

**Beyond BOURBON - 1948:  
The Fourth Year of Allied Collaborative COMINT  
Effort against the Soviet Union (~~S-CCO~~)**

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Author's note: This is the fifth and final in a series of *Cryptologic Quarterly* articles on the Allied cryptologic effort against the Soviet Union early in the Cold War. The series began in the Fall/Winter 93 issue and has run in consecutive issues. A companion article to this series, [REDACTED] "Removed from Normal SIGINT Procedure," was published in the Winter 1994 issue.

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**INTRODUCTION (U)**

~~(S-CCO)~~ BOURBON was the formally assigned covername for what was initially a joint American-British project to target communications of the Soviet Union after World War II. [REDACTED] BOURBON was essentially a compartmented project in 1945, and the covername was used extensively throughout 1946 before being replaced by the descriptive "Russian problem" in late 1947. Therefore, 1948 - [REDACTED] but the year that still represents the continuity of the effort begun in 1945 - went beyond BOURBON.

**America and the World - 1948 (U)**

(U) Overall, prices and inflation in America rose at record rates in 1948; by July a buck was worth 45¢ in prewar dollars. Employment, production, and corporate profits also climbed to record levels. Wages rose 39 percent. But by December, employment was down again, and retail stores reported lagging sales. The year 1948 ended with most businesses in decline and with the economy as a whole being characterized with words like "unstable" and "uncertain."

(U) In other words, 1948 had its ups and downs, much like the prince in Shakespeare's play *Hamlet*, the movie of which won the Oscar for Best Picture of 1948. Other endings included India's Mahatma Gandhi, who was assassinated, and Babe Ruth, who died of cancer.

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(U) An ominous nonevent ended the year – the Nobel Committee decided to award no peace prize for 1948, which perhaps explains why quotation marks fell off the Cold War idiom. The two sides of that conflict which had vaguely formed in 1947 became more clearly drawn in 1948: East versus West; communism versus capitalism; totalitarianism versus democracy; Russia versus the United States.

(U) Specifically, the Soviets began to turn that part of Germany they controlled into a separate nation. First, they decreed a new economic administration for their German zone, then declared a separate currency. Finally, the Soviets blockaded Berlin, which the United States and Britain countered with an airlift of food, fuel, and other supplies. Meanwhile, Czechoslovakia fell to the communists, but Tito's Yugoslavia escaped Soviet control.

(U) The Marshall Plan was working in Western Europe, but in Asia, large losses were being taken. North Korean communists decreed a "People's Republic," and Mao Tse-tung's communist army swept through Manchuria, taking control of the northern half of China.

(U) Harry S. Truman asked Congress to reinstate the military draft in case it was needed to meet "Soviet threats," asserting that world peace depended solely on Russia. Truman also won reelection to the presidency.

(U) Finally, Soviet spies seemed to be coming out of the woodwork in 1948. Elizabeth Bentley, Vassar graduate and long-time leader of a Soviet espionage ring, blew the whistle on twelve top "U.S. Reds," including Whittaker Chambers, who in turn, named Alger Hiss and eight other spies. Their mission, largely successful, included stealing America's atomic secrets.

#### *Direct CIA Access to "Raw Translations" (S)*

~~(S-CCC)~~ The protection of America's atomic secrets was a counterintelligence concern, mostly for the Federal Bureau of Investigation (FBI). In contrast, uncovering Soviet atomic secrets should have been the main concern of most of America's intelligence community. The United States Communication Intelligence Board (USCIB), the COMINT member of that community, however, seemed more occupied working community-wide COMINT policy and organizational issues. This effort included fiddling with the COMINT processing business. In April, for example, USCIB gave the Central Intelligence Agency (CIA) (and other consumers) greater access to COMINT activities, authorizing them to receive raw translations and other unfinished products considered by them "necessary for the fulfillment of their mission of producing finished intelligence."<sup>1</sup> Furthermore, COMINT consumer organizations were also allowed to place indoctrinated representatives within COMINT producing sections.<sup>2</sup>

~~(S-CCC)~~ R.H. Hillenkoetter, Rear Admiral, U.S. Navy, and Director of Central Intelligence (DCI), approached the Army Security Agency (ASA) early in 1948 requesting additional COMINT, particularly "raw translations" [REDACTED]

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Unrestricted access to the COMINT "activities," i.e., agencies, was required, according to Hillenkoetter, because it was of "fundamental importance" for CIA to "not only have working access both to the material and activities to determine the existence of *positive* intelligence, but also that [CIA] be aware of gaps in COMINT coverage to shift greater emphasis to other sources when required."<sup>3</sup>

~~(S-CCC)~~ Hillenkoetter had worked out acceptable arrangements with both ASA and the Communication Support Annex, Washington (CSAW), where the U.S. Navy's cryptologic organization was located, but the Army wanted USCIB to "take official notice of the solution." Consequently, the issue was on the agenda for a USCIB meeting held in April. A discussion of terminology started off the issue, with U.S. Army colonel Harold G. Hayes, chief, ASA, preferring the term "raw translations" over CIA's choice: [REDACTED]

[REDACTED] According to the minutes of the meeting, Lieutenant General S.J. Chamberlin, Director of Intelligence, General Staff, U.S. Army, supported the position of Colonel Harold G. Hayes:

The term [REDACTED] means to Colonel Hayes a large volume of material much of which is ultimately screened out and hence never reaches the stage of being translated and written up as COMINT information. He outlined illustrative steps in the processing at ASA and commented that he had been informed that sometimes as little as 20 percent of the original volume of intercepted material is finally processed. He said he would have no objections to supplying the CIA with any specific messages in 'raw' form, for use in verifying particular translations, but that the wholesale delivery of a great mass of crude COMINT material to the CIA by ASA would be mutually inefficient and merely a disorganized approach to a problem that could be handled much more satisfactorily by the Army's furnishing translations to the CIA. He said he believes the CIA really wanted 'raw translations' and that [REDACTED] was a misnomer.<sup>4</sup>

~~(S-CCC)~~ Although all USCIB members agreed with the change of terminology, it was clear from the minutes that Chamberlin was still not happy with CIA's increased access to ASA's material. He launched into a detailed lecture on the importance of protecting the security of COMINT, expressing his concern that "too many people are receiving such information." Hillenkoetter replied that he agreed, but that "a companion problem dealt with the imperative necessary for the CIA to get all available intelligence from all sources, in order to discharge its statutory responsibilities." Chamberlin said he would "personally assume the responsibility to insure that CIA received from the ID [Intelligence Division] all products of the Army CI [communications intelligence] system which would be valuable to the CIA in performance of its mission." Hillenkoetter continued the sparring by observing "that no one could ask for a firmer guarantee than the one given by General Chamberlin." At this point Thomas B. Inglis, Rear Admiral, U.S. Navy and commander, Office of Naval Intelligence (ONI), took up the cudgel, commenting that "even so, the existence of such a guarantee would not in practice act to protect the person guaranteed, because such a guarantee would not be accepted by superiors as a valid excuse for failure to discharge one's responsibilities." At this point, the State Department representative, Mr. Park Armstrong, said he assumed that these procedures applied as well to State. All

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members agreed.<sup>5</sup> While this policy applied to all COMINT, it was clearly directed at, and had its largest impact on, Soviet COMINT.

*Early U.S. Centralization Efforts (U)*

~~(S-CCC)~~ Surprisingly, Soviet cryptographic practices played a role in influencing the U.S. government's early efforts to centralize the processing of COMINT. In October 1948, a new Service Cryptologic Agency (SCA - later Service Cryptologic Element, SCE), the United States Air Force Security Service (USAFSS), was established, joining the existing "dynamic duo" of ASA and CSAW. From a Department of Defense perspective, a new agency meant not only three SCAs to deal with, but added costs. Perhaps it would be less expensive, the thinking went, to create a unified or joint agency. Some U.S. policymakers theorized that a centralized cryptanalytic attack on centrally controlled Soviet cryptosystems might make more sense than the existing and expensive "coordinated but separate" attacks being mounted at the time by the Army and Navy, with the Air Force in the cryptologic wings.<sup>6</sup>

~~(S)~~ This kind of thinking was behind the establishment of the so-called Stone Board (named after Admiral Earl E. Stone, its chairman), which met as directed by the secretary of defense, James V. Forrestal, initially on 25 August 1948, publishing its report in December 1948. This led ultimately to the creation in 1949 of the Armed Forces Security Agency (AFSA), the immediate predecessor to the National Security Agency.<sup>7</sup>

~~(S-CCC)~~ USCIB continued in 1948 to oversee the day-to-day operations of the SCAs through the mechanism of the Coordinator of Joint Operations (CJO), the closest U.S. position to a director, NSA, that existed before 1952. The chiefs of ASA and CSAW took turns each year wearing the second hat as CJO, attempting with limited success to coordinate the separate COMINT operations of each SCA.

*SIGINT Environment (U)*

~~(S-CCC)~~ As in the three previous years, Soviet communications of cryptanalytic interest in 1948 were primarily those found on telegraph lines [redacted] and HF radios (3-30 MHz). But change was in the airwaves. Target communication modes remained mostly manual Morse and radioprinter. Some radiotelephone traffic was found, primarily in the HF range, but VHF (30-300 MHz) communications were also intercepted.



~~(S-CCC)~~ A significantly more important exception to the general picture was the ever-increasing volume of "commercial" unenciphered or "plain language" telegrams

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exchanged by Soviet industrial ministries, research and development (R&D) centers and institutes, and plants and factories. Finally, electronic intelligence (ELINT), mostly radars, continued to be dealt with apart from COMINT by the military services. The USAF's ferret program of aerial reconnaissance, which focused heavily on ELINT, began, however, to show an ever-increasing degree of collaboration with the SCAs' fixed station COMINT operations.

#### **BOURBON Highlights of 1948 (U)**

~~(S-000)~~ Highlights in Allied collaboration included a joint technical conference held in London in July 1948, largely to endorse an enhanced Anglo-American effort against Soviet plain language traffic. There was also continued BOURBON collaboration with

~~(S-000)~~ Human resources continued to be added in abundance to the Soviet problem in 1948, no matter how one counted. The number of Americans and British subjects dedicated to BOURBON rose 62 percent in a year's time. Moreover, in the United States, one third of all SIGINTers worked the Soviet problem (leaving 67 percent working on the rest of the world), with the percentage growing because BOURBON got two thirds of all new hires in 1948.

~~(S-000)~~ The two-thirds fraction applied also to the ratio of available U.S. intercept positions tasked against the Soviet Union, positions that were growing in number in field stations that were increasing both in number and geographic coverage. As a result, U.S. collection of Soviet targets rose during 1948 from roughly [redacted] messages per month to about [redacted]. Of course, the British, with their much larger, more widespread collection capability, still copied most of the Soviet traffic.

~~(S-000)~~ Mr. Herbert Conley, who had been on the staff of the Senior U.S. Liaison Officer (SUSLO), London, in 1947, and was by late 1948 an ASA supervisor involved in analysis and reporting of Soviet targets, assessed in December the strides made in collection and forwarding. First, he reported on recent intercept improvements:

Continued attempts to build up intercept strength [redacted] had made it possible by the summer of 1948 to begin intercept of Russian operational or low-level Military and Military Air circuits in this area. The intercept and analysis of such links has been increased during the past few months, with emphasis being accelerated as the Russians have reduced transmission [redacted]. Operational air links employing radio-telephony transmissions have not been intercepted regularly, but cover of Morse links is extensive.<sup>8</sup>

~~(S-000)~~ Then, Conley pointed out how forwarding to ASA of selected intercept had been made more timely by year's end:

At the present date, Army Security Agency, Washington, is receiving daily by teletype all air defense and operational air traffic intercepted at U.S. stations [redacted] and at British stations

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in the U.K. Information on flights of Russian planes in Europe is available in Washington within a few hours after the flight has been scheduled.<sup>9</sup>

~~(S)~~ [Redacted]

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Speculation about the reasons ranged from normal development in Soviet cryptographic security (the early thinking) to later leanings strongly toward espionage.

~~(S)~~ [Redacted]  
Conley, in his December 1948 ASA-based assessment, picked out [Redacted]

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But, with only backlogs to clean up, U.S. cryptanalytic resources dropped 5 percent by the end of the year:

~~(S)~~ Traffic analysis of Soviet communications reached maturity. Again, Conley, speaking only for ASA, said it well:

[Redacted]

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~~(S)~~ Traffic analysis against the Soviet target was so well developed that when a

[Redacted]

~~(S-OO)~~ Soviet plain-language processing in 1948 rose like a phoenix out of the ashes [Redacted] The major 1947 problem of a shortfall in Russian linguists was on the road to being rectified in 1948. The Russian language work force in ASA and CSAW increased 131 percent, overtaking the number of traffic analysts, and falling only [Redacted] people short of the cryptanalytic work force. Two [Redacted] plain-language messages were reviewed during the year, and ASA alone published [Redacted] reports (more than [Redacted] every working day) based on plain-language material. Limited statistics were available for CSAW, but its linguists in March 1948 scanned over [Redacted] plain-language messages and translated [Redacted] of them.<sup>24</sup>

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~~(S-CCC)~~ GCHQ also quickly recognized the potential significance of Soviet plain language material, pointing out in its April proposal for an expanded BRUSA (British-U.S.A.) exchange that the British [REDACTED]

~~(S-CCC)~~ Allied cryptologists published thousands of COMINT reports in 1948. These reports mixed technical items such as lists [REDACTED] with intelligence information bulletins in the same serialization systems, making little distinction between them except for limiting some technical reports to producer agencies, presumably on the basis of customer interest. The consumer agency seemed to be able to get all the technical details it wanted. More important contemporary distinctions were made between the processing sources, i.e., cryptanalysis, traffic analysis, or plain language.

~~(S)~~ Conley, in his December memorandum, also addressed how timely ASA reporting on Soviet aircraft movements was becoming:

Material from [REDACTED] plain text messages is integrated both at ASA Europe and at ASA Washington so that composite information [REDACTED] is available to intelligence consumers within a minimum of time. ASA Europe is presently issuing to USAFE, through SSO channels, current information on [REDACTED]

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**DEVELOPMENTS IN ALLIED COLLABORATION (U)**

**U.S. - British Liaison (U)**

~~(S-CCC)~~ SUSLO, London, had long wrestled with the problem of shipping copies of British-intercepted Soviet traffic back to Washington, having had to depend for the most part on British transportation assets since BOURBON was implemented.<sup>16</sup> Therefore, it was with great pride, declared a major USCIB accomplishment, when in January 1948, there was finally established a U.S.-controlled air courier service for the transportation of raw traffic from London to Washington. On 20 January 1948, the first batch of raw traffic was delivered at the American embassy, London, by SUSLO for shipment to the United States.<sup>17</sup>

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~~(S-CCC)~~ There was no doubt that cryptologic liaison between America and the British in 1948 was required. U.S. Navy captain Joseph N. Wenger, chief of the Navy's cryptologic organization, wearing his CJO hat, confirmed in February in a statement of collection requirements that the collaboration with GCHQ remained highly desirable. He then cited as justification for the continued collaboration the fact that the British and their [REDACTED]

~~(S-CCC)~~ Liaison channels were used, for example, for the expression of American concerns over British intercept tasking. In May 1948, GCHQ was informed through [REDACTED]

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liaison channels that its diversion of intercept emphasis toward the Soviet target should



~~(S-CCC)~~ The centerpiece for American and British cryptologic liaison in 1948 was the second BRUSA Technical Conference, held from 15 to 26 July. The first conference had been convened in the spring of 1946, shortly after the BRUSA Agreement was signed. GCHQ called for the second conference to review and make changes to the appendices produced during the first conference. ASA was eager for a conference to plan for "emergency relocation of its stations in Europe." CSAW, on the other hand, "yielded reluctantly to the urgings of the CJO," Colonel Hayes, who had replaced Captain Wenger as CJO in April 1948.<sup>20</sup> The conference agenda was to be restricted to five general topics: security and processing; intercept; communications; traffic analysis; and standardization.

~~(S-CCC)~~ One topic, however, got very specific as applied to the Soviet problem. Plain language loomed large for cryptologic managers responsible for the Soviet target. Consequently, Appendix B of the BRUSA Agreement was revised so that the security and dissemination regulations now also applied to Soviet radiotelephone, intelligence, and the grading of plaintext messages. Furthermore, a new Appendix K was formulated to embody the results of a complete survey of the Soviet plain text and radiotelephone targets.<sup>21</sup> There was considerable correspondence between GCHQ and America concerning the exchange of Russian plain language traffic in 1948 (about which more later). During preparations for the London Conference, U.S. Army lieutenant Fred Bright emphasized to Washington that he as a liaison officer needed to understand clearly what was happening in the field of Russian plain-language processing.<sup>22</sup>

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~~(S-CCC)~~ Although American cryptanalysts had worked together with British cryptanalysts in GCHQ spaces since 1945, in December 1948 the first formally integrated "working party" was formed at GCHQ, when three Americans arrived in London to join the Meteorological Party. It integrated U.S. and GCHQ experts in cryptanalysis, traffic analysis and reporting as an element in one of GCHQ's departments, controlled by the director, GCHQ. The MET Party, as it was called, minimized duplication of effort, and increased the identification of "the understanding of what they were transmitting, and Combined parties dealing with traffic analysis, cryptomachines, and intelligence followed.<sup>23</sup>

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(S-CCO) In early 1948, British intelligence authorities proposed collaboration with the United States in electronic intelligence (ELINT), or as it was then called, electronic reconnaissance. In the U.K., ELINT was "supervised" by the COMINT Board of the LSIB. In America, however, the military services controlled ELINT, with USCIB playing no part. Nevertheless, Captain Wenger, in his last month as the USCIB's CJO, was the recipient of the British request for collaboration in ELINT. Wenger called a meeting of all service representatives to address the issue. Ultimately, the director of Intelligence, USAF, proposed that the commanding general, USAF Europe, and the U.S. commander in chief, Mediterranean Fleet, be allowed a "limited and controlled exchange of raw information (not analysis) with the British. . . ." Also recommended was that the overall joint supervision of the exchange "be vested in the Joint Chiefs of Staff."<sup>28</sup> Presumably, these recommendations were agreed to, and for the time being, USCIB evidently played no further part in U.S. ELINT.

