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TELEMATIC - CITY RELATIONS

Complex complementary or contradictory tendencies and perspectives

A wide and sometimes confusing range of perspectives has developed that try to chart the transformation of 21st century urbanity as a shift away from an industrial manufacturing dominated society to one dominated by knowledge and information, communication, symbols and services. Many commentators excitedly predict very radical changes as advanced telecommunications, computers and media technologies weave into the fabric of our daily lives. In attempting to grasp an understanding of technological impacts, and perhaps harness their capabilities to create a new identity for 21st century urbanism, one is left with precious little case study analysis and instead with a plethora of texts which are theoretical at best, and simply sloppy speculation at worst. It is perhaps more prescient to formulate a methodology for understanding the implications of technology and to establish a flexible framework for its evaluation than it is to make didactic predictions at this stage.

In the following paper I will attempt to compare the seminal texts of four authors which have been put forth as theoretical, speculative, critical and utopian explanations of emerging electronic societies. William J. Mitchell, M. Christine Boyer, Vittorio M. Lampugnani, and David Clark have recently written about the complex transformations underway in advanced industrial cities in which the convergence of telecommunications, computing and media technologies into what is called the “telematic” has a central importance. All four authors work in the field of architecture, urban planning and/ or urban development. This illustrates that the initial reluctance against the apparently invisible and intangible subject, especially in the more tangible disciplines, is replaced with growing interest in comprehending the relationships between the telematic and urbanism. It became evident that the telematic has important implications not only on the very nature of society, but also on the physical form of contemporary cities.

Although Mitchell and Boyer work in the field of architecture, they both focus on the immaterial implications and leave out any animating suggestions what will happen with our

existing cities. In reaction to Mitchell's book "City of Bits" and Boyer's book "CyberCities," Lampugnani wrote two critical texts. In "The Permanent Side: Desires for the city in the age of telematic" he readily accepts Mitchell's arguments that due to the telematic some activities will be dispersed out of the city or passed over to the electronic net. However, unlike Mitchell who skirts cyberspace as the new urban realm, Lampugnani sees an epoch-making opportunity for the reevaluation of the material side of the city and real urban design. In "The Architecture, the Book, and the Diskette," he criticizes Boyer's CyberCities as fragments of controlled and commodified "themed" and "simulated" elements, as the "hollow surrogate of the material city."

Lampugnani's criticism of the dominance of the immaterial over the material is the point of departure for this paper. I will offer as an additional comparison, David Clark's book, "Urban World/ Global City," that incorporates empirical research on urbanization, urbanism and globalization, which are not the focuses of Lampugnani's text, but do augment his criticisms.

Relationship of the telematic to the city

The telematic is being applied across all the social, cultural, environmental, political and economic functions that combine to make up contemporary cities. The telematic helps us to overcome spatial distance and liberate us from some temporal constraints. It also operates between various scales – from within buildings to transglobal networks. It effects the private as well as the public, the immaterial as well as the material. In this paper drawing on the three books and two texts, I argue that the complex interplay between these relations, functions and scales has to be considered to understand the impact of telematic on cities.

Why telematic and cities? Cities are the central arenas within which we would expect the effects of the current telematics transformation to be felt. Our world is a fundamentally urban place.¹ In developed countries between 60 and 90 per cent of the population live in towns and cities. Cities are the dominant communication, government, transaction and business concentrations of our society which make them the main centers of demand for telematics and the "hubs" of the electronic grids that radiate from them. Indeed, there tends to be a strong synergistic connection between cities and these new electronic infrastructure networks. Despite the ability of the telematic to overcome the time and space constraints which forced activities to

¹ Clark, 1996.

locate in close proximity within cities, it supports urban growth and urban concentration instead of dispersal.

Alternative perspectives

Much of the debate about the telematic and the city focuses on the tensions between two alternative views of the future of the city. Will the telematic lead to a “renaissance” of the contemporary city or do they signal the “dissolution” of the city?² Especially on the side that argues that the telematic signal the dissolution of the city a profound utopian optimism coexists with pessimism – crude technological or social determinism and all-explaining “grand metaphors”. The aim of comparing the four authors together is to set out the debate between these two dichotomous models and to capture a range of different perspectives so as to trace the complex interplay between telematics and cities.³ The prophecies for the city by the four authors are as distinct as their intellectual and literary styles.

