

METAPHORS OF THE CITY IN THE INFORMATION AGE

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1. INTRODUCTION

The technological revolution has transformed some of the most fundamental assumptions that characterize our society. It has redefined our conceptions of labor, of information, of the global, and even our understandings of space and time. The way that we conceive of and imagine the cities of this revolution, however, can serve as the quintessential expression of the information society.

More and more, the city has come to be understood metaphorically; that is, in terms of schemas and structures of other domains of human experience that are projected onto the more ambiguous notion of the city. Conceptions of the contemporary city are clear indications of a collection of metaphors that are influenced by our history, our technology, and our experience in time and place.

1.1. A Disappearance of the City? The technological revolution is characterized by improvements in transportation and communication systems that reduce the limitations of space. As a result, the social and economic activities that are the defining features of an urban society are no longer restricted to the physical boundaries of the city itself at least theoretically. It seems reasonable to propose that this death of distance (Hall, 1999) might imply a collapse of the notion of a city altogether; at least in the traditional sense, as a physically centralized, densely populated area of human habitation.

But theorist seem to agree that in fact cities will have an answer to the inherently aspatial nature of the information revolution. As Mitchell puts it, the reserves of resilience and adaptability that have allowed great cities to survive (in challenged form) the challenges of industrialization and the automobile will similarly enable them to adapt to the bitsphere (Mitchell, 1995).

The primary reason for this, given by most theorist, is that a major component of the interactions =in the advanced service communities are characterized by face-to-face

exchanges of gossip-level and quasi-illegal information that play a significant role in the more formal decision making processes (Castells, 1989). Also, we have seen how areas of dense telecommunication are typically shadowed by an equally concentrated infrastructure of face-to-face exchanges. It is this synergetic relationship between the two forms of communication that, as Hall sees it, explains why the graphs of long-distance telecommunication traffic have marched in parallel with those for long-distance business travel (Hall, 1999).

If cities and urban centers will continue to remain an integral part of our socio-spatial experience, then how are to conceive of them? The emerging metaphor for the contemporary city can be understood as an interplay between competing and cooperating conceptions of the contemporary city (Sui, 2000).

2. THE TECHNOPSIS

With the triumph of rational thought and socio-political effects of the Industrial Revolution in the Modern Age, a quasi-religious faith in scientific thought emerged. Science became the tell-all answer to phenomena in every domain of human experience, from social movements to individual interactions. It was believed that a commitment to rational thought would eventually provide us with a complete description of our natural world, including our experience with it.

For Eveno, the faith in a total explanation of science led to a determinism in the social sciences in which social structures/constructions were understood in terms of machine models (Eveno, 2000). Accordingly, the machine technique surfaced in the Modernist experiments of the city in such instances as Brasilia. The Modern City was understood in terms of a machine schema that was projected onto it. The City as machine metaphor brought with it the notion that the planning of a city was a single act devoted to the ultimate authority of this machine model.

At the same time, the Industrial Revolution presented the creators of space new material with which to imagine the city: reinforced concrete, steel, high-strength glass. Along with the evolving glorification of efficiency the metaphor of the city adopted a vocabulary of lightness that was typified by Le Corbusiers Radiant City plans for Paris in the 1920s (Benedikt, 1991). And, with the advent of the automobile, the notion of the City gained momentum as an expression of movement throughout the middle of the century. It was Haussmanns highways that provided the necessary transition to an urban environment of movement in an industrial society dominated by the automobile.

The commitment to the machine technique and the manipulation of space brought with it the inherent notion of environmental determinism, the idea that a logically and well-planned physical architecture of the city can have significant effects on the socio-political evolution of its citizens. But, by the 1970s, it became clear that the contemporary city was more than a system of highways and buildings, no matter how well planned. More and more, it was coming to be seen as an immense node of communication, a messy nexus of messages, storage and transportation facilities, a massive education machine of its own complexity, involving equally all media, including buildings (Benedikt, 1991).