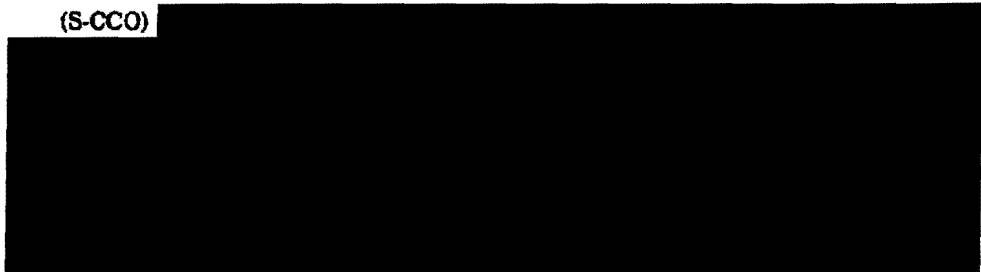
(S-CCO) The good news for future writers and readers of cryptologic history was found in a JLG announcement of 15 October that the secret title London Signal Intelligence Centre (LSIC) would be abolished on 1 November 1948, with instructions that only GCHQ should be used for all purposes thereafter.<sup>29</sup>

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sinister reflections, they could not fail to observe that the partnership resembled the equality of the beef-and-rabbit stew - one steer to one rabbit.<sup>31</sup>

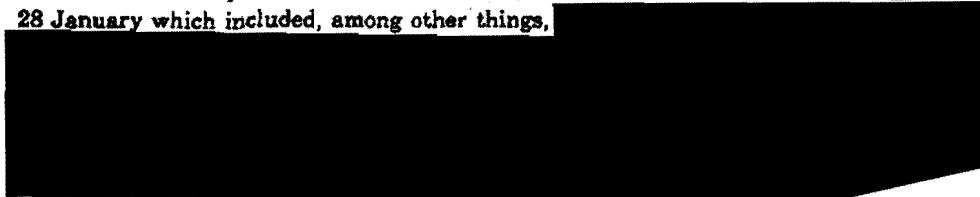
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~~(S-CCC)~~ USCIB was also concerned with the increased risks to COMINT security that went along with widening the knowledge base about COMINT activities generally, and "was disturbed by implications of the [redacted] that there was a weakness somewhere in the existing chain of COMINT security."<sup>32</sup> No agreement was reached but negotiations would continue. Formal letters between [redacted] and Washington were exchanged throughout the fall and winter of 1948, slowly narrowing the differences between the two parties.

~~(S-CCC)~~ Meanwhile, working level liaison continued. By 1948, USN lieutenant Max Gunn of CSAW was [redacted] as a special representative to coordinate technical matters between Washington and the [redacted] pertaining to the establishment and construction of [redacted] radio intercept stations.<sup>33</sup>

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~~(S-CCC)~~ USCIB kept GCHQ informed as to the nature of materials being sent to [redacted]. For example, USCIB provided GCHQ with a list of materials sent to [redacted] on 28 January which included, among other things, [redacted]



*Interruption of U.S.-[redacted] COMINT Relations* ~~(S-CCC)~~

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~~(S-CCC)~~ The United States Communications Intelligence Coordinating Committee (USCICC), composed of senior cryptologic officials and subordinate to USCIB, had been disinclined to satisfy the British request without further explanation concerning [redacted]



~~(S-CCC)~~ But Washington eventually acceded to London's wishes, permitting [redacted] whenever Britain considered such material necessary

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**PERSONNEL RESOURCES (U)**

~~(S-CCC)~~ As it would not be too much of an exaggeration to state metaphorically that in 1947 Americans were thrown at the Soviet problem, thus it is fair to add figuratively that in 1948 Americans were poured into the Soviet problem. ASA cryptologic processing manpower (i.e., not counting collection personnel) dedicated to the Soviet target grew by 48 percent in 1948. Counterpart Navy personnel increased a whopping 78 percent, for an overall American rise of 59 percent in 1948. This rate of increase was double the 1947 rate.

~~(S-CCC)~~ Available statistics for the total of ASA and CSAW personnel (i.e., including personnel working non-Soviet targets) show that personnel dedicated to the Soviet problem accounted for 27 percent in 1947, and 34 percent in 1948, of the total population at the two Washington COMINT centers. As the following chart shows, too, two thirds of all the new hires in 1948 were apparently assigned to the Soviet problem:

|               | ASA Soviet | CSAW Soviet | Total Soviet | Total ASA/CSAW Population |
|---------------|------------|-------------|--------------|---------------------------|
| December 1947 | 434        | 241         | 675          | 2,531                     |
| December 1948 | 6          | 428         | 1,073        | 3,124 <sup>48</sup>       |

~~(S-CCC)~~ A careful review of the statistics will show that, while there were 1,073 Americans assigned to the Soviet problem in December 1948, only 657 were cryptanalysts,

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traffic analysts or language analysts. It turns out that the other 428 people were in support functions such as administration, traffic preprocessing, maintenance, and clerical. Another 171 (or 40 percent) were in the training pipeline, a tail that did not appear identifiable in the monthly statistics until February 1948.<sup>44</sup>

~~(S-CCC)~~ The British, with still fewer people to throw at (or pour into) the Soviet problem than the Americans, nonetheless increased their ante, too. The substantial growth rate of 59 percent in American cryptologic processing personnel was combined with a more impressive 71 percent rise in British cryptologists dedicated to processing the Soviet target. This gave an Anglo-American annual increase of 62 percent, doubling the previous year's rate and continuing the amazing growth (in the face of general reduction of defense forces of both countries), as the following chart shows:

|               | U.S.  | U.K.       | Total      |
|---------------|-------|------------|------------|
| December 1947 | 675   | [REDACTED] | [REDACTED] |
| December 1948 | 1,073 | [REDACTED] | [REDACTED] |

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~~(C)~~ A breakdown of these statistics into the number of cryptanalysts, traffic analysts, and linguists will be presented when the contributions by these individual skills are addressed.

COLLECTION (U)

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~~(S-CCC)~~ By April 1948, the United States had thirty-six Army and Navy field stations, located both stateside and overseas. Britain operated [REDACTED] and the [REDACTED]. Less than a year later, in January 1949, because of various closings and openings of stations, the number of British operated sites had dropped by one to [REDACTED].<sup>47</sup> The U.S. number was thirty-five - including one USAF site (USA-45) for "ferret" flights. Concerning ferret flights in 1948, a "stripped down" USAF B-29 ferret reportedly overflew Soviet "Siberia" on an almost twenty-hour-long reconnaissance mission from Alaska to Japan on 5 August; on 8 August, the same aircraft reversed the flight path, returning to Alaska. These two missions were repeated on 1 and 6 September.<sup>48</sup>

Tasking and Collection Receipts (U)

~~(S-CCC)~~ A glimpse of U.S. intercept tasking for 1-15 October 1948 shows that of 824 documented U.S. collection positions, 548 (or 67 percent) were tasked against Soviet Morse and radioprinter targets. The same picture revealed that eight of [REDACTED] intercept positions were so tasked, with [REDACTED] levied on [REDACTED] remaining positions.<sup>49</sup>

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~~(S-CCC)~~ To show once again how statistics can be misleading, however, apparently not all of those tasked positions were manned. More elaborate statistics for January 1949

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indicated that of 874 U.S. intercept terminals installed, only 372 were manned. Accepting the manned figure as a more accurate reflection of reality, extrapolation would suggest that of the 548 terminals *tasked* against the Soviet Union, only about 233 were *manned*.<sup>50</sup> This number (233) compares favorably with the 196 manned terminals tasked against the Soviet Union in 1947.<sup>51</sup> As in 1947, probably about one third of the more widespread British intercept terminals, which numbered [REDACTED] in 1947, were tasked against Soviet targets in 1948.<sup>52</sup>

~~(S-CCC)~~ Soviet collection statistics vary widely in 1948, depending on the source. Rowlett reported an average of almost [REDACTED] messages per month being intercepted by U.S. stations during 1947.<sup>53</sup> Another study reported an October 1949 total of [REDACTED] Soviet messages.<sup>54</sup> Therefore, by extrapolating those 1947 and 1949 figures, U.S. collection apparently averaged between [REDACTED] messages a month, including plaintext traffic in 1948. This range of numbers appears consistent with the given statistics for the number of plain-language messages *scanned* per month in 1948 of between [REDACTED] (see LANGUAGE PROCESSING section).

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#### *Intercept Terminal and Field Station Support Diary (U)*

~~(S-CCC)~~ In February 1948, Captain Wenger, in his last month as CJO, forwarded to USCIB a statement of intercept terminal requirements which presented an excellent picture of the state of development of collection, including against the Soviet target. For example, it had been determined that an average of six persons was required to staff each terminal, including intercept, maintenance, and communications support. Additional radioprinter intercept terminals were deemed "essential." Moreover, all Morse intercept terminals needed to be retrofitted with frequency shift converters to allow for radioprinter collection as well as Morse intercept. The statement added that, currently,

[REDACTED] were required to provide adequate coverage, assuming continued British collaboration; the required number was [REDACTED] without British assistance.<sup>55</sup>

~~(S-CCC)~~ Washington informed London in March that a newly opened intercept station on [REDACTED] would include Soviet military communications in its tasking.<sup>56</sup> One of ASA's analytic branches urged its superiors in April to downgrade the classification of Soviet [REDACTED] from Top Secret Codeword to Secret Codeword, arguing that "it is essential that the [REDACTED] be available to the intercept station, in order that accurate [REDACTED] identification can be made by the station."<sup>57</sup>

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~~(S-CCC)~~ The U.S. had depended primarily on the British for intercept cover of Soviet targets in [REDACTED]. In fact, the new CJO, Colonel Hayes, estimated in 1948 that 65-70 percent of all Soviet raw traffic still came from British sources.<sup>58</sup> By July, however, ASA was acquiring its own collection capabilities, with [REDACTED]. All sites were undermanned, but operators

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were being trained as rapidly as possible. The [redacted] were authorized a total of [redacted] positions but had only [redacted] installed and only [redacted] operators trained. Soviet Morse and printer links were prominent among the tasked targets.<sup>59</sup> By September, one of the ASA stations was concentrating on intercept of "Soviet low-level activity."<sup>60</sup>

~~(S)~~ Soviet [redacted] Morse signals were intercepted by the British emanating from the Black Sea in July. GCHQ believed the signals were part of a Soviet naval exercise involving five major mobile surface units, a group of up to nine submarines, and five air units, under the direction of Black Sea Fleet Naval Air headquarters and the commander in chief, Black Sea Fleet.<sup>61</sup>

**Monitoring Soviet Submarines (U)**

~~(S)~~ In March 1948, Captain Wenger, chief, Op-20-2 at CSAW, submitted to Rear Admiral Earl E. Stone, who was the chief, Op-20, the Office of Naval Communications, for his signature a memorandum for the "Chief of Naval Intelligence." Wenger reported that a survey had been made and the following information was developed: [redacted]

E.O. 13526, section 1.4(c)

~~(S)~~ Apparently following up in August, trying to acquire more coverage on Soviet [redacted]

**[redacted] Transmissions (U)**

~~(S)~~ In October 1948, CSAW reported that a [redacted] expended in attempting to identify the purpose of those emissions." The transmission was described as [redacted]

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E.O. 13526, section 1.4(c)

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E.O. 13526, section 1.4(c)



**CRYPTANALYSIS (U)**

**Overview (U)**

~~(S-CCC)~~ For the first time since the start of the BOURBON project, the number of people in a particular career field fell, albeit by only 4.8 percent. Nevertheless, the decrease in the number of American cryptanalysts working the Soviet target from 269 in December 1947 to 256 by December 1948 is significant and symbolic, particularly in light of the 59 percent increase in people working the Soviet target generally. This downturn, of course, was a consequence of the [REDACTED]

~~(S-CCC)~~ This small drop in American resources was swept away by a 40 percent increase in British cryptanalysts dedicated to the Soviet problem, giving an overall Allied growth in cryptanalysts of 7 percent as shown in the following chart:

|               | <u>U.S.</u> | <u>U.K.</u> | <u>Total</u> |
|---------------|-------------|-------------|--------------|
| December 1947 | 269         | [REDACTED]  | [REDACTED]   |
| December 1948 | 256         | [REDACTED]  | [REDACTED]   |

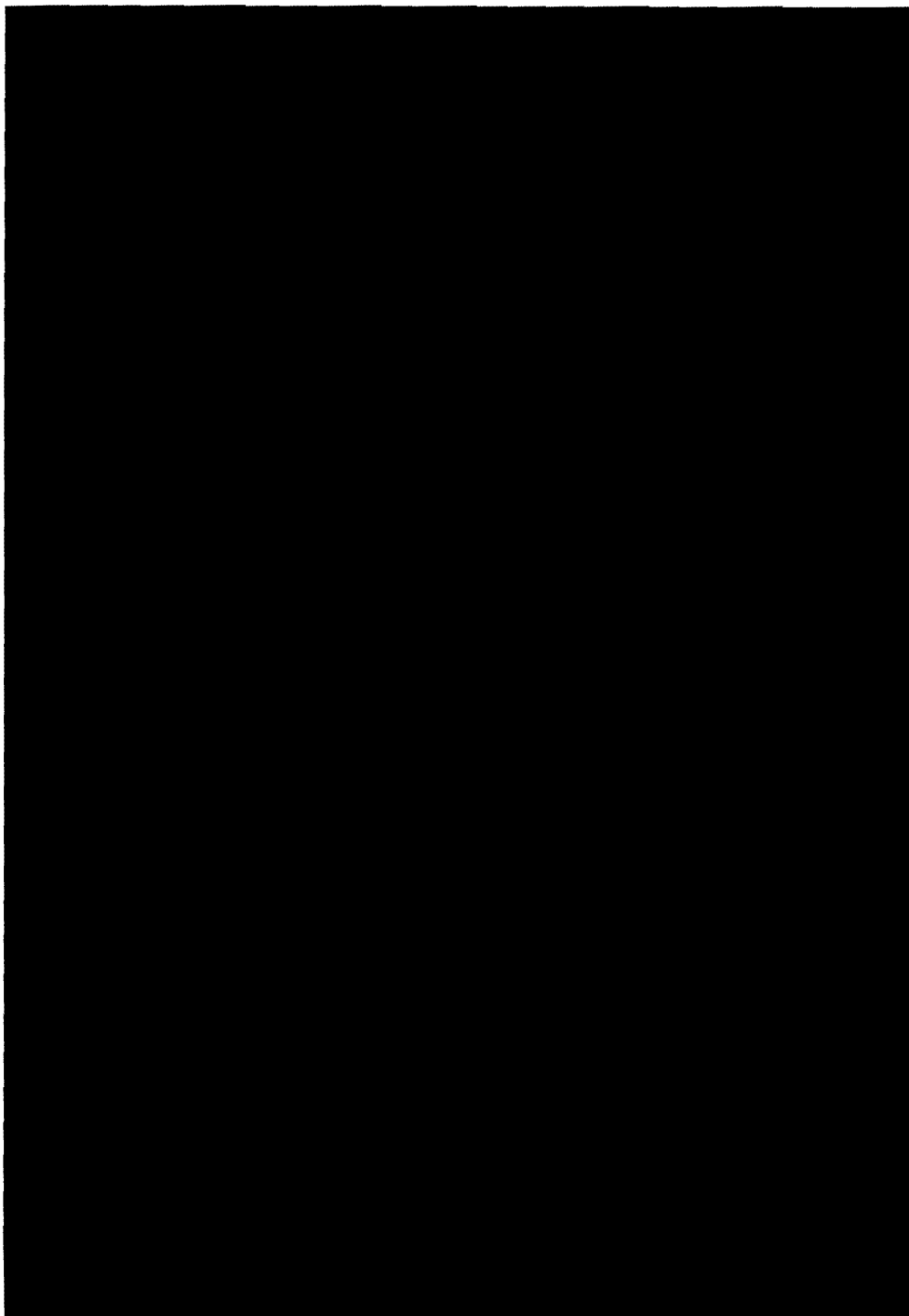
E.O. 13526, section 1.4(c)(d)

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CRYPTOLOGIC QUARTERLY

E.O. 13526, section 1.4(c)(d)



