Metacity; origins and implications. D.G.Shane

The Dutch group MVRDV first used the term "Metacity" in 2000 to describe a city that was formed from information, *meta* meaning about or above in Greek, as in *meta*data or *meta*phor (Shane 2011, Shane and McGrath 2012). The city thus became a statistical entity formed of masses of data, describing relationships amongst its populations, its environments, and its various systems of flows and stasis. MVRDV's Metacity was a data cube containing information about all the inhabitants on earth, a cube based on the demolished Kowloon Walled City: a three-dimensional slum, The City of Darkness (MVRDV 1998). This heterotopic and chaotic, hyper-dense urban village, used in some action movies before demolition, was a messy and informal, a maze of corridors, stairs, wires and rooms, far from the clean, transparent cube of data envisioned by the Dutch architectural group.

The metacity of information contained three other contemporary urban models. In part the data cube reflects the metropolitan model, the idea that the complexity of the city can be controlled from a single center by a single urban actor as in the dream of earlier imperial regimes with power residing in their original, "mother" city, but at a new global, United Nations scale. In part the metacity incorporates the widely distributed, mega-scale characteristics of Gottmann's (1961, 1990) auto-dependent megalopolis model that is in crisis as the true costs of petroleum powered growth become clearer in terms of global climate change. The metacity also includes elements of the fragmented metropolis model especially its powerfully interconnected digital realm that created the dense urban fragments and informational clusters to provide resilience and back up for the megalopolis in the crises of the 1970's and 80's, leading to the megamalls of the 90's and early 2000's (Shane 2011).

Besides supporting giant new nodes and sites, the important point of the metacity refers to the role of information in shaping the perception and use of the city, so that areas that formerly appeared as countryside or peri-urban territories now fall under the urban umbrella (Gleick 2012). Urban form thus becomes at once urban and rural, a conditioned described as "desakota" (village-city) by Terry McGee (1971,1991, 1995, 1997,2002, 2007). This paper will examine the origins of the metacity in earlier urban models and

implications of the city of information for the definition of the city in the future, including the need for new hyper-dense urban nodes.

1. Information and Urban Models in the megacity/metacity.

After the Second World War many governments in the modern world realized the importance both of controlling public propaganda information channels and maintaining secret communication channels for their own use. In the metropolitan model this meant that the largest number of people could assemble in one place at one time to be addressed by the great leader with obvious implications for urban space, as in Mao's remodeling of Tiananmen Square, Beijing in 1956. The new square could hold one million people, twice the number of Stalin's Red Square in Moscow (Judt 2006). East German technicians provided a special electronics dan wei work factory unit 798 (now the Beijing art complex) that could build a public address system for the lampposts in the square (Woorden 2008). The state radio system in China, like many other states including Britain's BBC, would carry the leader's speeches to every living room and kitchen in the metropolis, controlling channels of information and shaping the perception of the city and world.

This "propaganda model" of top down, metropolitan information distribution still exists in many countries of the world (Herman and Chomsky 2002), perpetuating the metropolitan model. In Gottmann's (1961) megalopolis model modern communication systems on the American East Coast from Boston to Washington played a big role in his definition of the urban territory. He detailed the volume of information exchange by counting the number of telephone calls, the flow of telegraph messages and mail volume, as well as the human flow by rail, road and plane along the corridor (Shane 2011). Television broadcasting, with its three main companies controlling three syndicated channels, also formed an important informational innovation in this territory, an innovation that proved to have a political dimension with the election of President Kennedy in 1960.

While the Federal highway programs allowed the wide distribution of the city over a vast territory of the megalopolis and federal loans financed the new single-family homes of the American dream, the Federally licensed and

approved TV and radio networks held the urban system together. The big American media companies of the megalopolis, many owned by the same families as the newspapers of the metropolis, fought to get the TV installed in every megalopolitan living room (Geller 1990). Here wives and children would be exposed all day to commercials for goods and services available at nearby malls spaced at regular intervals (Gruen 1964). From the informational and broadcasting point of view the megalopolis had its own geography and morphology of gigantic broadcasting towers and domestic antennas, spaced with regard to topography and market share as on Long Island, New York around Levittown (Bertomen 1991).

