILLE, JACOBUS (1932). "De Literator R. M. van Goens en zijn Kring". In *Studiën
    over de achtiende eeuw*. Tweede helft. Zutphen: Nauta & Co.
——— (1935). *Taalbederf door de School van Killowijn*. Amsterdam: H. J. Paris.
WILSON, THOMAS (1551). *The Rule of Reason*. London: Richard Grafton.
——— (1553) *Arte of Rhetorique*. London: s. n. [Facsimile reproduction, with introduc-
    tion by Robert Hood Bowers, Gainesville, FL:1962. *Scholars' Facsimiles & Re-
    prints*].
WINDELBAND, WILHELM (1921). *Geschichte der abendländischen Philosophie im Altertum*.
    Munich: Beck (*Handbuch der Altertumswissenschaft*, 5. Bd., Abt. 1, 1. Tl.)
WINDELBAND, WILHELM & HEINZ HEIMSOETH ([14]1948). *Lehrbuch der Geschichte der
    Philosophie. Mit einem Schlußkapitel: Die Philosophie im 20. Jahrhundert und einer Über-
    sicht*. Tübingen: Mohr.
WINDISCH, ERNST [WILHELM OSKAR] (1917). *Geschichte der Sanskrit-philologie und indi-
    schen Altertumskunde*. Strassburg: Trübner.
WINKEL, JAN TE ([2]1922-1927). *De Ontwikkelingsgang der Nederlandsche Letterkunde* (7
    vols.). Haarlem: De erven F. Bohn.
WOLFF, CHRISTIAN *Freiherr von* ([5]1733). *Vernünfftige Gedanken von Gott, der Welt und der
    Seele des Menschen, auch allen Dingen überhaupt*. 2 vols. Frankfurt & Leipzig: Andreä
    & Hort. [([1]1720). Halle: Renger.]
——— ([7]1733). *Vernünfftige Gedancken von den Kräfften des menschlichen Verstandes und ihrem
    richtigen Gebrauche im Erkäntniß der Wahrheit*. Halle: Renger.
WOLFF, MAX *Freiherr von* (1893). *Lorenzo Valla. Sein Leben und seine Werke. Eine Studie
    zur Literatur-Geschichte Italiens im 15. Jahrhundert*. Leipzig: E. A. Seemann.
WOODWARD, WILLIAM HARRISON (1904). *Desiderius Erasmus concerning the Aim and
    Method of Education*. Cambridge: Cambridge University Press.
WUNDT, WILHELM MAX (1911). *Völkerpsychologie*. I. *Die Sprache*. Leipzig: Engelmann.
ZELLER, EDUARD ([6]1923). *Die Philosophie der Griechen*. 3 vols. in 6. Leipzig: Reisland.
ZIELINSKI, TADEUSZ (1905): *Die Antike und Wir*. Trans. by E. Schöler. Leipzig:
    Dieterich.
ZIPF, GEORGE KINGSLEY (1936). *The Psycho-Biology of Language. An Introduction to
    Dynamic Philology*. London: Routledge.

ZOBEL, A. (1928). "Die Sprachphilosophie John Lockes". *Anglia* 52, 289–324.
ZUIDEMA, SYSTE ULBE (1936). *Die Philosophie van Occam in zijn Commentar op de Sententiën*. Hilversum: Schipper.

 The above is an expanded and updated version of Verburg's (by modern standards incomplete) bibliography. Virtually finished at the time of the translator's untimely death on August 30th 1997, it was prepared for publication by Vivian Salmon and Andrew Barker. Its virtues are entirely ascribable to Paul Salmon, who was not responsible for any subsequent or uncorrected errors.

Edinburgh, September 1997.

CHRONOLOGICAL TABLE

FROM APPROXIMATELY 1100 TO APPROXIMATELY 1800

GENERAL VIEWS OF LANGUAGE

THE STUDY OF LANGUAGE	REALISM	NON-REALISM
1120–1180 John of Salisbury Humane Studies at Chartres and Orleans	1033–1109 Anselm of Canterbury c. 1150 Petrus Helias' Commentary	1097–1142 Abelard
	1224–1274 Thomas Aquinas	1226–1277 Peter of Spain and other terminists William of Sherwood Lambert of Auxerre
	1235–1315 Ramón Lull	1300–1350 William of Occam Occamists