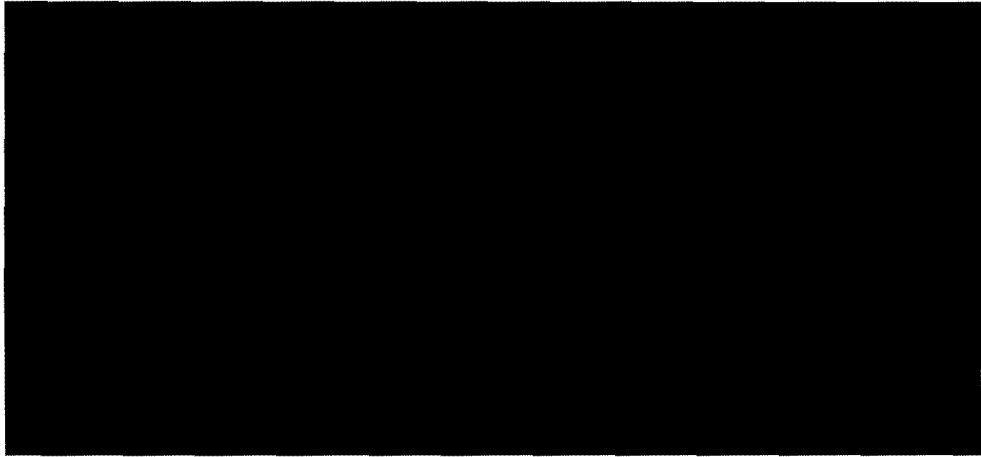
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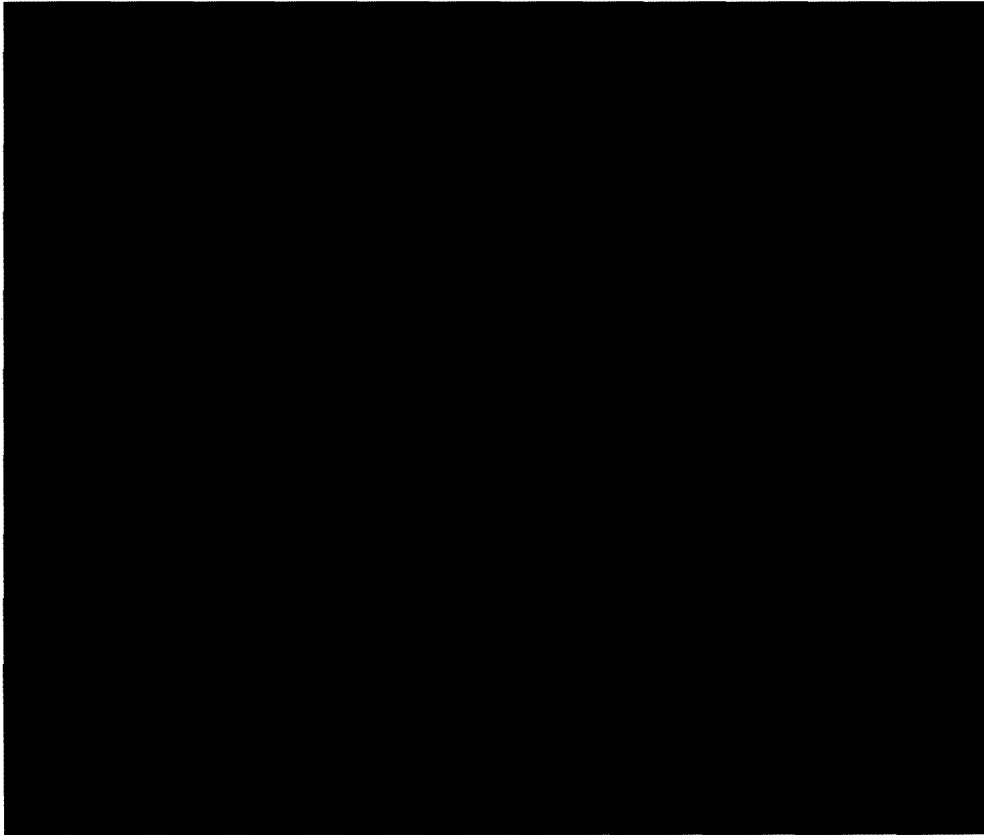
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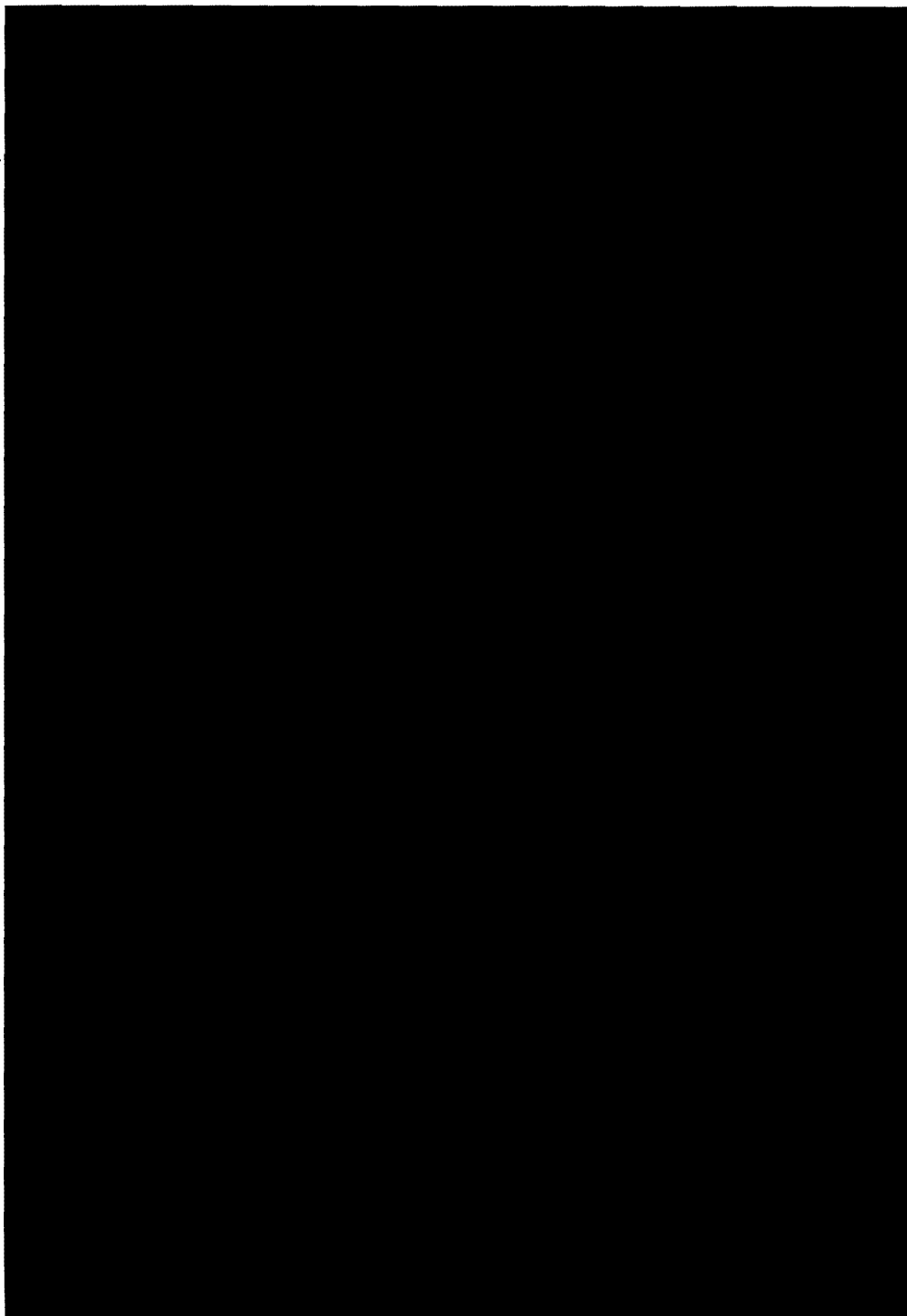
*COLERIDGE Replaced by ALBATROSS, but Not for Long (U)*



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CRYPTOLOGIC QUARTERLY

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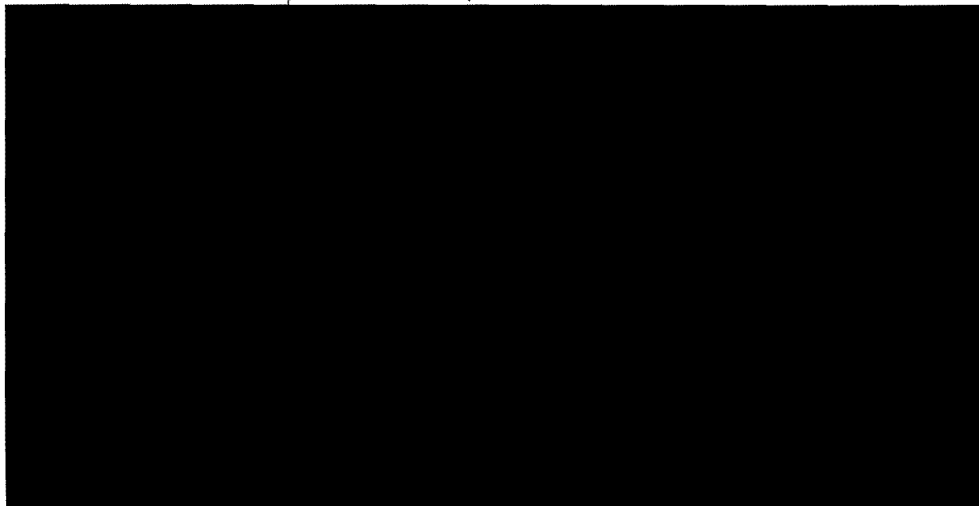
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*So-Long, Lost LONGFELLOW (U)*



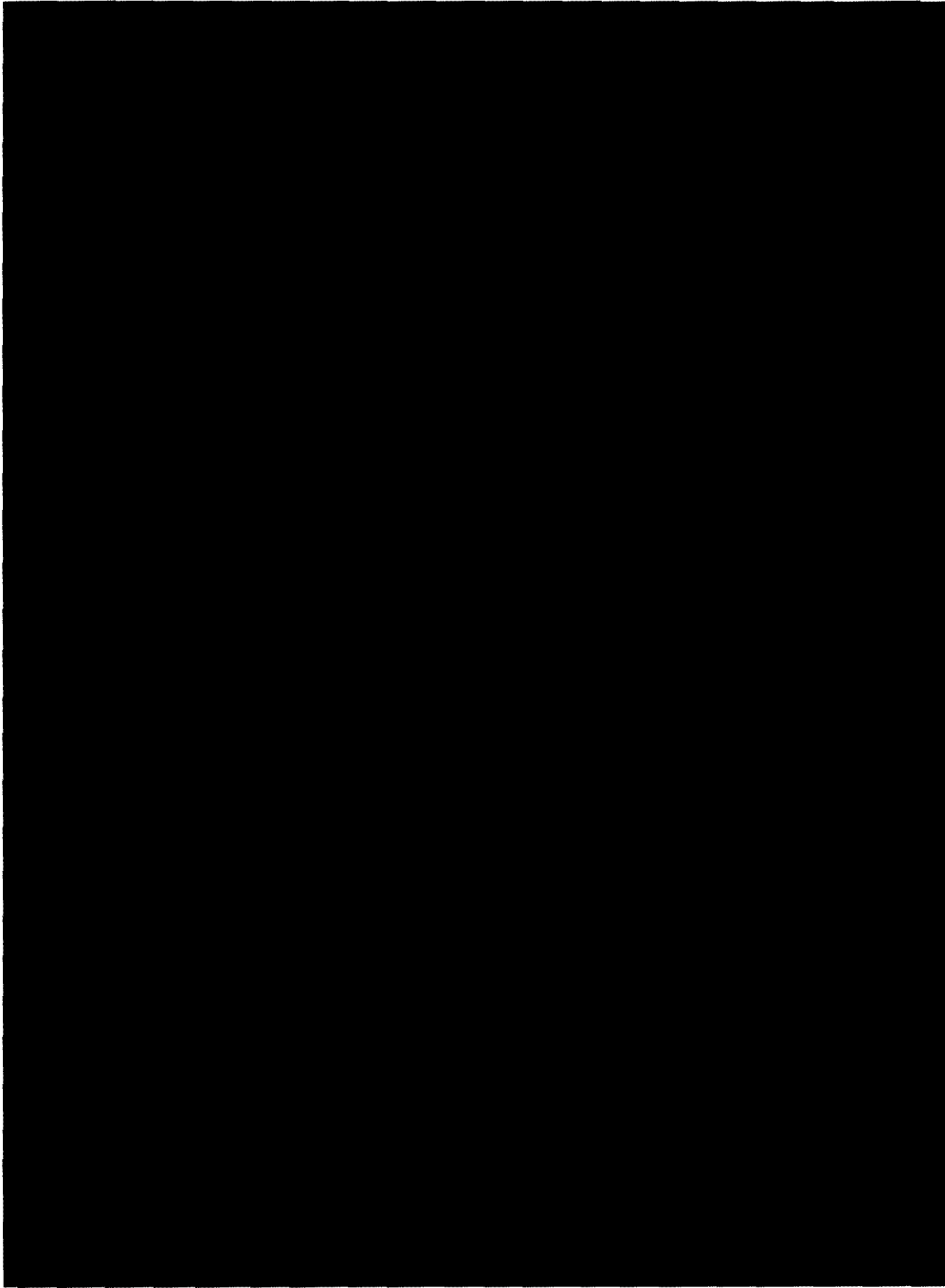
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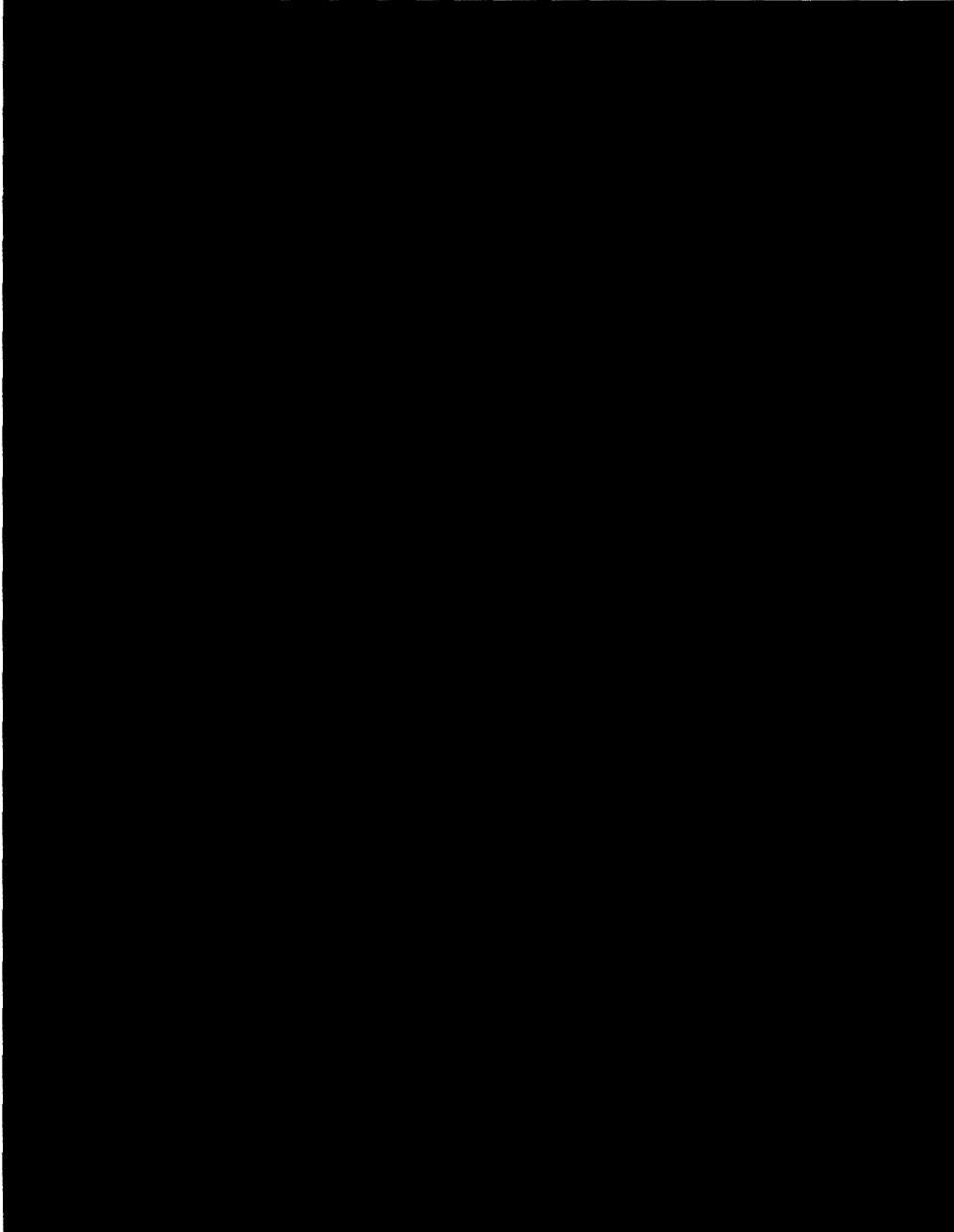
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*POGODA Under the Weather (U)*

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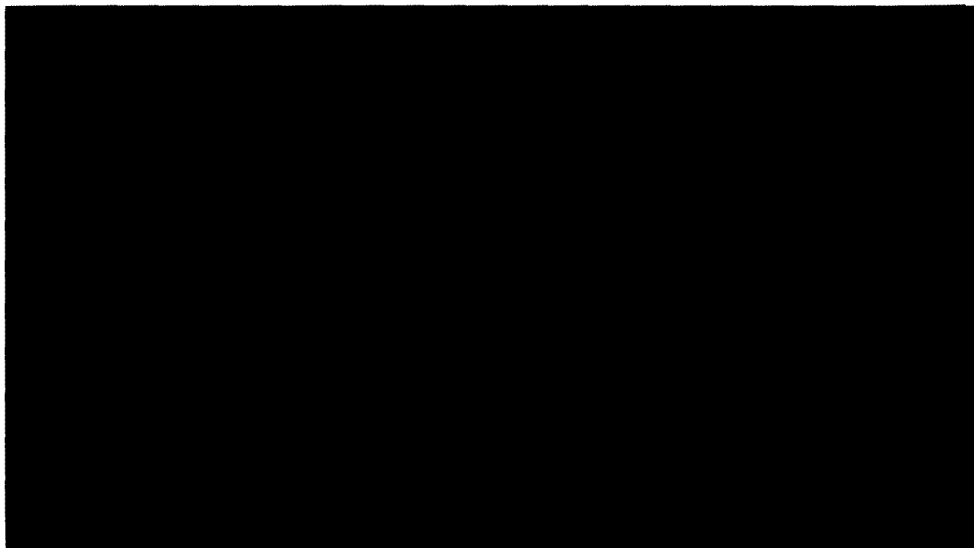
CRYPTOLOGIC QUARTERLY

*Brief Life of the Commercial Scrambler* [REDACTED]

E.O. 13526, section 1.4(c)(d)



*Other Soviet Military Systems (U)*

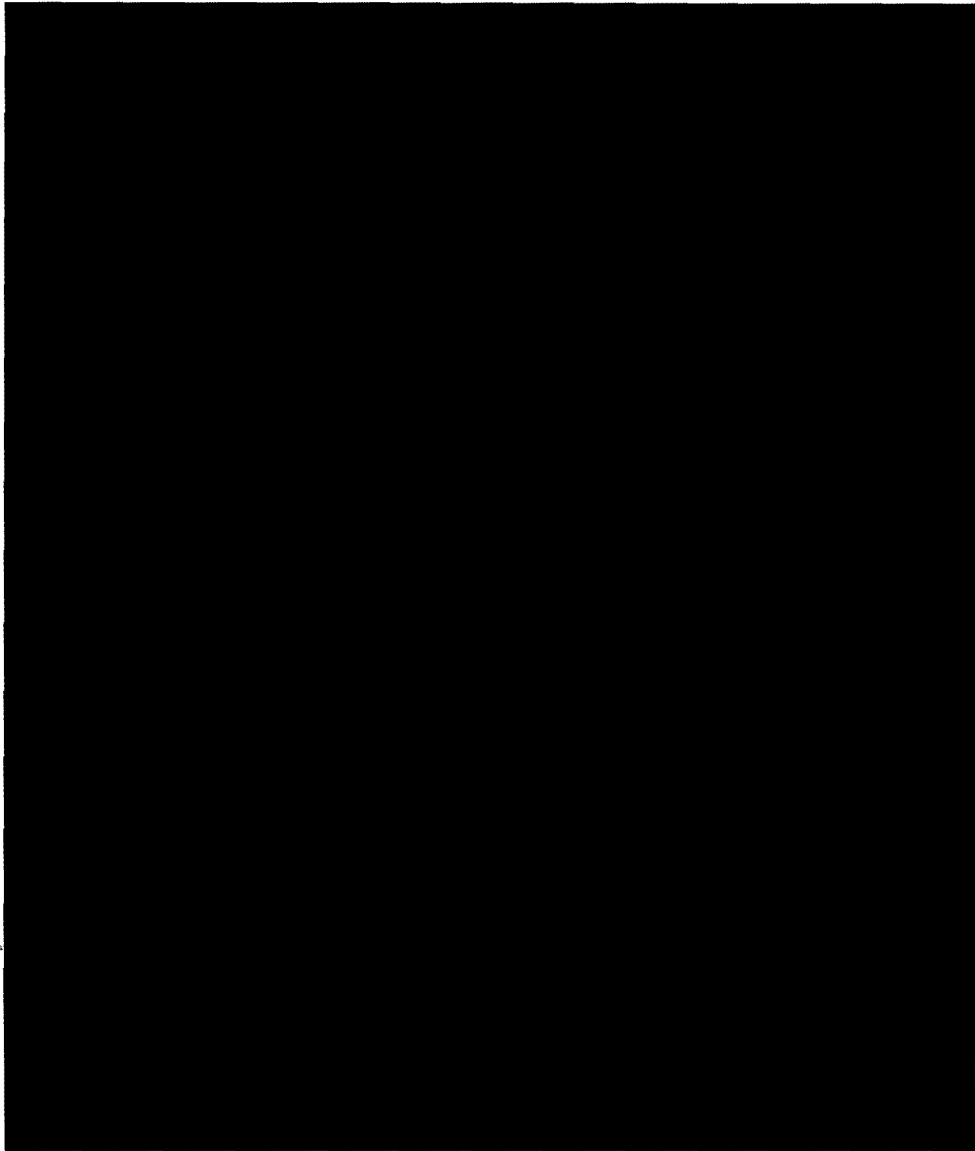


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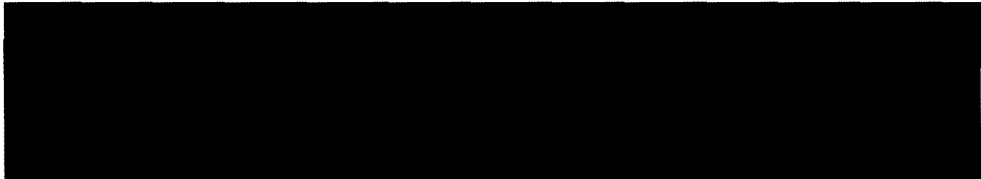
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*IBM & RAM Applications (U)*