Information channels multiplied in the Fragmented Metropolis as various urban actors, previously excluded from the media and made their voices heard to air their grievances (Jacobs 1961). Both the metropolis and megalopolis fell apart during the oil shocks of the 70's and 80's as oil prices rose and inflation took off in industrialized societies, destroying the consensus around social and democratic goals established after the Second World War. Simultaneously the rise of OPEC and the massive flows of petrodollars in the global system established a new network of financial control centers in London, New York and Tokyo (Sassen 1991).

These financial centers required high speed communication systems, initially in micro-wave towers and later by fiber optic cable, to trade 24 hours a day around the world (Graham and Marvin 2001). SOM's design for the Rockefeller's Chase Manhattan tower (1958) provided a key example of the architecture of this new money making machine, with its podium with a roof terrace plaza and modern tower, looking down on the New York Stock Exchange and Federal Reserve Bank (Shane 2011). Later Manhattan's World Financial Center (Cesar Pelli 1986), expanded this architecture to include a mall and tower combination, located in the middle of the Battery Park City residential new town in town urban fragment (Cooper Eckstat 1978).

In the informational metacity each of these urban models with their urban actors, sets of goals and values, even symbolic forms, retains its own consistency and logic within a larger network. Foucault (1967, 1984) described three similar systems of organizing information as separate systems of thought. One system focused on emplacement or place making, one concentrated on displacement or flow, and one system created a hybrid

mixture of both of these systems with an emphasis on mixing fast-changing information in shifting sites (Shane 2005, De Cauter +Dehaene 2008).

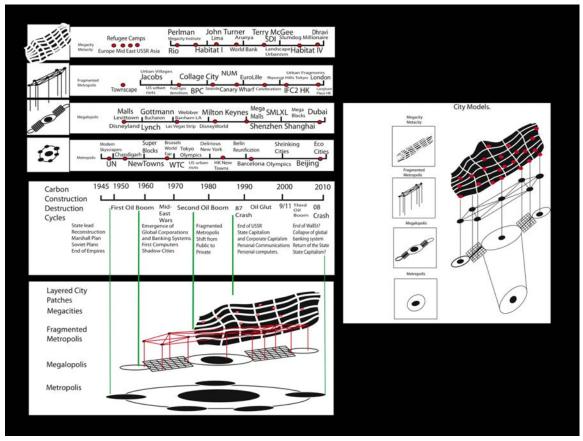


ILLUSTRATION 1. 4 urban models diagram.

2. Heterotopic informational systems in the metacity.

The metropolis, megalopolis and fragmented metropolis all continue as layered, informational systems in the metacity. Foucault (1967, 1984) proposed that one way to look at a system of thought or information in a society was to look at what was excluded from that system, what was placed in the "space of the other", the heterotopia of the system. Each urban model implies a system of information that for logical consistency requires the exclusion of non-conforming patterns. Foucault proposed that heterotopias in systems of thought were good places to quickly the study the logic of the dominant system that made the exclusions. He also argued that heterotopias were not abstract or invisible spaces, but real places on the ground, in the city or countryside that held non-conforming elements, reflecting the dominant values of the system operators. Urban geographers especially valued this "spatial turn" in the late 1980's (Harvey 1991, Soja 1989).

One of the advantages of Foucault's analytical system is that it connects specific urban actors and knowledge systems with specific urban sites or institutions that hold non-conforming people and thus bring into focus key values of the system of thought. In Lynch's model of the city of faith for instance, a feudal, hierarchical elite of warlords or priests tied many people to the land as slaves or peasants. Here McLuhan (1962, 1964) emphasized how medieval priests used the European cathedral as a heterotopic, mass communication and advertising device, saving souls while enriching the church. In this society Foucault found hidden heterotopias of "crisis", spaces that people could enter and leave voluntarily while they passed through a temporary, personal change in private. Amongst many examples he highlighted charitable almshouses in the medieval period. Such places were known by word of mouth and hidden in plain sight, using normative urban morphologies as a disguise. The famous almshouses of Leuven, Belgium, for instance, lie trapped within a perimeter block system of row houses (Shane 2005). Foucault saw this non-repressive, voluntary, consensual, word of mouth tradition continued in modern society in the boarding school, honeymoon house and modern motel.