	Modistae or Speculative Grammarians	
HUMANISM	Thomas of Erfurt	1350–1420 Peter d'Ailly
1304–1374 Petrarch	Siger of Courtrai	1363–1429 John Gerson
1313–1375 Boccaccio	Martin of Dacia	
1330–1406 Salutato	et al.	RENAISSANCE
	(14th century?)	
1370–1444 Bruni		1452–1519 Leonardo da Vinci
1380–1459 Poggio Bracciolini		1462–1524 Pomponatius
1407–1457 Valla		1463–1494 Pico della Mirandola
1444–1485 Agricola		1469–1527 Machiavelli
1451–1494 Poliziano (txt.)		1473–1543 Copernicus
1466–1536 Erasmus		1483–1553 Fracastoro
1481–1558 J. C. Scaliger (txt.)		1493–1541 Paracelsus
1492–1540 Vives		1498–1566 Nizolius*
1504–1564 Bibliander (comp.)		1501–1576 Cardano
1512–1578 Valerius ab Auduater †		1508–1588 Telesio
1515–1572 Peter Ramus †		
1524–1590 Knaustinus †		1532–1589 Zabarella

TEXTUAL CRITICISM

1540–1609 J. J. Scaliger (comp.)		1533–1592 Montaigne
1550–1628 Sanctius †		1548–1600 Bruno
1576–1649 Scioppius *		1561–1626 Francis Bacon *
1577–1649 G. J. Vossius		1658–1639 Campanella *

RATIONALISM

AXIOMATIC RATIONALISM

1564–1641 Galileo ¶
1571–1636 Kepler ¶

1588–1679 Hobbes
1596–1650 Descartes
1601–1680 Kircher
1614–1672 Wilkins
1632–1704 Locke
1646–1715 Leibniz

1679–1754 Wolff

1701–1767 Süssmilch
1723–1789 Meiner
1728–1777 Lambert

PRAGMATIC RATIONALISM

1612–1694 Chr. Huygens §
1632–1732 Leeuwenhoek §
1637–1680 Swammerdam §
1668–1695 Boerhave §

1612–1694 Arnauld
1615–1695 Lancelot
Port-Royal

Grammaires générales
1676–1756 Dumarsais

1671–1713 Shaftesbury
1688–1704 Vico

Enlightenment
1698–1759 Maupertuis

1704–1772 Duclos
1713–1780 Batteux
1717–1789 Beauzée

1709–1786 Harris
1714–1799 Monboddo *
1723–1790 Adam Smith *

1709–1777 de Brosses *
1715–1780 Condillac

1712–1778 Rousseau *
1713–1784 Diderot *

1728–1784 C. de Gébelin †
1733–1804 Priestley

1724–1771 van Lennep

1742–1795 Scheidius
1748–1810 van Goens

1758–1838 de Sacy

1730–1788 Hamann
1744–1803 Herder

1754–1836 Destutt de Tracy
The *"idéologues"*

1767–1835 W. v. Humboldt *
1785–1863 Jacob Grimm
(historical grammar)
(both connected with Bopp →)

TEXTUAL CRITICISM (continued)

1577–1649 G. J. Vossius
School of Vossius
(Latin scholars)
H. Grotius
Salmasius
N. Heinsius
Meibom
Graevius et al.
Gronovius (Gk.)

1651–1715 Perizonius
1662–1742 Bentley
1674–1731 L. ten Kate (ling.)

1685–1766 Hemsterhuis
School of Hemsterhuis
(Greek Etym.)
1715–1785 Valckenaer
1724–1771 van Lennep

1820–1885 G. Curtius
(Classical philology
merging into
linguistics →)

1832–1915 M. Bréal
(introduced Bopp's
comp. phil. to
France →)

LINGUISTICS

1791–1861 Bopp
(comp. phil.)
↓

NOTES ON THE CHRONOLOGICAL TABLE

1. Entries are arranged according to dates of birth. This has the drawback that some authors may have made decisive contributions to scholarship later than younger contemporaries. The reader is referred to the text for details.

2. A vertical arrow (↓) indicates transition, influence, the creation or existence of a school of thought; an asterisk (*) marks figures who show affinities with simultaneous but different developments, or those who initiate new developments. An obelisk (†) marks an author who anticipates future developments. Representatives of the mathematical and the experimental schools of natural science are marked with paragraph and section signs (¶ and §) respectively. Heavy lines indicate differences; Hamann and Herder, for example, are not rationalists. Textual critics are marked (txt.); linguists (ling.). It is hoped that other abbreviations are familiar.

The list includes the names of some authors who have not been discussed, but who are in some way significant in establishing trends.

INDEX NOMINUM

Page numbers divided by a dash indicate a continuous treatment of an author or occurrence of his name on each of those pages. The names and years are given according to the most recent biographical data. They might, therefore, slightly differ from the names given in the text, which in most cases were taken over from the original edition of 1952.