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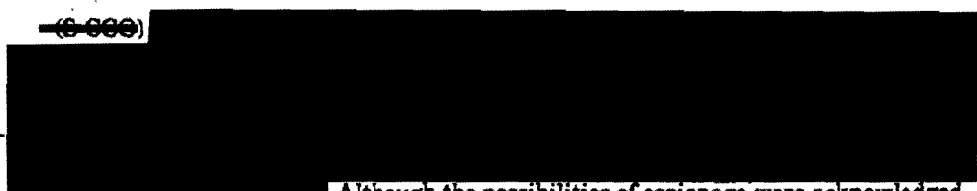
CRYPTOLOGIC QUARTERLY

E.O. 13526, section 1.4(c)(d)




**Espionage or Normal Cryptographic Developments? (U)**

E.O. 13526, section 1.4(c)(d)



Although the possibilities of espionage were acknowledged, CSAW in an internal memorandum concluded that the most probable cause was "normal development of Soviet security program, requiring no specific knowledge of U.S. or British COMINT successes for its basic motivation, but quite probably hastened by deductions based on external evidence which is necessarily susceptible to their observations."<sup>145</sup>

~~(S-CCC)~~ The issue surfaced at a USCIB meeting in November, where its members discussed the possible reasons the Soviets  First, the Board reviewed a letter on the subject received from LSIB. It offered four possibilities: (1) preparation for war; (2) methodical drive to improve communication security; (3) temporary pulling off the air to improve defects; and (4) reaction to a leak. London ruled out the first possibility but could not confirm or deny the last three.<sup>146</sup>

E.O. 13526, section 1.4(c)

~~(S-CCC)~~ Next, the chiefs of the "technical agencies" (i.e., ASA and CSAW), Colonel Hayes and Captain Wenger, were asked their views. Interestingly, they disagreed as to the causes. Colonel Hayes was "strongly inclined toward the belief that leakage of information had been the primary cause." Captain Wenger believed that "further development in the Soviet security program was . . . the most probable motivating factor although none [of the other possibilities] could be definitely ruled out." USCIB decided to refer the problem to its committee on security for study and to make recommendations for action.<sup>147</sup>

~~(S-CCC)~~ The issue was first addressed at a meeting of USCIB's Security Committee on 21 December 1948. The participants agreed to proceed on the assumption of Soviet penetration of Allied COMINT successes and draft a report accordingly.<sup>148</sup>

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~~(S-CCC)~~ At the second meeting on 4 January 1949, the first draft was discussed. Recommendations were to compartment the 

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E.O. 13526, section 1.4(c)(d)

[REDACTED] except plain language. There was much disagreement about what actions to take. The committee did agree, however, that "since the Russian problem

[REDACTED] A decision was made to redraft the report.<sup>149</sup>

~~(S CCO)~~ On 11 January 1949 the Security Committee submitted to USCIB its report citing the following facts bearing on the problem:

E.O. 13526, section 1.4(c)(d)

During 1948 the Russians adopted various successive communication security measures the reasons for which cannot be positively determined but which could have resulted from leakages of information of [REDACTED]

~~(S CCO)~~ Accordingly, the committee submitted a draft USCIB Directive No. 4 (approved on 14 January 1949), which assumed a leak and took measures to reduce the damage of future betrayals. It reaffirmed the "need-to-know" principle for the processing agencies, directing that producers of each COMINT field and task "shall be sequestered and compartmented from other operations to the greatest extent practicable without undue detriment to the operational efficiency and effectiveness," and "reports of progress in each general field of COMINT effort shall be separate from similar reports covering other fields. . . ." Secondly, it directed, for producers and consumers alike, that a COMINT clearance and indoctrination did not entitle one to receive "COMINT from all fields and tasks, or even all COMINT from any one field or task, unless he [or she] specifically requires it." Moreover, a COMINT clearance "shall not be regarded as entitling [one] to receive detailed information on the specific technical successes and processes which have led to its production."<sup>151</sup>

~~(S CCO)~~ GCHQ came aboard in April 1949, when the Allies agreed that added security would be obtained by the "complete separation of work on non-Russian from that on Russian," excluding the early stages of intercept, intercept control, and traffic handling, but incorporating "all phases of traffic analysis, cryptanalysis, translation, publication, evaluation, distribution, dissemination, intelligence appreciation within both the processing and consumer agencies, and exchange of information between the technical agencies." USCIB rejected the recommendation to use a "subsidiary" codeword to distinguish the Russian material from other COMINT.<sup>152</sup>

~~(S CCO)~~ The wisdom of the operating assumption (a leak) and these actions was confirmed a few years later. At least two Soviet spies were subsequently determined to have known that the Allies were achieving some success in reading Soviet cryptosystems. One was Kim Philby, who worked for Britain's MI6 and was a COMINT customer of at least GCHQ's product reports.<sup>153</sup> The other was William Weisband, who worked for ASA as a Russian linguist during the mid- to late 1940s and though not convicted of spying per se, was strongly suspected of being a Soviet agent.<sup>154</sup> Either or both could have and probably did blow the whistle on the Allied successes.

E.O. 13526, section 1.4(c)(d)

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CRYPTOLOGIC QUARTERLY

**TRAFFIC ANALYSIS (U)**

~~(S-CCC)~~ By the end of 1948, the Allied traffic analysis work force dedicated to the Soviet target remained considerably smaller than the corresponding cryptanalytic work force [redacted] but was growing faster (by about 47 percent per year as opposed to 7 percent). The number of American traffic analysts on the Soviet problem actually increased 50 percent in 1948, with the growth in British traffic analysts greater than 43 percent, as the following chart shows:

|               | <u>U.S.</u> | <u>U.K.</u> | <u>Approximate Total</u> |
|---------------|-------------|-------------|--------------------------|
| December 1947 | 104         | [redacted]  | [redacted]               |
| December 1948 | 156         | [redacted]  | [redacted]               |

\*Number in March 1948.

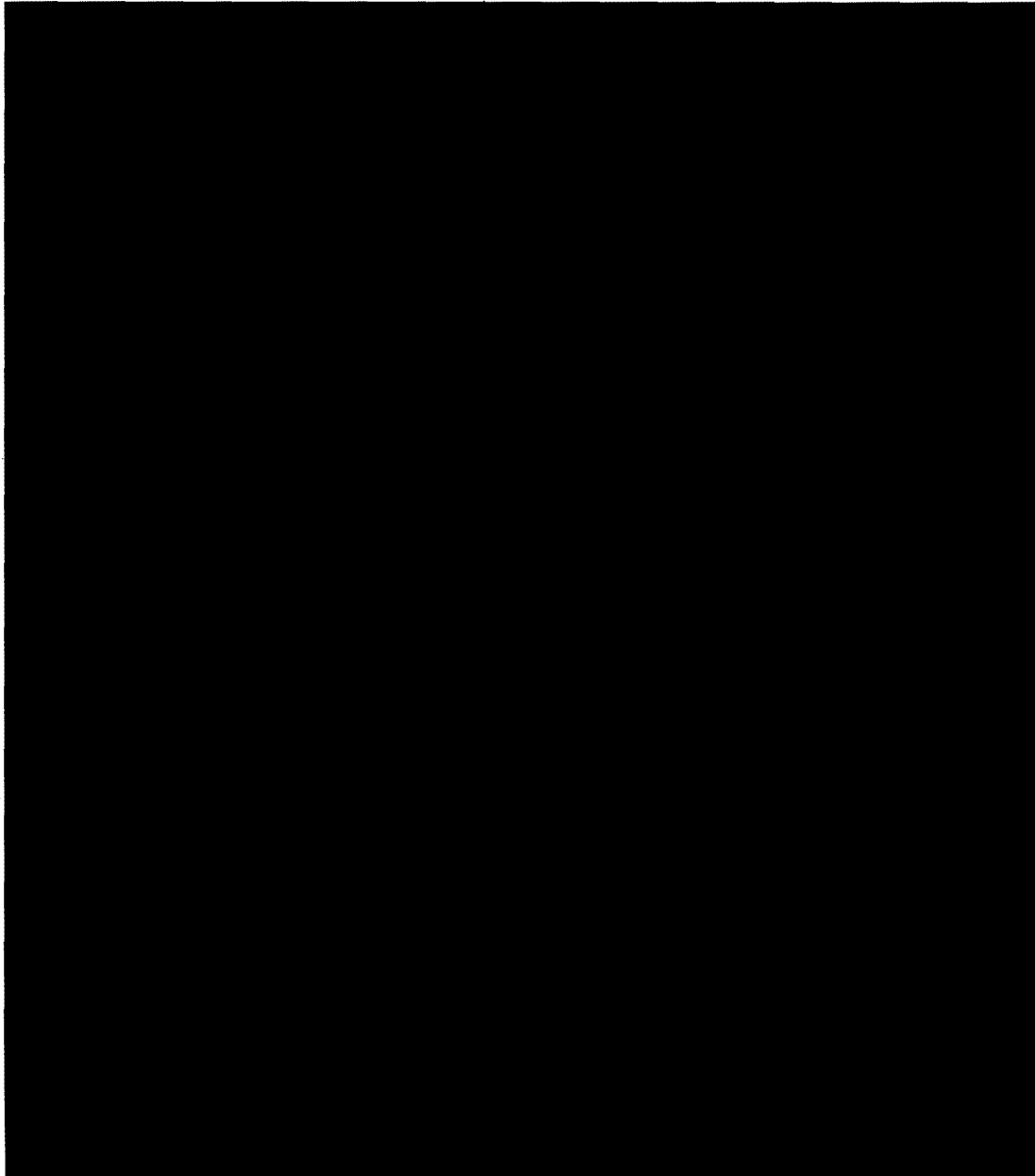
**Onward and Upward (U)**

~~(S-CCC)~~ While undoubtedly all the analytic career fields played their part in the more sophisticated COMINT analysis of Soviet military organizational developments and capabilities, it was the traffic analysis reports that often reflected such strides.

(SC) [redacted]

E.O. 13526, section 1.4(c)(d)

E.O. 13526, section 1.4(c)



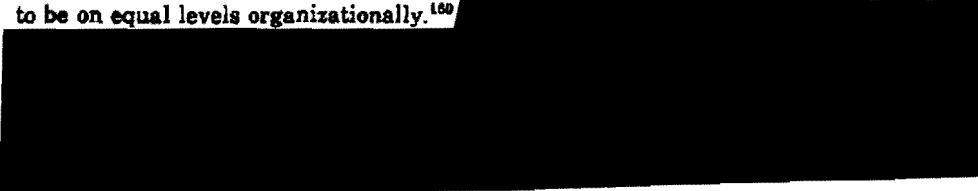
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CRYPTOLOGIC QUARTERLY

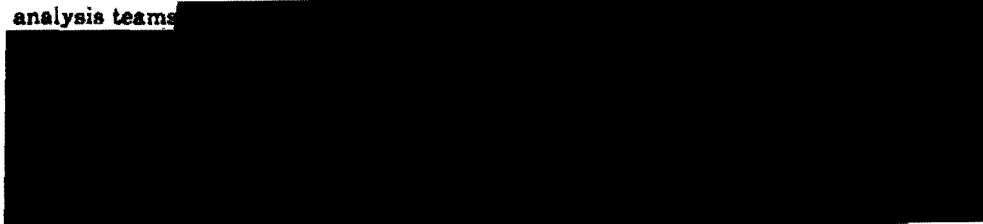
E.O. 13526, section 1.4(c)(d)



(S) Meantime, GCHQ traffic analysts discovered [redacted] that some Soviet Air Defense nets were subordinate to other nets; previously, they had been assumed to be on equal levels organizationally.<sup>160</sup>



(S) An example of the natural tension, healthy if held within reason, between traffic analysis and cryptanalysis surfaced in April at ASA. It seems that one of the traffic analysis teams [redacted]



[redacted] and reported that fact. Scooped but undaunted, the traffic analysis team chief published a memorandum for the record "to reaffirm the validity of Traffic Analysis techniques based on traffic flow and volumes (as opposed to the Traffic Analysis techniques already completely confirmed), and to place in [the Traffic Analysis section's] internal records an interesting item not published formally."<sup>162</sup>

(S) Traffic analysts at GCHQ also complained in April about insufficient collection of certain targets:

In almost all cases ... it will be seen that each system is partly or completely appreciated but the full details can not be produced because of lack of intercepted data. This lack is due both to incomplete cover and to low activity on part of the links. Although Research is mainly satisfied in exposing a system it nevertheless, appreciates that sufficient data must exist to make the answer operationally useful.<sup>163</sup>



E.O. 13526, section 1.4(c)

E.O. 13526, section 1.4(c)(d)

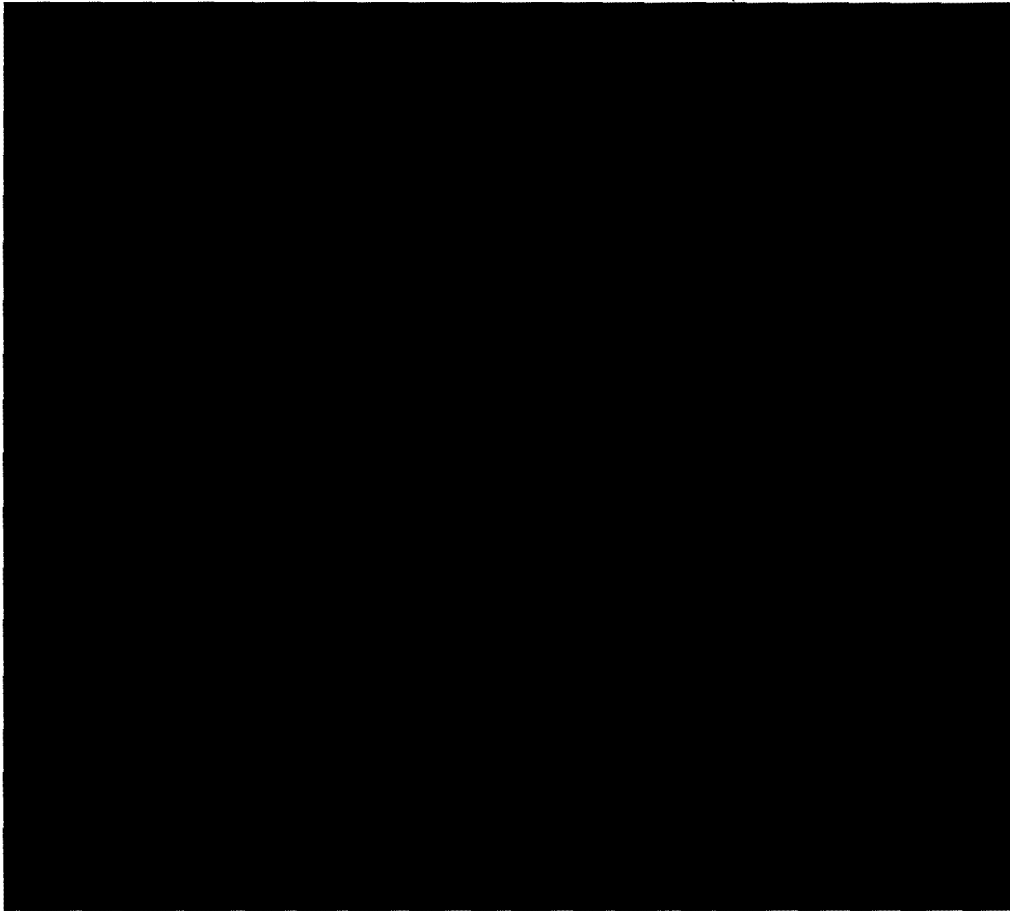
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E.O. 13526, section 1.4(c)



~~(S)~~ GCHQ made more headway into the existing [redacted] in May. Concerning the Soviet military in general, GCHQ cited "two important discoveries which will produce operational Intelligence as data accumulates." The first was the understanding of the way the Soviets were [redacted] and the second was the use of [redacted] Soviet air target; [redacted]

E.O. 13526, section 1.4(c)(d)

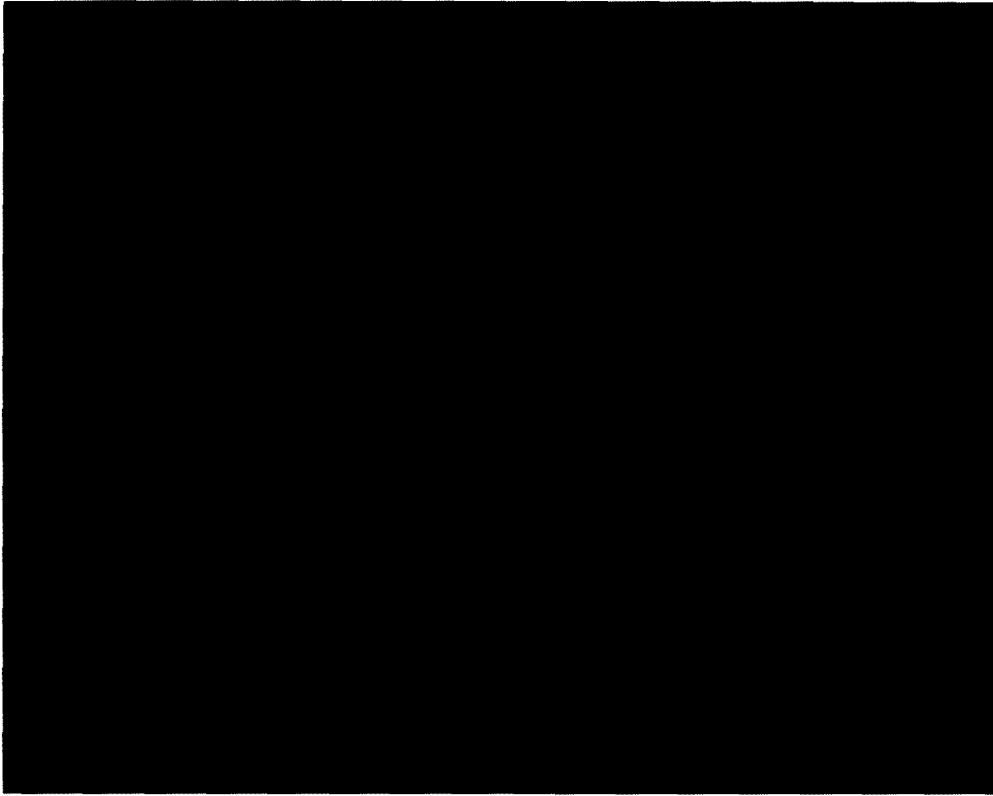
~~(S)~~ Traffic analysts were routinely following the training activities of Soviet forces by July. For example, GCHQ watched the [redacted]