Foucault also closely examined a second, modern heterotopic informational system, the heterotopia of "deviance", symbolized by Jeremy Bentham's Panopticon prison design from the 1780's that held those rejected by the modern system of thought. In this design people who could not conform to the new industrial norms of the modern world were taught to be modern subjects who internalized the voice of the jailer who was hidden in the darkened tower at the center of the ring of cells. The design involved extreme measures to isolate each prisoner and restrict communication during retraining (Evans 1982). Silent prisoners, for instance wore leather facemasks in exercise yards so that they would not recognize each other outside in the city. Walls were thick to prevent communication. The jailer had a voice tube to each cell to issue instructions. Foucault emphasized how modern scientific knowledge was applied in the precise micro-codes that regulated the design and behavior of prisoners and jailers alike. For Foucault, writing from France, the state controlled and fixed the rules of

discipline and punishment that defined communication in this modern city space.

Foucault's third category of heterotopias of "illusion" involved imagining a new system of thought and information at the beginning of the cybernetic age in 1967. This new system combined hybrid mixture of crisis and deviance, with an emphasis on mixing fast-changing information in shifting sites (Shane 2005). Foucault listed a strange laundry list of such new informational sites, worlds fairs, national exhibitions, department stores, museums, galleries, cinemas, theaters, carnivals, casinos, stockmarkets, markets, old style bordellos and brothels. Some of these heterotopias of illusion contained multiple, conflicting real places, like the world's fair, others contained multiple, conflicting timescapes, like the period rooms of a traditional museum.

The theater had the capacity to shift actors in time and space through performance and scenography. The cinema through jump cuts, flash backs and montage was even more effective and faster in shifting actors in time and space. Foucault like Marx saw the stock market as the ultimate fast shifting heterotopia of illusion, where information about the price of a commodity could vary by the second depending on the dealers perception of a shifting reality, while the commodity itself, gold bar or coffee in a warehouse, remained unchanged.

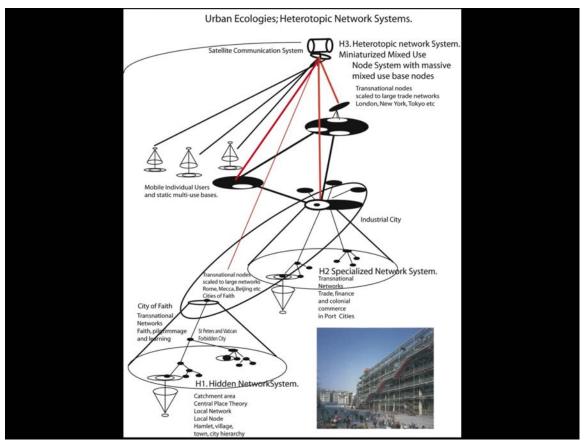


ILLUSTRATION 2. Heterotopic Systems.

3. Heterotopic structures of the metacity; Las Vegas, Disney and Epcot 1981.

The world's fair provided an official version of such a heterotopic space, the fun fair or carnival a popular version, while the stockmarket provided the basic model for Foucault (1967). He never foresaw the growth of the global market function in the neo-liberal age, as finance, insurance and real estate (FIRE) came to dominate the design of cities and transforming social democratic norms established under the state dominated heterotopias of deviance. Trading information in fast changing and global networks replaced knowledge and knowledge creation as a source of power, status and wealth. In this system of fast changing heterotopias of illusion privately owned gambling casinos and theme parks provide a key insight into the understanding the transformation to the city as information.