As advances in technology became more and more defined by the production, transfer, and consumption of information, the machine technique was no longer sufficient to communicate the intricacies of the emerging city, and was all but abandoned in favor of a communication/information technique. Socio-political phenomena have come to be understood in terms of the structure and experiences of these evolving information technologies. In particular, the conceptual schema of a network provides the model for many of our understandings of social constructions. The emerging notion of the city involves a reorganization of spatial structures grounded in this communication/information technique-in particular, the network model.

The contemporary metaphor of the city represents an inherent commitment to the progress of technology. In the 1980s, Dutton and others developed the wired city concept as an expression of this type of technological optimism. The wired city metaphor blends the communication and information technique with a deeply Modernist utopian vision of the city. For Dutton, the wired city metaphor embraces at least five very insightful core organizing principles:

- Communications is of increasing significance to society
- The new media have inherent biases toward more decentralized and democratic nodes of communication
- Electronic media should emulate and reinforce face-to-face patterns of communication
- Communications should be viewed as an electronic highway
- Long-range, rational-comprehensive planning should guide development (Dutton, 1987).

Here we notice the explicit declaration of the information technique in grounding the contemporary city. However, we also see that the realization of the contemporary city as

a vehicle for the access and deliverance of information is heavily influenced by the urban-planning experiments of High Modernism. The success of the contemporary city hinges on the commitment to a rational and all-inclusive plan. The Haussmann highways of the Modern age serve as the model for the information and communication infrastructures.

In other conceptions of the contemporary city-in particular the Postmodern Archigram notions of the Walking City, the Plug-in City, and the Instant City-the Modern commitment to the freedom of movement in the city is also realized.

The network metaphor for the city is particularly useful in grounding our notion of the contemporary city as a collection of distinct and disparate units. The growth center conception of the Modern city has given way to Postmodern city that has 'spread out and separated to form extensive monocultures and specialized destinations/ (Jacobs and Appleyard, 1982). Urban life and the experience of a community exist primarily within these protected enclaves of homogeneity. Today's technopoles are no longer a single source of technological and social progress, but instead a concentration of many sources - again, an entailment of the network metaphor of the city.

The emerging conception of the city (the 'Technopolis'), then, is a collection of Modernist commitments to Utopian urbanism blended with the Postmodern investments of cyberspace and the information age, and in particular the communication and information technique of the network schema. The technopolis encompasses a variety of models for the 21st century city, from electropolis and wired cities to city of bits and the computational city. For Sui, the technopolis refers to the 'constellation of massive transportation, telecommunications, and information networks to move goods, people, and information; it is a combination of wheels, wires, and airwaves' (Sui, 2000). It is an ideal space of information sharing and consumption.

3. COMPETING AND CONTRIBUTING METAPHORS AND THE DANGER OF CYBERNOPOLIS

3.1. Ecumonopolis. The environmental destruction that has become associated with urban growth has lead to a rethinking of the often irresponsible policies of Modern urbanism. We have seen an effort to reconsider the relationship that a city has with its physical environment. The Ecumonopolis notion of the city has its origins in the Garden City movement of Ebenezer Howard in the very early 1900's, in which a self-contained community of predetermined size and population surrounded by farmland was to bring

together the economic and cultural benefits of both city and country living. The Garden City experiments proved to be a highly influential expression of the concern over the problems of large cities (in this case, congestion in the urban center of London).

The metaphor continued to win influence throughout the twentieth century, and today is embodied in the notion of the sustainable city. Simply put, the sustainable city is a quest for harmony between the urban community and the surrounding natural environment. The sustainable city has the ultimate responsibility to respect and make use of the natural environment beyond its own boundaries. It encourages individual participation in city policies and requires a more even distribution of environmental assets (Haughton and Hunter, 1994).

It is clear that in many ways the commitments of the Ecumonopolis stand in opposition to the motivating assumptions of the technopolis. In fact, many of the problems that the Ecumonopolis identifies in the contemporary city are linked to the unchecked progress of technology. In particular, the designs and plans of the Modern growth poles usually involved a 'clean slate' design, stripped of the traditional, and subordinating the environment to the logic of the Modern city. However, it is also worth pointing out that both conceptions of the city rely heavily on the network metaphor; for Haughton and Hunter, 'the sustainable city is a learning city, a sharing city, an internationally networked city' (Haughton and Hunter, 1994). The information and communication techniques have provided for a contemporization of Howard's Garden City. It is this accordance that allows both the Ecumonopolis and the techopolis to operate together within today's broader notion of the city.