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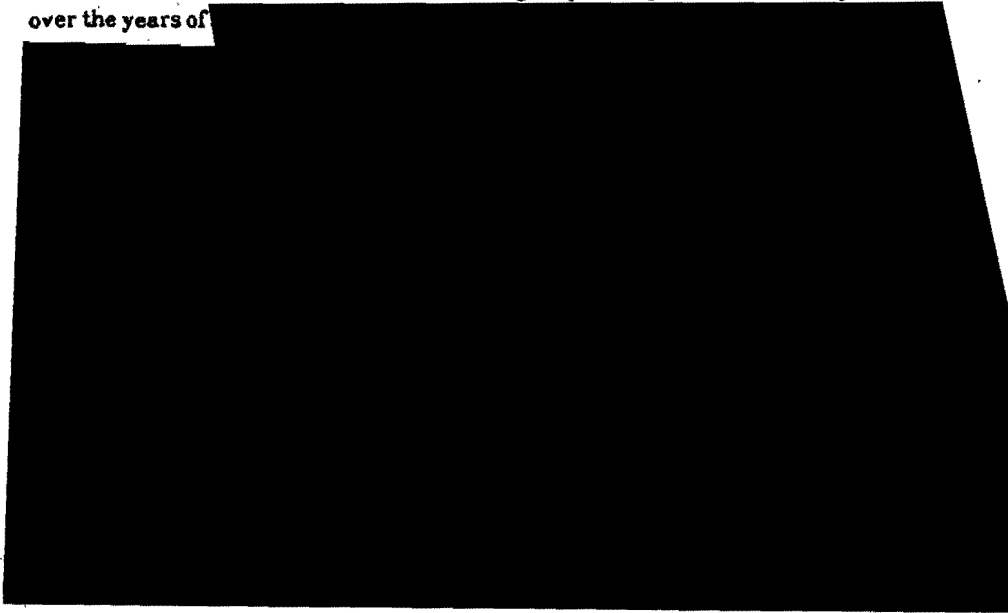
CRYPTOLOGIC QUARTERLY

E.O. 13526, section 1.4(c)(d)



~~(S)~~ ASA traffic analysts detected in August probably the first of many occurrences over the years of

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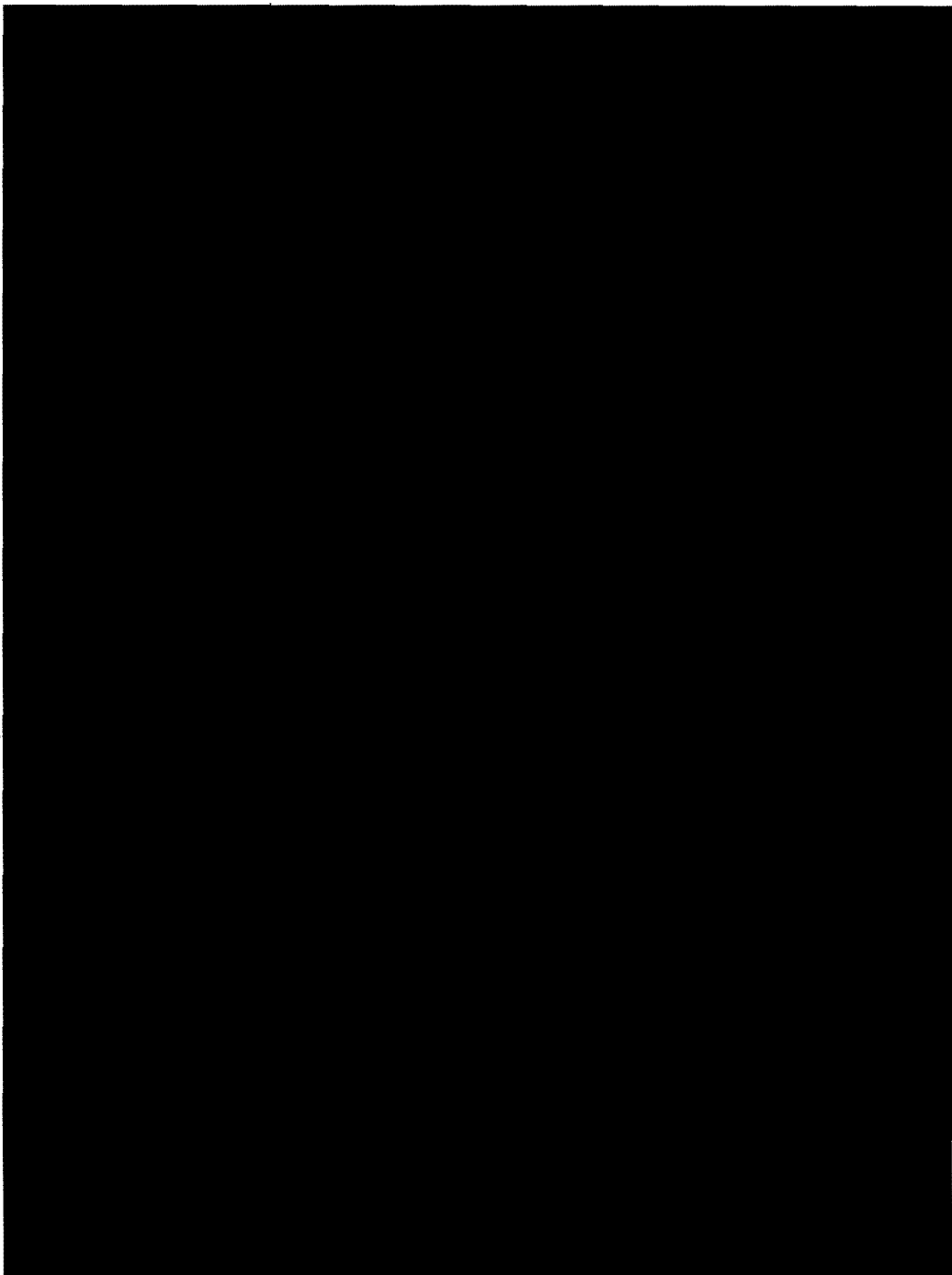


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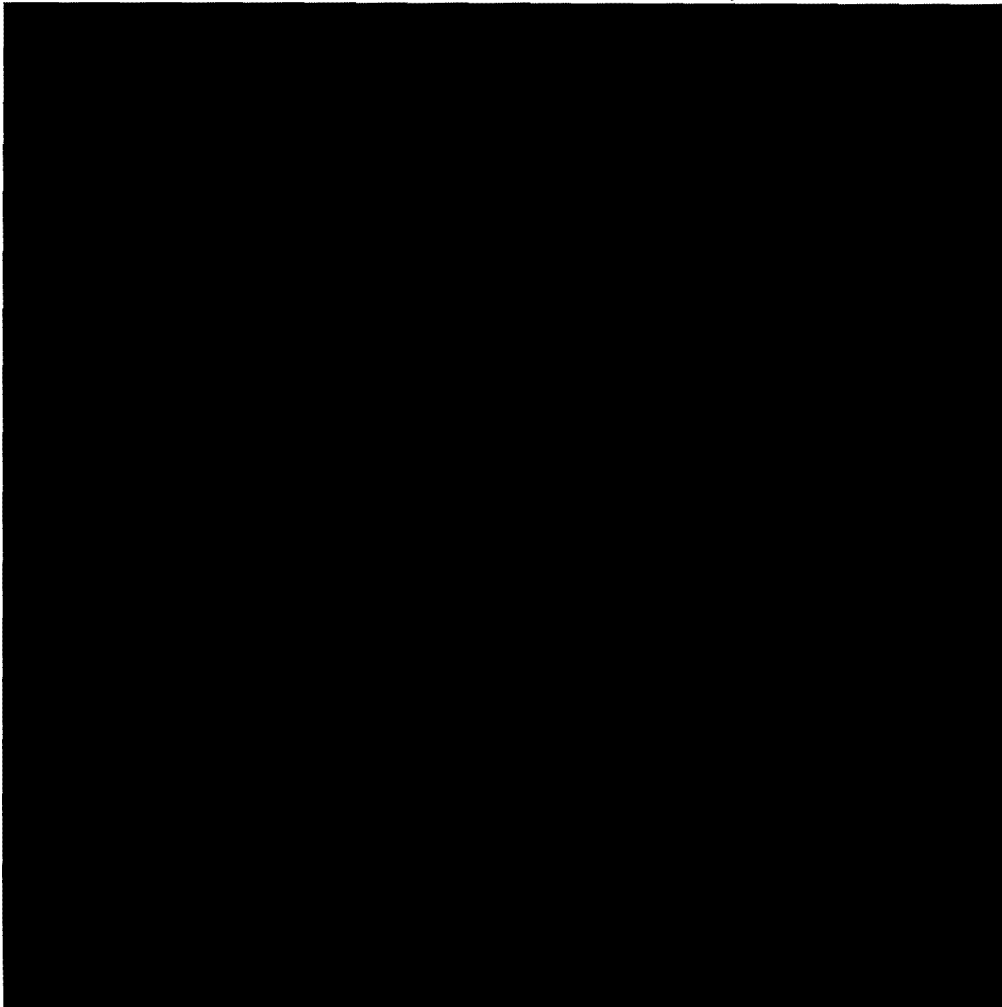


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E.O. 13526, section 1.4(c)(d)

**LANGUAGE PROCESSING (U)*****From Cryptolinguistics to Plain Language (U)***

~~(S-CCO)~~ In 1945, the Russian linguist work force in America was the smallest of the three primary career fields (the other two being cryptanalysis and traffic analysis) involved in processing Soviet collection. By 1948, it was in second place and climbing fast. The number of ASA and CSAW language analysts grew by 131 percent during 1948, overtaking the traffic analysis work force and closing in on the cryptanalytic personnel strength devoted to the Soviet target, falling only [redacted] short.<sup>168</sup> Limited statistics available for GCHQ carried [redacted]

Consequently, Allied language

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E.O. 13526, section 1.4(c)(d)



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resources dedicated to the Soviet target grew by 76 percent in 1948, as the following chart shows:

|               | U.S. | U.K. | Approximate Total |
|---------------|------|------|-------------------|
| December 1947 | 101  |      |                   |
| December 1948 | 233  |      |                   |

E.O. 13526, section 1.4(c)(d)



~~(S-CCC)~~ The Soviet plain-language effort began as an adjunct to cryptanalysis. Often plain language

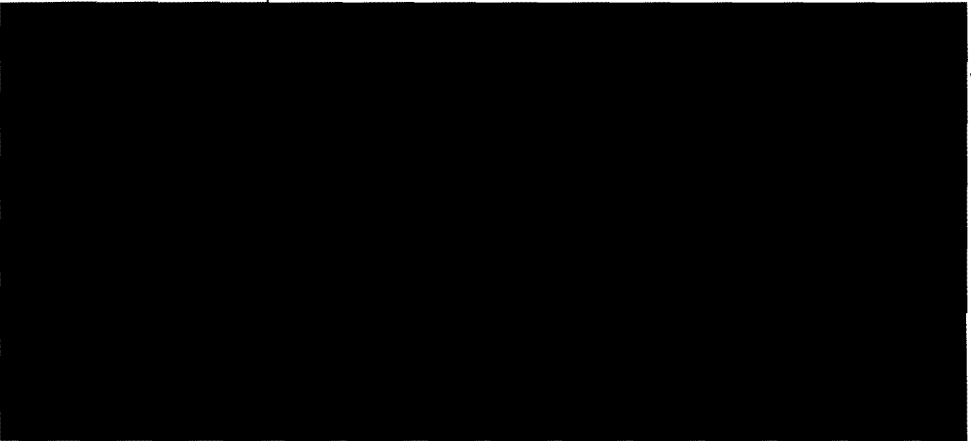
occasionally directly containing intelligence information. Eventually, Allied collection "tapped" into a wealth of plain-language telegrams not directly of a military nature, but of great value for economic and military-related information if processed adequately.

plain-language exploitation took on enormously enhanced attractiveness.<sup>188</sup>

E.O. 13526, section 1.4(c)(d)

**ASA's Plain Language Effort (U)**

~~(S-CCC)~~ Excellent statistics are available for ASA's plain language effort during 1948. Actually beginning in December 1947 with sixteen Russian linguists dedicated to the plain language effort, ASA acquired, trained and assigned on average eight additional Russian linguists per month throughout 1948, ending the year with 111 (see Appendix).<sup>189</sup> ASA took steps in September to exceed even this number, in part by starting an intensive six-month Russian language training course in September, with thirty-one students.<sup>190</sup>



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**CSAW's Plain-Language Effort (U)**

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~~(S-CCO)~~ CSAW had thirty-one Russian linguists in December 1947 and eighty-one doing language work by December 1948, an annual growth rate of 261 percent.<sup>194</sup> While CSAW likely allocated a substantial number of Russian linguists to plaintext work, it apparently did not (as ASA did) publish during 1948 what portion of its growing linguist population was [redacted] and how many were working the plain language target.<sup>195</sup> (In 1949, CSAW had sixty-seven Russian linguists doing plain language work, but this time its total Russian language force was not given.)<sup>196</sup>

~~(S)~~ That CSAW linguists were working the plaintext problem there is no doubt, because the number of messages scanned and translated there was impressive, as the following statistics show:

| Month/Year    | Scanned    | Translated |
|---------------|------------|------------|
| May 1946      | [redacted] | [redacted] |
| December 1946 | [redacted] | [redacted] |
| May 1947      | [redacted] | [redacted] |
| March 1948    | [redacted] | [redacted] |

**The British Effort and the London Technical Conference (U)**

E.O. 13526, section 1.4(c)(d)

~~(S-CCO)~~ GCHQ's Ryder Street plain language group was still active in February 1948. Lieutenant Colonel William G. Bartlett (downgraded in rank from colonel like many other officers after World War II), SUSLO, London, informed Washington in February that Mr. Arthur W. Bonsall, who as Sir Arthur would serve as director of GCHQ from 1973 to 1978, [redacted] and would be relieved in April by John Beaumont. GCHQ was considering sending Bonsall to the States after his relief to discuss the "Russian civil plain language problem."<sup>198</sup>

~~(S-CCO)~~ In March, about fourteen months after the first American visit (U.S. Navy commander Grant Manson; the first SUSLO London, visited the Ryder Street facility on 31 December 1946), a First Lieutenant Frederic J. Bright, U.S. Army, a new SUSLO London staff officer, paid a visit to GCHQ's Soviet plain-language operation on Ryder Street, London (GCHQ organizational designator [redacted]).

~~(S-CCO)~~ A few weeks later, Lieutenant Bright alerted Washington to GCHQ's proposal for a conference. He explained that GCHQ's director, Sir Edward W. Travis, had first planned to send a party to Washington to discuss the plain language issue but changed his mind. Now, he was going to send Washington a "complete report on both the intercept and the processing of the traffic" then call for a conference to be held in London "this summer to discuss the problem."<sup>199</sup>

~~(S-CCO)~~ The very next day, 2 April, Travis, writing for the chairman of LSIB, sent a formal memorandum to the chairman, USCIB (Rear Admiral Thomas B. Inglis U.S. Navy,

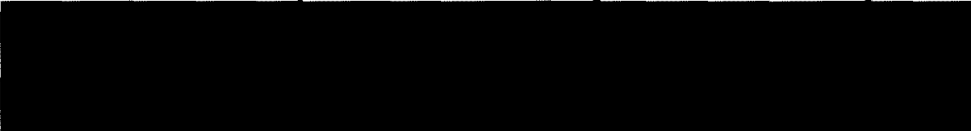
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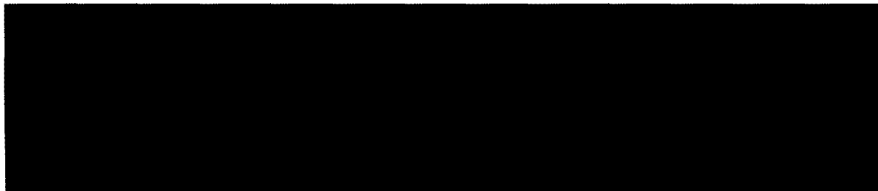
director, Naval Intelligence), on the subject of "our limited effort on Russian Plain Text traffic [which] has produced most important information." The memorandum expressed concern over British loss of information resulting from lack of manpower and limitations on collection. Travis also mentioned that a report of a survey GCHQ made on the problem was enclosed. He thereupon formally proposed a joint British-U.S. effort, with details to be discussed at a special conference to be held in London.<sup>201</sup>

~~(S-CCC)~~ This call for Soviet plaintext collaboration included an increase in the scope of Allied collaboration as spelled out in the BRUSA Agreement of 1946. The agreement



unwanted material. Inglis wrote LSIB on 3 June 1948 that the British plan was acceptable to USCIB. It would be approved at the London Conference.<sup>202</sup>

~~(S-CCC)~~ The GCHQ survey forwarded to Washington by Travis in April came in two parts, beginning with Enclosure A, a general description of the target:



~~(S-CCC)~~ Enclosure B of GCHQ's survey provided a detailed history of British efforts against Soviet plain text, including the following suggestion of the original size of the Ryder Street operation: "British exploitation of Russian plain-text as an entity began in September, 1946, in a section of [redacted] persons . . ." suggesting the original size of the Ryder Street operation.<sup>204</sup> Lastly, this enclosure contained GCHQ's proposal for expanded exchange:



~~(S-CCC)~~ Later in April 1948, Colonel Hayes, once again the CJO, informed USCIB that ASA and CSAW had agreed on a plan to coordinate their exploitation of "Russian Plain Language Processing" which would maximize production and minimize duplication of effort.<sup>204</sup>

E.O. 13526, section 1.4(c)(d)

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~~(S-CCC)~~ In May, GCHQ forwarded to Washington another study which, among other things, assessed their plain-language effort:

E.O. 13526, section 1.4(c)(d)



~~(S-CCC)~~ In June, Frank Rowlett, who was still chief, ASA's Operations Division, sent a package of write-ups on the Allied plain language program to Lieutenant Bright in London. One was the "write-up on the ASA Russian Plain Text Unit previously promised you. It was delayed longer than I had anticipated." Another in the package was a copy of the British proposals.<sup>208</sup>

~~(S-CCC)~~ Preparations for the London Conference continued. Speaking for SUSLO London, and perhaps also for GCHQ, Lieutenant Bright informed Rowlett and Colonel Hayes in July that he considered the ASA write-up "comprehensive," covering the field "very well." He also reported that [redacted] the Ryder Street office, "was very pleased with the formal USCIB proposals, so that the work of that conference committee should be greatly simplified."<sup>209</sup>

~~(S-CCC)~~ The London Conference produced one revised appendix plus a new one on the Soviet plain-language effort. Appendix B was revised so that the security and dissemination regulations applied to Soviet radiotelephone [redacted] and the grading of plaintext messages. A new Appendix K was formulated [redacted]

*Plain Text Tie-in to Radio-Telephone Activity (U)*

E.O. 13526, section 1.4(c)(d)

~~(S-CCC)~~ Lieutenant Fred Bright, the SUSLO London staff officer, also discovered that GCHQ had included a [redacted]



~~(S-CCC)~~ GCHQ demonstrated an early capability to produce [redacted] Within a few days of acquiring plain-

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E.O. 13526, section 1.4(c)(d)

language information derived from [REDACTED] in July that revealed the existence of a new airfield at [REDACTED]

**SIGINT REPORTING (U)****Overview (U)**

~~(S-CCC)~~ In 1948 COMINT reporting, or as it was more commonly called then, "dissemination," was the responsibility at ASA of the Information and Documents Branch (CSGAS-95). At CSAW, it was the Information Division (NI). Each unit received finished COMINT from the cryptanalytic and traffic analysis sections and passed it on to authorized consumers. Published translations (bulletins), prepared in a format standardized by the CJO's subordinate Joint Processing Allocation Group (JPAG), was the principal means of reporting COMINT. All Soviet COMINT was published in a special series. All bulletins were exchanged with GCHQ, who in turn forwarded copies of all its bulletins to ASA and CSAW.<sup>213</sup>

~~(S-CCC)~~ Most significantly, COMINT consumers in 1948 acquired the right of access to virtually raw traffic:

E.O. 13526, section 1.4(c)(d)

In addition to receiving published bulletins, the consumer agencies were allowed to obtain [REDACTED] and other unfinished COMINT products necessary for the fulfillment of their mission, and to place indoctrinated representatives within COMINT producing sections. These arrangements were sanctioned by USCIB on 27 April 1948, in connection with a request by the CIA for fuller access to COMINT activities, and were made applicable to all USCIB members. The exact categories of COMINT products and information to be made available could not be laid down in advance, but had to be left to the judgment of the individual consumers.<sup>214</sup>

~~(S-CCC)~~ This USCIB sanction was probably unsettling to COMINT producers, but its ramifications, if any, did not appear in the cryptologic archival record for 1948. Perhaps there was no problem at the time; the COMINT agencies were reporting all the technical details anyway.