In Las Vegas normal codes are reversed, visitors spend wages earnt elsewhere in architecturally themed interior fantasy environments. Gambling, prostitution and the distribution of free alcohol are profitable and legal occupations. The Venturi, Scott-Brown and Isenour team (1972) studied Las Vegas as a Pop icon outside the puritanical aesthetics of the modernist masters like le Corbusier. Their analysis emphasized the mobility and speed of the observer in a car. They argued that designers needed to scale signs and symbols at a megascale to be legible at speed and thus buildings became relatively unimportant sheds (unless an iconically shaped, symbolic "Duck" building). Speed and information drove signage and architectural design. At a smaller scale their analysis included the commercial strip outside every American town, the Miracle Mile of new 1950's shops and car parks, as well as the new invention of the shopping mall (Gruen 1964)

The Venturi, Scott-Brown and Isenour team missed the key ingredient of media in Las Vegas' success. It is easier to see the media's influence in the early 1950's when ABC, one of the three national TV and radio networks, partially financed the construction of Disneyworld in exchange for the exclusive rights to Disney's cartoons (Marling 1998). The network ran the cartoons on Saturday morning to entertain children while their parents did domestic chores, resulting in massive advertising revenues. Disneyland also attracted 12 million people in its first year of operation, as people sought psychological solace in dreams of Victorian small town high streets, community and fantasy lands, while moving to the modern suburbs of single-family homes and malls (Shane 2005).

Walt Disney's Experimental Prototype Community of Tomorrow (EPCOT, 1982) in his Florida mega-theme park development demonstrated his understanding of the enclave logic of the new global urban space-making system, based on urban fragments and associated villages in global networks. Visitors to EPCOT entered past corporate pavilions that emphasized the connective power of corporate America in the global system with General Motors providing transport, AT&T providing communication systems, and Kodak storing our memories. After this entry, visitors confronted a lake, symbolizing the ocean, surrounded by a selection of old empires, like China, Britain, France, Italy, or Japan, all accessible by ferry. Each nation became a village street stage set with a vertical marker element,

the Eiffel Tower for France, Big Ben for Britain, and so forth. Disney designers reversed the spatial relationship between the Saint Mark's Campanile and the Doge's Palace, for instance, to show that the new space was a simulacra, a transformed memory of the old city.

The redesign of Las Vegas in the 1990's reflects the success of the Disney Company theme parks in becoming a global brand. Casino owners replaced their 1960's parking lots with themed urban environments and redesigned the Strip as a retro-pedestrian environment, in the age of GPS, SatNav and nostalgia for past urban environments, becoming global brands. \$1.8 billion Las Vegas Venetian Casino (1999), for instance, has a Piazza San Marco forecourt with canals leading through a slot machine interior piazza up to a second floor replica of the Grand Canal, with singing gondoliers, below the housing tower with a village of villas on the rooftop (Shane 2011 2012). The Macao Venetian casino (2007) repeated this same pattern of urban simulacra on an even grander mega-scale. Casino designers, like Disney, sought to establish their brand of heterotopias of illusion in the national informational system using urban theme park imagery as an attractor, first as part of the American suburban dream, then as part of a global network in the highly mediated metacity that extended its reach across Europe, Asia, even Russia.