B

Bacchus (Greek-Roman god of wine), 117

Bacon, Francis, Lord Verulam (1561–1626), xxiv; 138; 177; 180; 181; 185; 187; 188; 192; 194; 198; 209–227; 228–232; 234; 239; 240; 242; 244; 247; 264; 266; 269; 277; 278; 328; 329; 341; 443; 450

Bacon, Roger (c.1214–c.1292), 83; 96

Bailly, Anatole, 344

Barker, Andrew, 524

Baron, Hans, 109; 110; 468

Basil (4th cent.), 136

Batteux, *Abbé* Charles de (1713–1780), 342; 401; 414; 415; 440

Baudius, Dominicus (1561–1613), 441

Baudouin de Courtenay, Jan Niecislaw (1845–1929), 313; 374

Baumgarten, Alexander Gottlieb (1714–1762), 341; 342

Baur, Franciscus Johannes (Frank, 1887–1969), 166

Beauzée, Nicolas (1717–1789), 342; 400–404; 412; 461

Beck, Franz, 111

Bellaar Spruyt, Cornelis, 268

Bembo, Pietro (1470–1547), 146; 149; 150

Benfey, Theodor (1809–1881), xiii; xiv; xxxi; 7; 11; 171; 338; 345; 366; 392; 405; 411

Bentley, Richard (1662–1742), 450

Berengar of Tours (997/8–1088), 33; 36

Bergson, Henri (1859–1941), 409

Berkeley, George (1684–1753), 266; 269; 312

Bernard (Silvestris) of Tours (fl. 1150), 34

Bernard of Clairvaux (1091–1153), 70

Bernard Theodoric of Chartres (d. c.1216), 34

Beth, Evert Willem (1908–1964), xii; 78; 79; 157; 288; 310

Bibliander, Theodor (Georg Buchmann, 1504–1564), 160; 170–173; 176; 177

Billeter, Gustav (b. 1873)., 105; 464

Black, Max, 106; 310

Blemmides (Blemmydes), Nicephorus (1197–1272), 362

Bloch, Bernard, 9

Bloomfield, Leonard (1887–1949), 4; 65; 386

Bludau, August, 114; 130; 131; 133

Boc(c)accio, Giovanni (1313–1375), xxiii; 106; 108; 109; 112; 120; 141; 150; 186; 467

Boeckh, August (1785–1867), 445

Boehme, Jacob (1575–1624), 296

Boerhaave, Herman(n)us (1668–1738), 382; 450

Boethius, Anicius Manlius Torquatus Severinus (470–524), 25; 34; 36; 62; 66; 91; 92; 116; 125; 126; 359; 469

Boileau, Nicolas (1636–1711), 343; 416

Boindin, Nicolas (1676–1751), 410

Boineburg, Johann Christian, *Freiherr von ~, Elector of Mainz* (1622–1672), 285

Boll, Marcel, 323

Bonaventura (Johannes

Fidanza, 1221–1274), 42; 200

Bopp, Franz (1791–1867), vii; xiii; xxiii; xxv; 8; 21; 97; 331; 335; 336; 340; 341; 344; 385; 387; 392; 393; 395; 396; 398; 404; 410; 452–462

Borst, Arno, 465

Bos, Lambertus (1670–1717), 441

Bossuet, Jacques–Bénigne (1627–1704), 343; 416

Boutroux, Émile, 210

Bracciolini, Poggio (1380–1459), 108; 112; 114; 120

Brahe, Tycho (1546–1601), 194; 198

Brandi, Karl Maria Prosper Laurenz (1868–1946), 103; 463

Brantome, Pierre de Bourdeille, *Seigneur de* (c.1540–1614), 416

Bréal, Michel Jules Alfred (1832–1915), 452; 453; 459; 460

Bréhier, Émile, 11

Brentano, Franz (1838–1917), 79

Brink, Jan ten, 166

Brøndal, Viggo (1887–1942), 71

Brosses, Charles de (1709–1777), xxv; 342; 344; 353; 354; 366; 373; 385–399; 402; 410; 411; 412; 413; 417; 418; 423; 427; 428; 450; 451; 454; 457; 459; 460; 461

Broukhusius, Janus (1649–1707), 441

Brunet, Pierre (1893–1950), 383; 450

Bruni, Leonardo (1370–1444), 34; 108–112; 115; 186; 224; 467–469

Brunnhofer, Hermann (1841–1916), 204

INDEX RERUM

Page numbers divided by a dash indicate a continuous discussion or at least one occurrence of the topic mentioned on each of those pages. Reference to occurrences in footnotes are not explicitly given. This index covers the translation, foreword and translator's introduction, but does not cover Appendix B. Greek words appear alphabetically according to their translitterated orthography, with exception of vowels with spiritus asper, e.g., ὅρος follows 'Ornament' and is followed by 'Orthoepy'; ψῆφος is treated as if it were spelled *Psephos*.