**Technical Reporting (U)**

E.O. 13526, section 1.4(c)(d)

~~(S-CCC)~~ The distinction between what are today called technical reporting and product reporting was in 1948 still not clearly defined. As in the three previous years, 1948 reports intended for the COMINT customers still contained much technical information, including [REDACTED] names. The customer knew, for example, which reports came from [REDACTED]

~~(S-CCC)~~ That said, the Allied cryptologic agencies produced a great volume of technical reports on the Soviet target in 1948. On the American side, under the banner of

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the JPAG, several series of essentially technical reports were published. One of these was, of course, the U.S. Monthly Status Report, under the CJO's signature, which summarized virtually everything the U.S. processed during the month. Each monthly was an enormous document, always well over 100 legal-size pages, containing the numbers of each agency's personnel (by career field), processing and machine applications, and highlights, plans, a cryptographic summary, a traffic analysis summary, then detailed information of every specific foreign cryptographic system under study. The Soviet portion itself averaged twenty-five to thirty pages every month.

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~~(S-CCC)~~ In addition, JPAG published [redacted] "Interim Reports" every year, approximately [redacted] copies to a distribution of at least six and sometimes as many as fourteen internal and external elements. Most of these were technical reports for the COMINT community, [redacted]

~~(S-CCC)~~ ASA and CSAW produced Soviet-related Interim Reports, not only [redacted]

~~(S-CCC)~~ Exceptions to these purely technical reports included the sanitized SECRET noncodeword weekly CSAW-produced "OP-20-NT-1 Russian Traffic Information Summary, period 2 through 8 February 1948"<sup>227</sup> which read, not surprisingly, like a weekly intelligence summary of Soviet naval and naval air activity, and included the commanders in chief, Pacific and Atlantic Fleets, on the distribution page. ASA's special report "Abnormal Water Levels of the Danube River System,"<sup>228</sup> included the Special Research Branch of MID on distribution. Clearly, these were in effect product reports lumped in what was generally a technical reporting series.

#### *U.S. Product Reporting, Generally (U)*

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~~(S-CCC)~~ As in 1946 and 1947, ASA and CSAW continued to publish [redacted] based product reports in the RU Series 5 x 8 inch cards, and traffic analytically derived COMINT in the V-TAF Series reports.<sup>229</sup> What was new in U.S. product reporting in 1948 was the plain-language reporting (see following page).

~~(S-CCC)~~ As had been done since 1945, U.S. cryptologic agencies continued to include technical details such as the [redacted] in all reports creating a security hazard that was not *addressed* until 1949 when the creation of the Consolidated Information Dissemination Office, or CONSIDO, was proposed and not

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not solved until later. CONSIDO, designed to satisfy the recognized need to centralize the evaluation and follow-on dissemination on COMINT, was never established.<sup>230</sup>

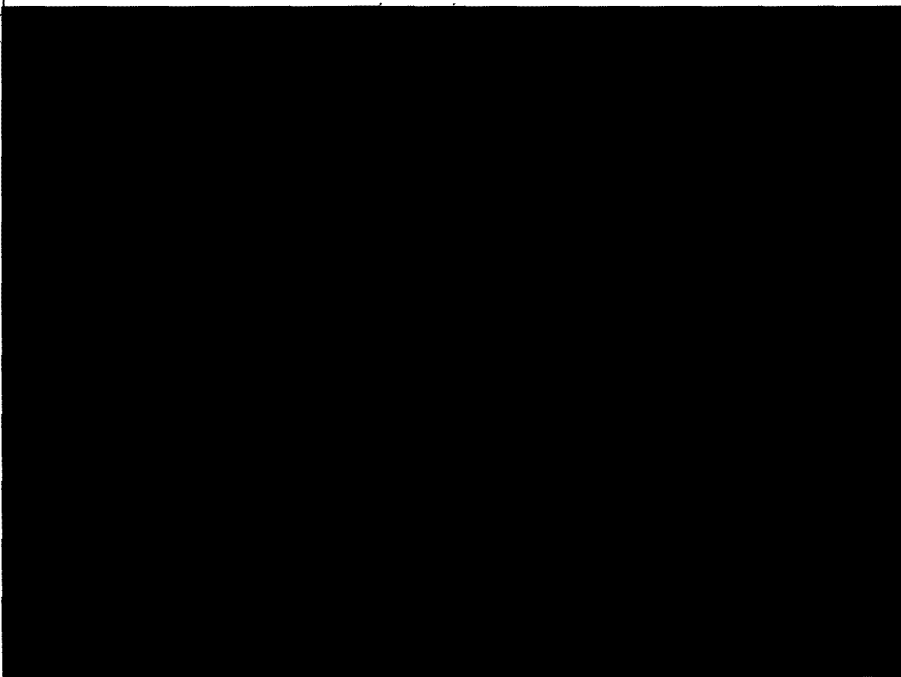
***U.S. Plain-Language Reporting (U)***

~~(S-CCO)~~ In January 1948, USCIB established a RU-PLAI reporting series, for "Russian Plain-Language Analysis Items," which would be made up of

individual identifications or organizations involved in economic activities, their titles, locations, subordination, personalities, and activities, derived from the analysis of plain text messages intercepted on various commercial radio circuits of the USSR. The date given at the right is the last appearance of the identification in messages. These items will serve to provide additional information on a current basis to supplement studies of the more important ministries and directorates of the USSR.<sup>231</sup>

~~(SC)~~ Apparently, ASA produced these plain-language reports in a joint effort with the U.S. Army's Military Intelligence Division (MID) as each report was annotated: "Prep by ASA, ID." The first substantive report, produced on 5 x 8 inch cards, looked like this:<sup>232</sup>

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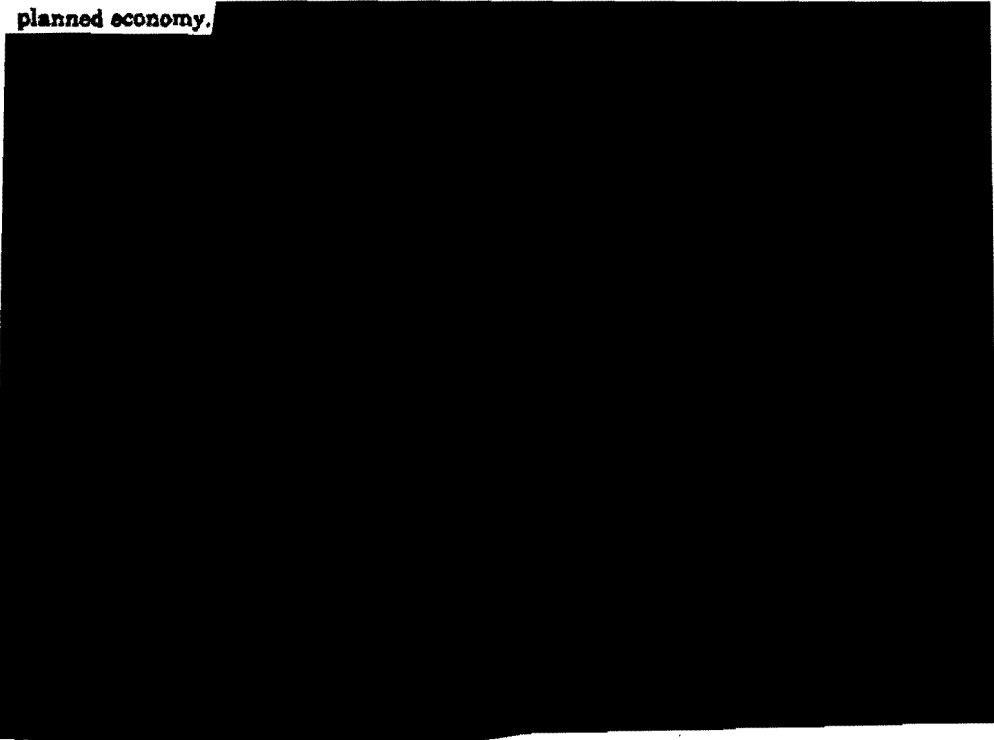
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~~(S)~~ Between 9 January 1948 and the end of the year, ASA published [redacted] reports. Despite the fact that activities in Soviet atomic energy were [redacted]

[redacted] What the RUPLAI reports did, however, was bring home to the intelligence community the enormous scope and breadth of centralization of the Soviet planned economy. [redacted]



*Customer Use of Soviet COMINT(U)*

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~~(S)~~ Customers of course combined COMINT with other intelligence sources and produced daily and weekly reports. The Department of State published a daily "Diplomatic Summary," [redacted]

[redacted] The Army published "Military Digest," likely containing much Soviet COMINT, and the Navy published a report strictly addressing the Soviet target called the "Soviet Intelligence Summary," which was probably based on Op-20-NT's weekly summaries. Of course, all agencies published special reports as well.

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*British Reporting* [REDACTED]

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MISCELLANEOUS [REDACTED]



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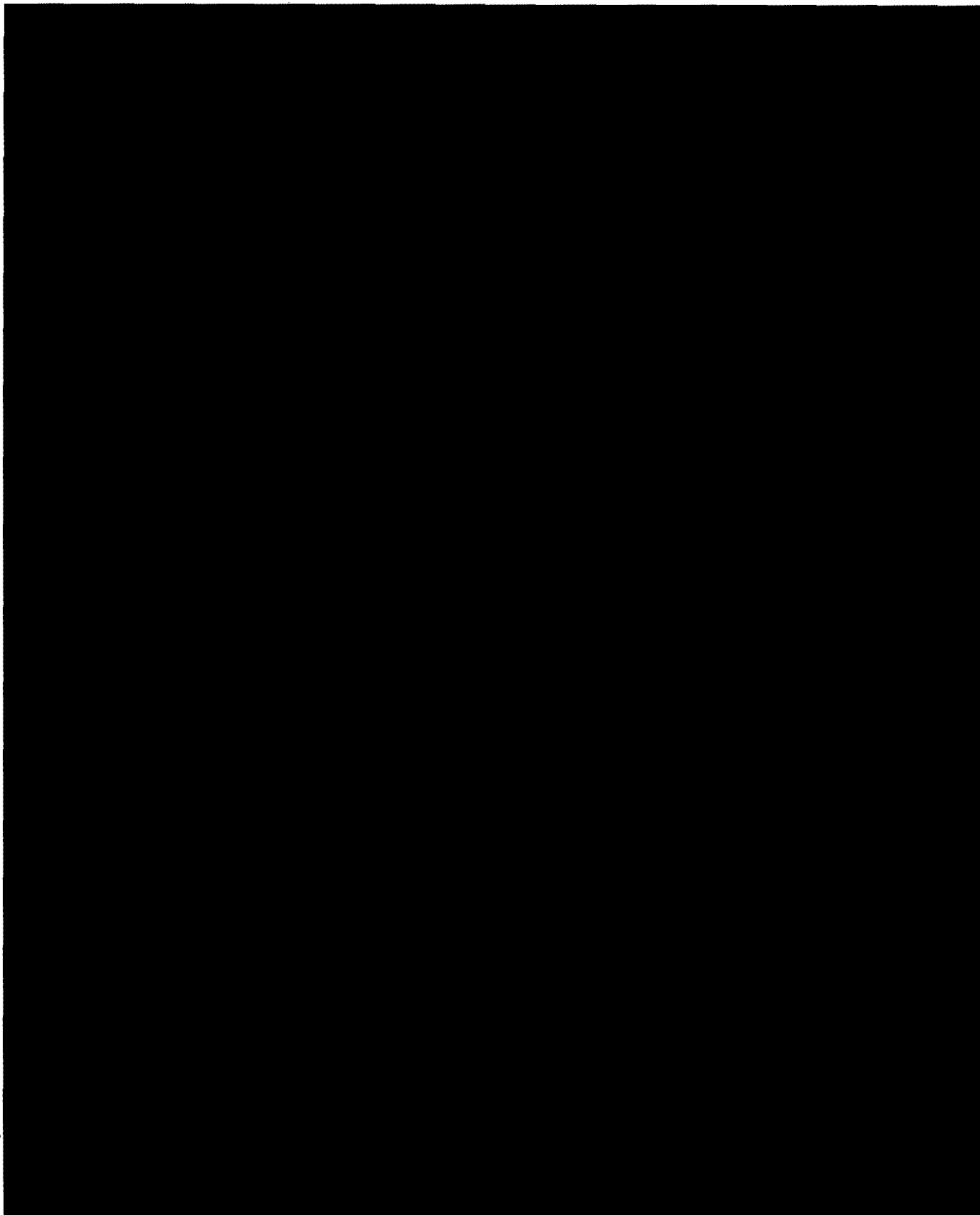
(S-CCO) [REDACTED]



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CONCLUSION (U)

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~~(TS-CCC)~~ If Allied collaboration had been a game of golf, it was par for the course in 1948.  In other

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words, it was business as usual with GCHQ [REDACTED]

~~(S-CCC)~~ American and British cryptologists certainly could not complain about lack of human resource support in 1948. The Soviet problem received more new people [REDACTED] in 1948 than there were working the target in January 1946 (approximately [REDACTED] Across the Atlantic, GCHQ's human resources dedicated to Soviet cryptologic processing rose a whopping 71 percent in 1948. In other words, Allied cryptologists processing Soviet communications targets increased almost fourfold, from [REDACTED] in three years.

~~(S-CCC)~~ All these analysts needed traffic to work on, and Allied collectors responded. American collection capabilities improved as the numbers of installed intercept positions increased and collection receipts skyrocketed, perhaps as much as threefold, [REDACTED]

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~~(S-CCC)~~ Foreshadowing future real-time support, the forwarding of intercept of selected Soviet military aircraft scheduling information was reduced in 1948 to "within a few hours."

~~(S-CCC)~~ Traffic analysis reached a stage of maturity [REDACTED]

~~(S-CCC)~~ The Allies recognized the potential intelligence contribution to be derived from Soviet plain-language exploitation, revised the BRUSA Agreement to incorporate necessary changes in the partnership and exchange, and the U.S. in particular increased the language work force 131 percent in one year's time.

~~(S-CCC)~~ COMINT reporting on the Soviet problem continued at a great rate in 1948, not surprising given the large number of analysts employed. Still important was the source of the COMINT [REDACTED] with little concern shown for restricting the customer's access to all the COMINT technical production details like case notations, frequencies, etc.

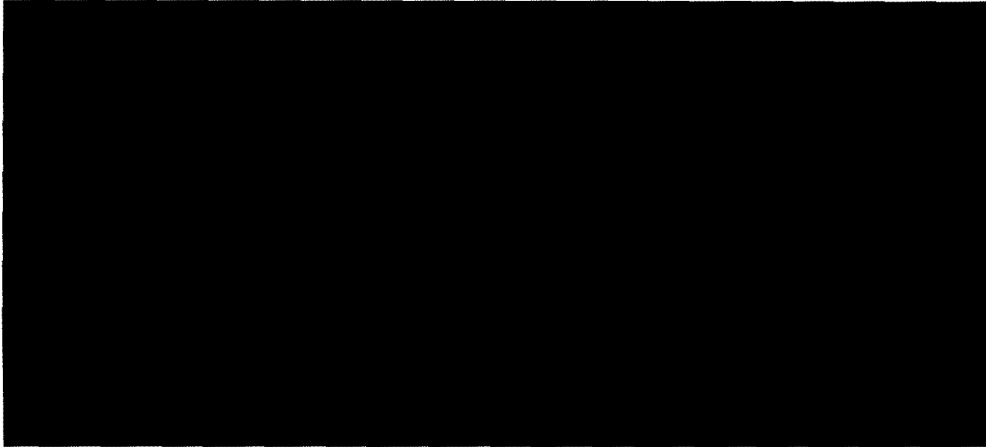
(S-CCO) [REDACTED]

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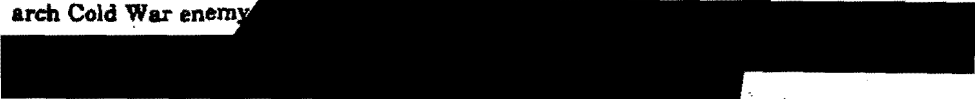
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EPILOGUE (U)

~~(S-CCC)~~ While it may have seemed premature in 1945, the apparently unchallenged decision by Allied cryptologic officials to make the Soviet Union the number one target clearly had to be seen as a sound selection by the end of 1948. Nowhere in the historical record could be found someone in authority writing: "We are going to target the Soviet Union because. . . ." Rather, the fact of targeting the USSR seemed a foregone conclusion. All available historical correspondence, and there is much of it, both U.S. internal and exchanges between Great Britain and America, addressed in enormous detail not *whether* but essentially *how* best to exploit the communications of the Soviet Union. At least from hindsight, the decision seems prescient. Although knowledgeable officials understood that in World War II the partnership with the Soviet Union was limited to an "anti-Hitlerian" alliance, lacking the political, social and cultural bindings that tied together Great Britain and the United States, it seems uncanny that by 1948, Stalinist Russia had emerged as the arch Cold War enemy.