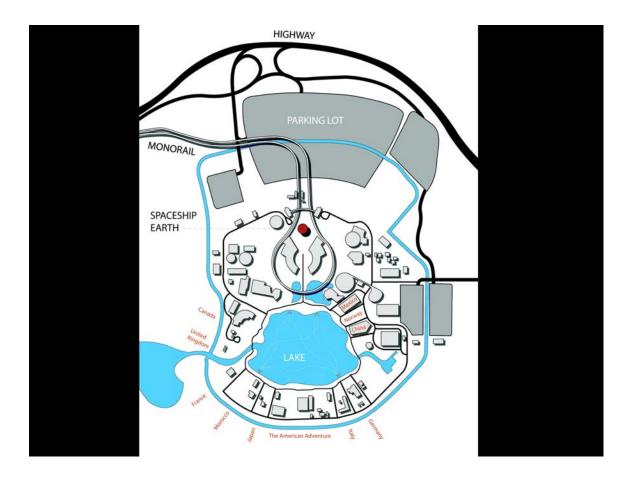


ILLUSTRATION 3. EPCOT DIAGRAM; DGS and Uri Wegman

4. Metacity; communications and urban form in the Megacity.

Disney's EPCOT (1981) diagram placed the communications industry at the gateway of the new world, coupled to energy supplies from power companies and mobility from the auto industry, with a photographic company as the memory system holding images. This structural model still holds true, with modifications to adapt it to the Twenty First century. Koolhaas's CCTV building in Beijing stands as a monumental reminder of the power of the state based metropolis in the informational city, with 5,000 employees distributing programming to one sixth of the world's population. This complex, three dimensional, communications mega-node stands in stark contrast to the empty public spaces of the old metropolis that now serve primarily as tourist attractions, like Tiananmen Square. Meanwhile China's telecom industry serves over a billion customers with a 80% market

penetration. At the Beijing Olympics in 2008 this top-down state machinery broadcast to an estimated 4.7 billion people, almost 2/3rd of the world's population (Barboza 2008).

The CCTV stands as a heterotopic monument to the city as information and as in Disney's model, implies that all previous systems can be held within this system as at EPCOT. Older cities become statistics and images to mined and manipulated as informational structures. As Disney envisioned the old imperial systems of the world and their metropolitan centers have been reduced to informational systems and images within the new global system. Tourists in their hotels, the wealthy in their condominiums and corporate offices mostly now inhabit the centers of the metropolis. All process the city as information, while global brands use the image of the city for marketing purposes. In Beijing the authorities have transformed the Qianmen approach street to Tiananmen Square into an urban simulacra of old Beijing, complete with old streetcar, as a successful, open air Festival Mall, a richly endowed metablock of information with many mobile aps and websites tied to its global and national stores (Bernstein 2009).

In the city as information such metablocks need not take the form of traditional cities as long as the network of electrical services for power and cell towers or cables for communications transmission penetrate their built fabric. The UN predicts that two thirds of the future urban growth of cities will be self-built housing like the favelas of South America, while David Sattherthwaite (2005, 2007) points out that 92% of this gigantic urban expansion will be in cities of 1-2 million (not megacities), cities whose form is unrecognizable from the traditional European perspective (Perlman 1976, Neuwirth 2005). Terry McGee (1971) identified a far older Asian morphology that included rice paddies, fish farms and urban agriculture based on the communal management of water systems in ancient river valley and delta cultures, a widely distributed pattern of agriculture in the city that can be traced back beyond Angkor Watt in Asian history. This city territory has gained a new urban dimension with hand held communication devices and personal mobility, either by public transportation or by bike, scooters or motorbikes. The modern statistical definition of the Asian city often includes wide areas of agriculture belts, in Japan or China for instance, or even in Central Bangkok, where land ownership is still vested in the monarchy (Hebbert 1995, Moench and Gyawali 2008).

The kilometer square grid of central Bangkok, originally a new town area outside the sixteenth century island core, now contains ancient monastic temples and their fish ponds, with attendant workers housing along traditional Soi lanes, stretching back to an ancient canal that both irrigated the ponds and carried their produce to market. These long lanes surround the temple and have their own motor bike taxi services to carry inhabitants to the main avenue. Factories and their associated worker housing also follow the Soi format, forming another morphological patch within the kilometer square megablock. On the opposite side from the canal, Bangkok's Miracle Mile of the megalopolis formed during the Vietnam War with the busses and the subway connecting the main Rama I boulevard with the suurrounding suburbs. Here shopping malls and department stores proliferated, forming another distinctive morphological patch that turned from the interior to the exterior with the construction of the above ground Sky train. Political parties quickly learnt to make their demonstrations more effective by shifting their demonstrations from the traditional central square to disrupt shopping on Rama 1, also occupying the airport mall (McGrath 2007, 2012).