3.2. Anthropopolis. Yet another collection of conceptions for the contemporary city can be identified as the anthropopolis, a city of and for the people. The ultimate success of the anthropopolis city is measured by the satisfaction of human need and the quality of urban life. The goal of the city, then, is to make the human activities of the city - where we work, live, and entertain ourselves - as enjoyable as possible. Transportation systems, communication networks, and the physical environment all need to be designed and implemented in such a way that the ultimate human satisfaction is obtained from them.

As we have seen, the anthropopolis plays an important role in many of the techopolis conceptions of the city. In particular, the Wired City embraces advances in communications technology as the basis for providing a more satisfying urban lifestyle. More specifically, online environments and virtual spaces are developed in the hope of fostering

individual involvement within the city. So-called geographic information systems (GIS) allow for the unprecedented modeling of physical spaces within the new cities.

For some theorists, the very notion of the network city becomes almost indistinguishable from the active participation and engagement of its members; residents should feel that 'some part of the environment belongs to them, individually and collectively' (Jacobs and Appleyard, 1982). It is inherent in the assumption of the contemporary city that active participation of its members can lead to an evolved sense of community and increased happiness. It is the Anthropolopolis aspect of today's city that strives to distinguish itself from the paradoxes of the Modern city. The network city has the unprecedented ability to provide for its residents a detailed and maintained knowledge of its function, layout and activities. It is here that the city reveals its significant meaning and provides a clear picture of the origins of things; this is the contemporary city's 'authenticity' (Jacobs and Appleyard, 1982). The development of the city's authenticity is the network city's answer to the isolation and departure associated with its Modern counterpart.

3.3. Fears of the Network City. Criticism of the contemporary model of the city can, in many ways, be matched up to the dialectic of the Modern 'machine city.' As communication technologies become more and more a fundamental right of the individual, they can also provide a mechanism for alienation and social control (Eveno, 2000). Although we have seen how aspects of the network model provide idealistic accounts of social incorporation, it is clear from our experience so far that we have seen an unprecedented polarization of society.

For Daniel Sui, the contemporary city is characterized by 'the continued decentralization of both population and employment, the increasing levels of social diversity and social polarization, the emergence of an elite inner city (gentrification), and the deepening spatial separation between jobs and labor (spatial mismatch)' (Sui, 2000)

Although the network city provides the potential for the equal participation of its members, its decentralized nature allows for the development of highly polarized sectors. The major issue is the lack of accessibility to the new technologies associated with certain socio-economic sectors of the city, and also the lack of any concrete way to measure 'access to information.' Most of our current measurements of accessibility describe models of transportation, and are not relevant to the despatialized networks of information. The result is an increasing division between the information-rich and the information-poor within a city that lacks any cohesive way to address the inequality, all reinforced by our metaphorical understandings of the city as a decentralized network of information.

Another looming aspect of the contemporary city is the potentially dangerous nature of the geographic information systems (GIS) that were designed with the ideal intent to foster community involvement within the city. As information technologies improve, sophisticated computer systems now have the capability of efficiently assembling, storing, manipulating, and displaying geographically referenced information. In other words, the city has the unprecedented ability to surveil its citizens. Mike Davis and other theorists have shown us that the contemporary city is subtly but effectively reinforcing its own process of socio-spatial polarization through a culture of fear (Davis, 1991), manifested, for example, in the Postmodern architecture of Los Angeles. The advent of the GIS allows the socio-politically advantaged to keep an eye on the marginalized sectors of the city under the guise of a community based project. In an age of a culture of urban battlegrounds, the network city can easily become associated with a kind of Urban Panopticism.

The metaphors that define our contemporary conception of the city are deeply rooted in Modernist traditions of the urban utopia and a commitment to progress. At the same time, technological advances shape the ways that we implement these traditions, and the ways in which we think about social phenomena. The emerging network metaphor of the contemporary city is a result of a conceptual shift to information paradigms. However, in many ways, the emerging vocabulary only serves to augment the Modern contradictions of social polarization.

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