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~~(S-CCC)~~ [redacted], the maturation of Soviet traffic analysis, the substantially enlarged Russian linguist work force, the expanded collection and processing capabilities all put Allied cryptologists on a sound footing for the future. And a bit more scary the future was. The first Soviet atomic bomb was exploded in 1949. Moreover, in 1949 the capitalized expression "Cold War" became for the first year in history an entry in the *Facts on File* index, and the term "Soviet bloc" became common. In partial response to the emergence of the Soviet bloc, the Western Allies formed the North Atlantic Treaty Organization (NATO). Also in 1949, eleven American Communist leaders were convicted on conspiracy charges.

~~(S-CCC)~~ And, of course, as all Agency personnel know who have been around for twenty to thirty years, the Soviet target came to dominate, until the 1990s, the Agency's

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budget in terms of personnel, collection systems (driving requirements for all overhead assets), processing, and reporting systems. Although the establishment of the National SIGINT Operations Center (NSOC) was given final impetus by the North Korean shootdown of the U.S. Navy EC-121 in 1969, Group A was always the major player in real-time SIGINT support, at least until the fall of the Berlin Wall. The closing of many Service Cryptologic Element field stations occurred only after the collapse of the Soviet Union.

~~(S-CCC)~~ A reader might ask if, in fact, the BOURBON project had been such a success, what was wrong with having two or even three American COMINT agencies "coordinating" their separate and independent processing tasks? Thomas Burns's *Origins of the National Security Agency, 1940-1952* answers that question in detail. In brief, the separate COMINT operations were often fractionated, leaving out some targets and unnecessarily duplicating others; that is, they were being inefficient and uneconomical. From a Soviet target perspective, however, Project BOURBON was successful in spite of the ASA-CSAW, and later USAFSS, arrangement, not because of it. It was successful despite interagency bickering, and probably the high cost of doing SIGINT business; there was really little choice for U.S. intelligence but to depend from 1945 to 1948 on the service SIGINT organizations and to work with them as best they could until something better could be arranged.

~~(S-CCC)~~ As early as 1948, as the Stone Board report shows, U.S. intelligence officials knew the existing arrangement was not working well. The battle was, again, mostly over how to improve it, how to centralize processing, not whether it should be done. The creation of the Armed Forces Security Agency (AFSA) in 1949 was merely the first attempt. Continued SIGINT processing problems surfaced by, among other things, the Korean War, brought about the establishment of the National Security Agency in 1952.

~~(S-CCC)~~ But whether there was one agency or three working the problem, the Soviet target dominated the SIGINT business in America like no other for over forty years. Project BOURBON got us off to a good beginning, and until the demise of the Soviet Union made for an even better ending. Allied cryptologists kept all ears tuned to the activities of the Soviet leadership, its military forces and economic system. Year after year, if not always able to discern Soviet intentions, Allied SIGINTers kept tab on Soviet capabilities and activities, ready and able to sound the alarm.

~~(S-CCC)~~ Just as the successful efforts of World War II cryptologists against Germany and Japan left a legacy of professionalism for Cold War analysts, let us hope that the enormous inheritance of Cold War cryptologic skills, innovative collection and processing techniques, tradition, and dedication will be handed down in good shape to the SIGINTers of the future.

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## Notes

(All materials are available at the Center For Cryptologic History (CCH), the NSA/CSS Archives, or in the NSA Library, unless otherwise indicated.)

1. (U) Thomas L. Burns, *The Origins of the National Security Agency, 1940-1952* (Ft. Meade, MD: Center for Cryptologic History, NSA, 1990) ~~(S)~~, 440-41. Hereafter, Burns.
2. George F. Howe, *Historical Study of COMINT Production Under the Joint Operating Plan, 1946-1949*, Draft Completed in April 1957 ~~(S)~~, 169-170; CCH Collection, Series V.E.1.1. Hereafter, Howe JOP study.
3. (U) Minutes of the 30th Meeting of USCIB, held on 27 April 1948 ~~(S)~~; NSA/CSS Archives, Accession No. 2256N, location C16-0608-6.
4. Ibid.
5. Ibid.
6. Burns, 61.
7. ~~(S)~~ The Stone Report, actually a majority report and an accompanying minority position, failed to reconcile conflicting views of the various USCIB members. Following the naming of a new secretary of defense, Louis A. Johnson, the issues were resolved, and on 20 May 1949, AFSA was formed; the goal of effective centralization was not successful, however, and the National Security Agency replaced AFSA three years later in 1952. See Burns, 61-65.
8. (U) Memorandum from H.L. Conley to Chief, CSGAS-80, Subject: Conduct of Russian Air Force and Army Problems, 14 December 1948 ~~(S)~~; NSA/CSS Archives; Accession No. 5505, box CBN122. Hereafter, Conley Memorandum.
9. Ibid.
10. Michael L. Peterson, "Old BOURBON - 1947 ~~(S)~~," *Cryptologic Quarterly*, Fall 1994, 18-19.
11. Conley Memorandum.
12. (U) JPAG Monthly Status Reports, January-December 1948 ~~(S)~~; NSA/CSS Archives; Accession No. 42466, locations H10-0106-3 and H10-0106-4.
13. Conley Memorandum.
14. Howe JOP study, 125-126.
15. Conley Memorandum.
16. Michael L. Peterson, "Middle BOURBON - 1946 ~~(S)~~," *Cryptologic Quarterly*, Summer 1994, 5. Also, Peterson, "Old BOURBON - 1947," 7.
17. (U) JLG Memorandum for CJO, Subject: Activity Report, 1 April 1947 - 31 March 1948, 23 March 1948 ~~(S)~~, CCH Series V.J.1.

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18. (U) CJO (Wenger) Memorandum for USCIB, Subject: Estimated USCIB [redacted] 1 February 1948; dated 25 Feb 1948 (TS); NSA/CSS Archives; Accession No. 1496, box CBPB65.

19. (U) JICG (H. Johnson, Acting Deputy Coordinator for Intercept Control) Memorandum for the Record, Subject: LSIC Diversion of Facilities to the Russian Problem, 27 May 1948 (TS); NSA/CSS Archives; Accession No. 1496, box CBPB65.

20. (U) George F. Howe, *The Narrative History of AFSA/NSA*, Part IV, Final Draft, Chapter XX, 3, April 1963 (TS); CCH General Collection. Hereafter Howe History.

21. Howe History, 5.

22. (U) Rowlett's 12 July 1948 note to Colonel Hayes, covering LSIC/USLO (Lt. Fred Bright) letter of 5 July 1948 to Rowlett (TS); NSA/CSS Archives; Accession No. 4978, location G05-0406-5.

23. Howe History, 12.

24. (U) Senior British Liaison Officer (SBLO) Memorandum for Chairman, USCIB, on the Subject of [redacted] 7 July 1948 (TS); NSA/CSS Archives; Accession No. 8223, location G15-0510-5.

25. Ibid.

26. (U) USCIB Memorandum for SBLO, Subject: [redacted] 9 July 1948 (TS); NSA/CSS Archives; Accession No. 8223, location G15-0510-5.

27. (U) Unaddressed paper, entitled: Comments of OMGUS Berlin Cable, 26 January 1949 (TS); NSA/CSS Archives; Accession No. 5193, location H01-0301-4.

28. (U) USAF Memorandum for Captain J. N. Wenger, USN, from George C. McDonald, Major General, USAF, Director of Intelligence, Office of D/Chief of Staff, Operations, Subject: Collaboration with British on Electronic Reconnaissance, 29 March 1948 (TS); CCH Collection, Series V.J.2.3.

29. (U) JLG Memorandum for Chiefs ASA and OP-202, Subject: Abolition of British Secret Titles; 16 October 1948 (TS); NSA/CSS Archives; Accession No. 1375, location G16-0406-3.

30. (U) Memorandum for All Members, U.S. Delegation, [redacted] 1 November 1949 (TS); NSA/CSS Archives, Accession No. 2508, location G15-0509-5. Also, Aide Memoire for Conversation with Mr. Drake, 17 January 1952 (TS); NSA/CSS Archives, Accession No. 2508, location G15-0509-5.

31. Howe JOP study, 81.

32. Ibid., 79.

33. (U) JLG (Hazlep) Memorandum for the Coordinator of Joint Operations, Subject: Activity Report, 1 April 1947-31 March 1948; 23 March 1948 (TS); CCH Collection, Series V.J.1.

34. (U) CJO Memorandum from Wenger, Coordinator of Joint Operations, for Colonel P. Marr-Johnson, British Liaison Office, Subject: C.I. Material sent to [redacted] by USCIB; 28 January 1948 (TS); NSA/CSS Archives; Accession No. 8369, box CBQD16.

35. Peterson, "Old BOURBON - 1947," 9-10.

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36. Ibid.

37. Ibid.

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38. ~~(S)~~ Undated ~~(S)~~ Progress Report No. 1, period 1st June 1947 - 29th February 1948 ~~(S)~~; NSA/CSS Archives; Accession No. 8447, G15-0501-7.

39. Robert Mann, *The Petrus Affair: Politics and Espionage* (Elmsford, NY: Pergamon Books, Inc.; 1987), especially Chapter 12, "The Case," 175-195, especially 178.

40. Ibid., 184.

41. ~~(S)~~ JLG Memorandum for Deputy Coordinator for Allocations, Subject: COMINT Material for ~~(S)~~; 8 July 1948 ~~(S)~~; NSA/CSS Archives; Accession No. 1494, location G16-0407-3.

42. ~~(S)~~ USCIB Memorandum for Brigadier Tiltman (SBLO), Subject: ~~(S)~~; 18 October 1948 ~~(S)~~; NSA/CSS Archives; Accession No. 2134, location G16-0608-4.

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43. JPAG Monthly Status Report, December 1947 ~~(S)~~; NSA/CSS Archives; Accession No. 42466, location H10-0106-3, and JPAG Monthly Status Report, December 1948. Total population from Howe JOP study, 173-176.

44. JPAG Monthly Status Report, February 1948.

45. LSIC Monthly Status Report, December 1947; NSA/CSS Archives; Accession No. 2006N, box CBQ148, and GCHQ Monthly Status Report, December 1948; NSA/CSS Archives; Accession No. 2006N, box CBQ148.

46. (U) Intercept site listing of unknown but probable authoritative source, 28 April 1948 ~~(S)~~; NSA/CSS Archives; Accession No. 1496, box CBPB65.

47. Howe JOP study, 145-148.

48. William E. Burrows. *Deep Black: Space Espionage and National Security* (New York: Random House, 1986), 58-59. Jeffrey Richelson. *American Espionage and the Soviet Target* (New York: Morrow, 1987), 111.

49. (U) JICG/B.5 Intercept Operators Summary, period 1-15 October 1948; 25 October 1948 ~~(S)~~; CCH General Collection.

50. Howe JOP study, 152.

51. (U) Rowlett Memorandum to CJO, Subject: Review of Current U.S.-British Collaboration in the Communications Intelligence Field, 5 August 1947 ~~(S)~~, Tab A-2. An undated, unsourced draft is available in the NSA/CSS Archives; Accession No. 1377, box CBPB67. A heavily annotated version is available in CCH Collection, Series V.J.2.7. Hereafter Rowlett Review.

52. Peterson, "Old BOURBON - 1947," 11.

53. Rowlett Review, Tab A-2.

54. Howe JOP study, 156.

55. (U) CJO (Wanger) Memorandum for USCICC, Subject: Estimated USCIB Intercept Terminal Requirements, 1 February 1948; dated 25 Feb 1948 ~~(S)~~; NSA/CSS Archives; Accession No. 1496, box CBPB65.

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56. (U) JICG Memorandum for Col. P. Marr-Johnson (British Liaison Officer), Subject: Missions to be Assigned to Station [REDACTED], 19 March 1948 (S); NSA/CSS Archives; Accession No. 1496, box CBPB65.

57. ~~(S)~~ AS-93 memorandum to AS-10, Subject: [REDACTED], 29 April 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 5333, location G20-0206-2.

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58. Hows JOP study, 71.

59. (U) JICG (P.J. Patton) Memorandum for USTALO, Subject: Forwarding of Information, 12 July 1948 (TS); NSA/CSS Archives; Accession No. 1496, box CBPB65.

60. (U) LSIC/USLO (Norman Boardman) letter to "Dear Mr. Rowlett," 4 September 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 4978, location G05-0405-5.

61. (U) LSIC Monthly Status Report, August 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 2006N, box CBQI48.

62. ~~(S)~~ OP-20-2 Memorandum for the Chief of Naval Intelligence, originated by CAPT Wenger, signed by RADM Stone, Subject: Status of our present ability to provide operational information on [REDACTED], 22 March 1948 (~~TOP SECRET~~); CCH Collection, Series V.B.2.7.

63. ~~(S)~~ OP-20-T Memorandum for OP-20-2, Subject: [REDACTED], 16 August 1948 (~~TOP SECRET~~); CCH Collection, Series V.R.1.7.

64. ~~(S)~~ JPAG Interim Report #4495, Section RU#1719, Subject: Op-20-NT-1 [REDACTED] Bulletin #27, 13 October 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 46470, location H07-0111-2. Also OP-20 Memorandum for OP-202-T and 202-L, thru N-2, Subject: [REDACTED], 19 October 1948 (~~TOP SECRET~~); CCH Collection, Series V.R.1.8.

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65. Ibid.

66. Ibid.

67. JPAG Monthly Status Reports, December 1947 and December 1948. Also LSIC Monthly Status Report, December 1947, and GCHQ Monthly Status Report, December 1948.

68. JPAG Monthly Status Reports, January-December 1948. Also, LSIC/GCHQ Monthly Status Reports, January-December 1948; NSA/CSS Archives; Accession No. 2006N, boxes CBQI46-48.

69. JPAG Monthly Status Report, January 1948.

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70. JPAG Monthly Status Report, March 1948.

71. ~~(S)~~ JLG Memorandum for Chief, ASA, and OP-20-2, Subject: LSIC study [REDACTED] [REDACTED], 25 May 1948 (TSC); NSA/CSS Archives; Accession No. 757, location G16-0406-5.

72. JPAG and LSIC/GCHQ Monthly Status Reports, January-December 1948.

73. Ibid.

74. JPAG Monthly Status Reports, January-December 1948.

75. LSIC/GCHQ Monthly Status Reports, January-December 1948.

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76. ~~(S)~~ A27 TSR 02-89, *Fifty Years of Soviet* [REDACTED] 10 January 1989 ~~(TSR)~~, CCH General Collection. Hereafter A27 TSR 02-89.

77. (U) Joint NY-1 and CSGAS-87 study, *A Survey of Russian Cryptographic Systems*, 10 January 1949 ~~(TSR)~~; CCH Collection, Series V.R.1.10. Hereafter Systems' Survey.

78. Peterson, "Old BOURBON - 1947," 19-21.

79. Ibid.

80. JPAG Monthly Status Report, January 1948.

81. (U) LSIC/USLO memorandum, signed by P.H. Currier, Commander, USN, to JPAG, Subject: [REDACTED] 14 January 1948, ~~(TSR)~~; NSA/CSS Archives; Accession No. 45812, location G03-0401-5.

82. JPAG Monthly Status Reports, January-December 1948.

83. LSIC/GCHQ Monthly Status Reports, January-December 1948.

84. LSIC Monthly Status Report, April 1948.

85. (U) Theodore L. Squier, Jr., Chief, 93-B-2 [ASA] Memorandum for the Record, Subject: Traffic Analysis Intelligence, 16 April 1948, ~~(TSR)~~; NSA/CSS Archives; Accession No. 45812, location G03-0401-3.

86. JPAG Monthly Status Report, May 1948.

87. JPAG Monthly Status Report, July 1948.

88. LSIC Monthly Status Report, July 1948.

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89. Systems' Survey.

90. ~~(S)~~ A27 TSR 02-89, 14, which adds that [REDACTED]

91. LSIC Monthly Status Report, September 1948.

92. JPAG Monthly Status Report, September 1948, published 11 October 1948.

93. GCHQ Monthly Status Report, October 1948.

94. JPAG Monthly Status Report, October 1948.

95. Conley Memorandum.

96. LSIC/GCHQ Monthly Status Reports, September and December 1948.

97. Peterson, "Old BOURBON - 1947," 21-23.

98. LSIC Monthly Status Report, January 1948.

99. LSIC Monthly Status Report, February 1948.

100. JPAG Monthly Status Report, February 1948.

101. LSIC Monthly Status Report, April 1948.

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102. JPAG Monthly Status Report, April 1948.

103. (U) JPAG Interim Report #3660, RU Section #1244, Subject: [REDACTED], 17 May 1948 (~~TOP SECRET~~); CCH Collection, Series V.I.3.10.

104. LSIC Monthly Status Report, May 1948.

105. JPAG Monthly Status Report, May 1948.

106. (U) Chief, CSGAS-93 (Hugh S. Erskine, Lt. Col, Signal Corps) Memorandum for Record, no Subject, 3 June 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 1496, box CBPB65.

107. (U) N-31 (H. Campaigne) memorandum to [OP-20-L, Subject: [REDACTED] History of, dated 8 June 1948 (~~TOP SECRET~~), available in the CCH General Collection. Hereafter, Campaigne Memorandum.

108. [REDACTED] entitled: Russian Interim Report Number 316 - Final Report on [REDACTED] [REDACTED], 28 October 1948 (~~TOP SECRET~~); P1 Collection, box 529, file S-2631.

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109. Peterson, "Old BOURBON - 1947," 23-25.

110. (U) LSIC/USLO memorandum, signed by P.H. Currier, Commander, USN, to JPAG, Subject: [REDACTED] 14 January 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 45812, location G03-0401-5.

111. LSIC Monthly Status Report, January 1948.

112. JPAG Monthly Status Report, January 1948.

113. JPAG Monthly Status Report, February 1948.

114. JPAG Monthly Status Report, March 1948.

115. JPAG Monthly Status Report, April 1948.

116. JPAG Monthly Status Report, May 1948.

117. (U) Chief, CSGAS-93 (Hugh S. Erskine, Lt. Col, Signal Corps) Memorandum for Record, no Subject, 3 June 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 1496, box CBPB65.

118. JPAG Monthly Status Report, May 1948.

119. LSIC Monthly Status Report, May 1948.

120. JPAG Monthly Status Report, June 1948.

121. JPAG Monthly Status Report, August 1948.

122. LSIC Monthly Status Report, September 1948.

123. GCHQ Monthly Status Report, November 1948.

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124. [REDACTED] JPAG Interim Report #6123, RU #2544, Subject: [REDACTED] 7 October 1949 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 45812, location G03-0401-6.

125. [REDACTED] Edgar C. Duin (Capt., Signal Corps) paper, entitled: [REDACTED] 28 September 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 45812, location G03-0401-6.