The Asian megablock with its widely distributed urbanism now overlaid with the metacity informational system can be found throughout the world, especially in river and delta locations where the management of irrigation in earlier agricultural system demanded communal cooperation and collective negotiations. The spacing of agricultural villages and communal facilities like temples varied with the carrying capacity of the land, setting up a basic territorial morphology that became overlaid in the Po Valley, for instance, by Roman colonial grid encampments, railway networks and small metropolitan centers, followed by small industries connected to the global economy by highways to the airport. The block size varied in discrete patches from the village scale, to the industrial modern block to the modern factory all within the framework of the Roman megablock overlaying the villages and irrigation system. All these systems now operate as layers of information in the metacity, with modern pumps and computers controlling irrigation systems, prices of products, both agricultural and industrial traded on line, traffic conditions and flows monitored by SatNav systems and railway companies on line, with agritourism and village images advertising the pleasures of the rural Po Valley and its Palladian villas globally. Everything appears to be open and free in this etopian territory of fun and

leisure, where no one need ever get lost (Mitchell 1996, 2000).

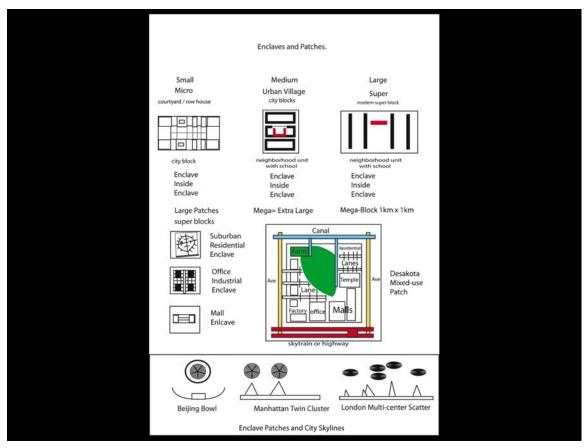


ILLUSTRATION 4 BLOCK SCALE AND METABLOCK DGS.

Conclusion; the limits of the metacity concept..

Modern global communications and hand held personal communication devices have greatly facilitated the proliferation of heterotopias of illusion in the post-modern society of the metacity. Fast changing information played a large role in Foucault's theory of the construction of sites and his theory of heterotopias of illusion. Foucault understood that the key to mobile and temporary site construction was the number and shifting sets of relationships that connected at a point inside the network, creating a temporary node from a set of relationships. Where the Panopticon had rigid disciplinary codes enforcing a set code against deviance, the codes of the heterotopia of illusion were fast changing, hybrid and flexible, giving the illusion of freedom. Multiple voices and actors controlled their spaces and were free to interact within the heterotopic space.

As Foucault stressed there are distinct limits to the freedom allowed in the post-modern heterotopias of illusion that provide only an illusion of freedom. The whistleblowers of Wikileaks, like Private Manning and Edward Snowden, amplified by newspapers like the NYTimes and London Guardian, have revealed the massive scale of US and Allied government spying n their citizens activities, including planting paid political agitators as spies inside grass root groups like Occupy Wall Street (2008) and various world wide resistance organizations. The Boston Marathon terrorist bombing (2012) demonstrated the impossibility of processing the massive data collected, and the subsequent armed manhunt of the suspects centered on cctv, TV, and tracking the location of a stolen cell phone after a shoot out in the street. The surviving, wounded suspect was ultimately located by a home owner noticing blood leaking out from under a boat cover in his back yard in the locked down working class neighborhood of Watertown (Mendick 2013).

While the metacity and its informational structures facilitates the appearance of freedom in the megacity and megablock, it too has its rules and structures that were so well delineated by Disney's EPCOT almost 50 years ago. The widely distributed city territory including agricultural belts forms the basic format of the megablock in the metacity and megacity alike. Within this larger network and framework a great diversity of fragmentary systems of exist as urban actors sponsor a dynamic ecology of urban patches within a local, regional and global economy. Here Foucault's heterotopia of illusion triumphs as the actors shift and change their priorities quickly in the shifting networks of the territory. With the collapse of the old neo-liberal financial system of public-private partnerships in the market crash of 2008, new patterns of association and finance using the internet and collective communities on the internet might now emerge from the chaos of lost home ownership and empty new towns. The metacity remains a work in process and the impact of the city as information has still to be investigated more fully.

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