126. JPAG Monthly Status Report, December 1948.

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127. ~~(S)~~ Extract from an unspecified ASA produced Annual Report. . . B. [redacted]  
3 [redacted] 14 July 1949 (~~TSC~~); NSA/CSS Archives; Accession No. 45812, location G03-0401-6. Also, Edgar C. Duin (Capt., Signal Corps) paper, entitled: [redacted], 28 September 1948 (~~TSC~~); NSA/CSS Archives; Accession No. 45812, location G03-0401-6.

128. ~~(S)~~ JLG Memorandum to Chief, ASA, and OP-20-2, Subject: LSIC study "The Effort on Russian Signal Intelligence in Relation to That on Other Signal Intelligence Tasks," 25 May 1948 (~~TSC~~); NSA/CSS Archives; Accession No. 757, location G16-0406-5.

129. LSIC Monthly Status Report, May 1948.

130. LSIC Monthly Status Report, September 1948.

131. JPAG monthly Status Report, September 1948.

132. Systems' Survey.

133. ~~(S)~~ [redacted] entitled: Russian Interim Report Number 304 - [redacted]  
[redacted] Final Write-Up, 11 October 1948; NSA/CSS Archives; Accession No. 45812, location G03-0401-7.

134. Systems' Survey.

135. (U) CSCAS-97E (Edward E. Christopher, Chief) Memorandum to JPAG, Subject: Joint Effort on [redacted]  
[redacted] 25 October 1948 (TSC); CCH General Collection.

136. GCHQ Monthly Status Report, November 1948.

137. JPAG Monthly Status Report, November 1948.

138. (U) [redacted]  
[redacted]

139. JPAG Monthly Status Report, December 1948.

140. (U) OP-20-NS-1 memorandum, signed by F. W. Cameron, Lieutenant, USN, to OP-20-N-22, Subject: Percentage of NS-1 Man Hours Devoted to BOURBON [last time used] Production, 28 January 1948 (U); NSA/CSS Archives; Accession No. 8449, location G16-0410-4.

141. JPAG Monthly Status Report, February 1948.

142. JPAG Monthly Status Report, October 1948. [redacted]  
[redacted]

143. JPAG Monthly Status Report, November 1948.

144. (U) Many discussions with Cecil Phillips, beginning on 1 December 1992, lasting through April 1994.

145. ~~(S)~~ N-2 memorandum to 202, N, signed by R. Mason, Subject: [redacted]  
[redacted]  
[redacted] 26 October 1948 (~~TSC~~); CCH Collection, Series IV.AA.16.

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146. (U) Minutes of 35th Meeting of USCIB, held on 16 November 1948 ~~(TS)~~; NSA/CSS Archives, Accession No. 2756N, location G16-0608-8.

147. Ibid.

148. (U) Agenda item 2 of the minutes of the First Meeting of the USCIB Security Committee held on 21 December 1948 (TSC); NSA/CSS Archives; Accession No. 26073N, location G16-0704-7. ~~(S)~~ Members present were: Navy: Captain E.S. L. Goodwin, Chairman, and Commander A. Cole, Jr.; State: Mr. Grant C. Manson; Army: Lt. Colonels A.C. Peterson and C. H. Hiser; [REDACTED] USAF: Lt. Colonel H.H. Towler and Lt. H.T. Danilson, and Secretary: Lt. E. J. Rowett, U.S. Navy.

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149. (U) Agenda item 2 of the minutes of the Second Meeting of the USCIB Security Committee held on 4 January 1949 ~~(TS)~~; NSA/CSS Archives; Accession No. 26073N, location G16-0704-7.

150. (U) USCIB Security Committee Special Report No. 2-49, Subject: Measures for the Protection of COMINT, 11 January 1949 ~~(TS)~~; NSA/CSS Archives; Accession No. 26073N, location G16-0704-7.

151. Ibid.

152. (U) USCIB cover memorandum for the Chairmen, Intelligence and Security Committees of USCIB, Subject: Joint Report on USCIB Policy on Dissemination of COMINT to Recipients in Critical Areas, and Protection of COMINT by Such Recipients, 27 April 1949 ~~(TS)~~, with enclosures; NSA/CSS Archives; Accession No. 26073N, location G16-0704-7. Also, Minutes of the 41st Meeting of the USCIB held on 17 June 1949 ~~(TS)~~; NSA/CSS Archives; Accession No. 26073N, location G16-0704-7.

153. Peterson, "Middle BOURBON - 1946," 33.

154. ~~(S)~~ Discussions with Cecil Phillips, who worked at ASA and knew Weisband. Suspected of being a Soviet agent as far back as World War II, Weisband was arrested in 1950, but convicted of lesser charges, in part to prevent a public trial.

155. JPAG and LSIC/GCHQ Monthly Status Reports, January-December 1948.

156. (U) JPAG Interim Report #3743, Section RU #1275, Subject: Traffic Analysis Diagram #32, 4 June 1948 ~~(TS)~~; NSA/CSS Archives; Accession No. 46470, location H07-0110-2.

157. LSIC Monthly Status Report, January 1948.

158. Ibid.

159. JPAG Monthly Status Report, January 1948.

160. LSIC Monthly Status Report, February 1948.

161. LSIC Monthly Status Report, March 1948.

162. (U) Theodore L. Squier, Jr., Chief, 93-B-2 Memorandum for the Record, Subject: Traffic Analysis Intelligence, 16 April 1948 ~~(TS)~~; NSA/CSS Archives; Accession No. 45812, location G03-0401-3.

163. Ibid.

164. JPAG Monthly Status Report, April 1948.

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165. (U) JPAG Interim Report #4142, Section RU #1491, Subject: Traffic Analysis Diagrams #38-40, 16 August 1948 ~~(TOP SECRET)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-3.

166. LSIC Monthly Status Report, May 1948.

167. LSIC Monthly Status Report, July 1948.

168. LSIC Monthly Status Report, August 1948.

169. LSIC Monthly Status Reports, August and September 1948.

170. LSIC Monthly Status Report, August 1948.

171. JPAG Monthly Status Report, August 1948.

172. GCHQ Monthly Status Report, October 1948.

173. GCHQ Monthly Status Report, December 1948.

174. Peterson, "Old BOURBON - 1947," 31.

175. ~~(TOP SECRET)~~ C. Garofalo, "A Brief Quarter Century of Soviet Crypto/Traffic Analysis," 1971 ~~(TOP SECRET)~~ as published in Vera R. Filby, *A Collection of Writings on Traffic Analysis*, Center for Cryptologic History, National Security Agency, CH-E32-93-5, 1993. Hereafter Garofalo.

E.O. 13526, section 1.4(c)(d)

176. ~~(TOP SECRET)~~ GCHQ ~~(TOP SECRET)~~ Memorandum to SLO Washington (for Cdr Barnett), Subject: ~~(TOP SECRET)~~ dated 15 May 1947 ~~(TOP SECRET)~~; CCH General Collection. Also Untitled GCHQ report (first page missing), same Subject, dated August 1947; CCH General Collection.

177. Garofalo.

178. LSIC Monthly Status Report, April 1948.

179. Garofalo.

180. JPAG Monthly Status Report, October 1948.

181. GCHQ Monthly Status Report, December 1948.

182. GCHQ Monthly Status Report, November 1948.

183. ~~(TOP SECRET)~~ PA61 CTR #7-68, title ~~(TOP SECRET)~~ 14 August 1968 ~~(TOP SECRET)~~; CCH General Collection; original provided by ~~(TOP SECRET)~~ A/D/Chief ~~(TOP SECRET)~~ January 1994.

184. JPAG monthly Status Report, November 1948 (dated 10 December 1948).

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185. JPAG Monthly Status Reports, January-December 1948.

186. LSIC/GCHQ Monthly Status Reports, January-December 1948; ~~(TOP SECRET)~~

187. (U) SUSLO London (Fred Bright) paper, entitled: Some Notes on Ryder Street, 16 April 1948 ~~(TOP SECRET)~~; Acc #4976, location G05-0405-6. ~~(TOP SECRET)~~ Britain's "Ryder Street" operation ~~(TOP SECRET)~~

The Ryder Street operation was initially run by M.I.6., independent of

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Also, Peterson, "Middle BOURBON - 1946," 29-30. The source of the number 60 is SUSLO London's LSIC Newsletter No. 12-46, 16 August 1948; NSA/CSS Archives; Accession No. 759, location G16-0407-3. The title of the group can be found in USLO memorandum to JICG, Subject: USTALO Informal No. 4, 26 February 1947 (S); NSA/CSS Archives; Accession No. 5494, box CBPI51.

188. Howe JOP study, 120.

189. JPAG Monthly Status Reports, December 1947-December 1948.

190. JPAG Monthly Status Report, September 1948.

191. JPAG Monthly Status Report, February 1948.

192. JPAG Monthly Status Report, December 1948.

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193. JPAG Monthly Status Reports, February-December 1948. (S) In September 1949, ASA [redacted] were used, according to Howe JOP study, 125-126.

194. JPAG Monthly Status Reports, December 1947 and December 1948.

195. JPAG Monthly Status Reports, December 1947 - December 1948.

196. Howe JOP study, 125-126.

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197. Ibid. Figures from September 1949 indicate that CSAW [redacted]

198. (U) SUSLO, LSIC Newsletter No.1-48, to D/Chief for Liaison (USCIB), 19 February 1948 (S); NSA/CSS Archives; Accession No.759, box CBPB65.

199. (U) LSIC/USLO Memorandum (signed by Frederic J. Bright, 1st Lt. Sig. C.) for Chief, CSGAS-90, ASA, no Subject, 22 March 1948 (S); NSA/CSS Archives; Accession No.4978, location G05-0405-5.

200. (U) LSIC/USLO letter to "Dear Mr. Rowlett," from "Fred" [Bright], 1 April 1948 (S); NSA/CSS Archives; Accession No. 4978, location G05-0405-5.

201. (U) AZ/6106, LSIB Memorandum from Travis, for Chairman, London Signal Intelligence Board (LSIB), to Chairman, USCIB, 2 April 1948 (S); CCH Collection, Series V.J.1.

202. Howe JOP study, 124-125.

203. (S) JLG Memorandum (#0001969) for OP-20-2 and ASA, Subject: Russian Plain Text Traffic, 9 April 1948 (S); NSA/CSS Archives; Accession No.767, location G16-0406-5.

204. Ibid.

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205. Ibid.

206. ~~(S)~~ CJO (Hayes) Memorandum to Members of USCIB, Subject: Russian Plain Language Problem, 14 April 1948 ~~(TOP)~~; CCH Catalog, Tab 2C42.

207. ~~(S)~~ JLG Memorandum to Chief, ASA, and OP-20-2, Subject: LSIC study "The Effort on Russian Signal Intelligence in Relation to That on Other Signal Intelligence Tasks," 25 May 1948 ~~(TOP)~~; Accession No. 757, location G16-0406-5.

208. (U) ASA Chief of Operations Division (Rowlett) Memorandum for Lt. Fred J. Bright, (USLO, London), 18 June 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 4978, location G05-0405-5.

209. (U) Rowlett's 12 July 1948 note to Colonel Hayes, covering LSIC/USLO (Lt. Fred Bright) letter of 5 July 1948 to Rowlett ~~(TOP)~~; NSA/CSS Archives; Accession No. 4978, location G05-0405-5.

210. Howe History, 15.

211. ~~(S)~~ Chief, AS-90 (Rowlett) cover note to Chief, ASA (Hayes), passing along Fred Bright's 16 April 1948 letter to Mr. Rowlett about the Ryder Street operation, entitled: Some Notes on Ryder Street, 29 April 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 4978, location G05-0405-6.

212. LSIC Monthly Status Report, July 1948.

213. Howe JOP study, 168-169.

214. Ibid., 169.

E.O. 13526, section 1.4(c)(d)

215. ~~(S)~~ JPAG Interim Report, JPAG #4195, Section RU #1526, Net Analysis Casebook #59, [REDACTED] 24 August 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-3.

216. (U) JPAG Interim Report #3104, Section RU #942, Subject [REDACTED] 23 January 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-6.

217. (U) JPAG Interim Report #3177, Section RU #982, Subject: BRUSA Nomenclature, 9 February 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

218. ~~(S)~~ JPAG Interim Report #3080, Section RU #928, Subject: OP-20-NT-1 Russian Operators' Manual (Change #2), 19 January 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-6.

219. ~~(S)~~ JPAG Interim Report #3069, Section RU #923, Subject: Russian [REDACTED] 15 January 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-6.

220. ~~(S)~~ JPAG Interim Report #3241, Section RU #1016, Subject: Russian [REDACTED] 26 February 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

221. (U) JPAG Interim Report #3180, Section RU #985, Subject: OP-20-NT-1 Additions and Corrections to [REDACTED] 9 February 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

222. (U) JPAG Interim Report #4259, Section RU #1576, Subject: RU-NAW #377 Military Daily, 1 September 1948 ~~(TOP)~~; NSA/CSS Archives; Accession No. 46470, location H07-0109-5.

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223. (U) JPAG Interim Report #3225, Section RU #1010, Subject: Russian Abbreviation File (Part 33) (Supplement #5), 24 February 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

224. ~~(TOP SECRET)~~ JPAG Interim Report #3219, Section RU #1006, [REDACTED] (IBM Methods ASA), 11 February 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

225. ~~(TOP SECRET)~~ JPAG Interim Report #3243, Section RU #1017, Subject: OP-20-NT-1 Russian [REDACTED] List, 27 February 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

226. ~~(TOP SECRET)~~ JPAG Interim Report #3349, Section RU #1073, Subject: The Russian [REDACTED] 18 March 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

227. ~~(TOP SECRET)~~ JPAG Interim Report #3420, Section RU #1106, Subject: OP-20-NT-1 Russian Traffic Information Summary, period 2 through 8 February 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

228. ~~(TOP SECRET)~~ JPAG Interim Report #3371, Section RU #1090, Subject: Abnormal Water Levels of the Danube River System, 23 March 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 46470, location H07-0109-7.

229. Peterson, "Old BOURBON - 1947," 39-41.

230. Howe JOP study, 170-171.

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231. ~~(TOP SECRET)~~ RU-PLAI #1, Russian Plain Language Analysis Items, 9 January 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 9268, location G16-0211-4.

232. ~~(TOP SECRET)~~ RU-PLAI #2, [REDACTED] 13 January 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 9268, location G16-0211-4. Presumably CSAW could and did publish RU-PLAI reports, but none could be found in available records.

233. (U) RUPLAI #616, [REDACTED] #41, 22 November 1948 (~~TOP SECRET~~); NSA/CSS Archives; Accession No. 9268, location G16-0211-4.

234. Peterson, "Old BOURBON - 1947," 39.

235. Ibid.

236. LSIC/GCHQ Monthly Status Reports, January-December 1948.

237. Ibid.

238. ~~(TOP SECRET)~~ SARU/C500, title: [Soviet] Telecommunications as of May 1948, 26 July 1948 (~~TOP SECRET~~); CCH General Collection.

239. Howe JOP study 141-144. ~~(TOP SECRET)~~ Howe added: "By September 1949, the effort on Russian [REDACTED]"

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240. Ibid., 141.

241. Ibid., 140.

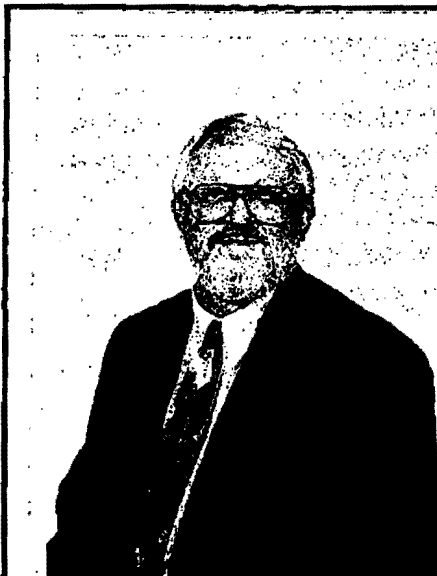
242. Ibid., 142-143.

243. GCHQ Monthly Status Report, October 1948.

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244. (S) RUPLAI #154, Ministry of the Aviation Industry, USSR #14. Title: Flight Unit (LETNAY: CHAST); location: Ramenskoe; subordination: Flight Research Institute; Personalities: eight names individual; 30 April 1948 (S); NSA/CSS Archives; Accession No. 9268, location G16-0211-4.



~~(S)~~ Mr. Peterson is currently a historian at the Center for Cryptologic History (E324). He began his career as an intercept processing specialist in the U.S. Air Force (1959-63). After his discharge, he transferred to NSA, first working as an intelligence analyst in A32 (1963-66) and later as section chief in A74 (1966-71). Subsequently, Mr. Peterson served as A Group product control officer, NSOC (1972-73); cryptologic staff officer in A8 and V5 (1973-74); cryptologic staff officer at [REDACTED] (1974-76); branch chief in A23 (1976-83); deputy chief, Current Watch Operations, A11 (1983); chief, Plans and Programs, on the A Group Programs and Budget Staff, A043 (1983-85); deputy chief, A44 (1985-88); and chief, A65 (1988-92). In 1972 Mr.

Peterson was awarded a B.A. in Soviet area studies from the University of Maryland. His article "The Church Cryptogram: Birth of Our Nation's Cryptology" appeared in the Summer 1987 issue of *Cryptologic Quarterly*; a second article, "Maybe You Had to Be There: The SIGINT on Thirteen Soviet Shootdowns of U.S. Reconnaissance Aircraft," was published in the Summer 1993 issue. A series of articles by Mr. Peterson on Project BOURBON have appeared in recent issues of *Cryptologic Quarterly*. Mr. Peterson is a certified Special Research Analyst, Traffic Analyst, and Editor/Writer.

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Appendix

ASA Russian Plain Language Unit Strength & Output (U)

| Month/Year      | Strength |
|-----------------|----------|
| (Dec 1947 goal: | 16       |
| Nov 1947-       |          |
| Feb 1948**      | 26       |
| (per month)     |          |
| Mar-Apr '48     | 42       |
| (per month)     |          |
| May 1948        | 47       |
| Jun 1948        | 64       |
| Jul 1948        | 59       |
| Aug 1948        | 74       |
| Sep 1948        | 90       |
| Oct 1948        | 109      |
| Nov 1948        | 111      |
| Dec 1948        | 111***   |

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\* JPAG Memorandum to Coordinator for Joint Operations, Subject: Allocation of [redacted] 17 December 1947, [redacted]; NSA/CSS Archives; Accession No. 21518, box CBJQ74.

\*\* JPAG Monthly Status Reports, November 1947 - December 1948 [redacted]; NSA/CSS Archives; Accession No. 42466, locations H10-0106-3 and H10-0106-4.

\*\*\* AFSA Strength figures for the [redacted] by January 1953 (per XXV-13, Part IV of Dr. Howe's *The Narrative History of AFSA/NSA*). However, the value of [redacted] in November 1951, with its [redacted] (XXV-13; CCH General Collection.)