Overview of texts

In *City of Bits*, William J. Mitchell portrays the “bitsphere” as the new urban realm and gives us a look how some of the techno-enthusiasts might live in the future, which will be increasingly immersed in simulated environments. His own description of his effort, a “windshield survey along the infobahn”, is telling and appropriate. The book is indeed a fast ride, much is only glimpsed quickly and thus warrants a visit to other links and readings.

Also in *CyberCities* by M. Christine Boyer reality becomes increasingly immaterial. But in contrast to Mitchell’s utopian vision that holds out the promise of new reinvigorated communities, Boyer illustrates a postmodern dystopia of disorder, decay and uniform globalization. While Boyer’s intellectual position disdains the search for order and favors juxtapositions and fragments, Mitchell looks up to Aristotle and waits for a grid logic to contain cyberspace.

In Vittorio M. Lampugnani’s modest but animating vision the telematic nestles in cities both “discretely and helpful.” He argues that telematic if used intelligently can liberate the solid side of the city from its utilitarian and commercial part. Thus revalued in its authenticity the city

² Gottman, 1990.

becomes again imaginable in its original and most characteristic functions as a place of “collective memory, identity and res publica.”

David Clark identifies transnational corporate capitalism as the consequence for the recent rise of an urban world and a global urban society. He is skeptical of extreme claims and thus stresses that “urban world and global city are convenient catch-phrases which summarize current themes and describe conceptual ideals rather than the present situation.”⁴ He sees the global urban world as increasingly, but still “incompletely, interlinked and interconnected as an urban place in economic and social terms.”⁵ Clark accounts that this globalization of society and the development of a world-economy are largely made possible by advances in telecommunication technology. But the result, he points out, is not a delocalized and placeless globalization, but a larger version of diversity that marks our historical cities.

Commonality exists between Mitchell's utopian and Boyer's dystopian assumptions that the telematic has a revolutionary importance and radically redefine urban life. Both point towards the dissolution or disappearance of the city and emphasize a single trend in urban form and imagery without taking sufficient account of how that trend is embedded in a variety of existing contexts. While in each case, whether City of Bits or CyberCities, the trend exists in dialectic relationship to prior and surrounding circumstances, contamination seems unavoidable.

In contrast Lampugnani and Clark urge a more sophisticated approach by examining the use of the telematic within existing trajectories and from an historical perspective. Consequently, it cannot be assumed that the telematic will inevitably result in the disappearance or dissolution of the city. Both Lampugnani and Clark argue that cities continue to flourish and even gain new meaning.

The focus of the following analysis of these very different theoretical approaches is on two questions. First, given the unprecedented proximity of telematic, how do these different theoretical approaches help to understand the changing nature and outcomes of the relationships between the telematic and the city? And second, how might we rethink relations once held to be categorically distinct – between immaterial and material, urban and rural, private and public, and

⁴ Urban World/ Global City, p.186

⁵ Urban World/ Global City, p.186

local and global. This typology usefully shows that the telematic seems to be a key facilitator between the complex and often contradictory nature of the linkages between these various scales and relations.

I. IMMATERIAL - MATERIAL

The current shift from the material towards the immaterial is mainly facilitated by telematic technologies. While Boyer and Mitchell skirt for the most part the immaterial side, Lampugnani stresses that “in a world where prophecies of the immateriality seduce and sometimes delude”, it will be more and more necessary to think about the solid and material side. Practical as well as social/psychological issues are of particular importance in the relation between the material and immaterial.

In *City of Bits*, Mitchell reimagines architecture and urbanism in the new context of “the digital telecommunications revolution, the ongoing miniaturization of electronics, the commodification of bits, and the growing domination of software over materialized form.”⁶ He writes, that these transformations “subvert, displace, and radically redefine our notions of gathering place, community, and urban life.”⁷ and they foreshadow the emergence of “invisible cities.” According to Mitchell the worldwide computer network is the “electronic agora”⁸ and *City of Bits* the “capital of the twenty-first century”.⁹

Practical aspects of the telematic

The practical aspects of the telematic focus on tele-services and tele-activities, which are delivered electronically into our homes. According to Mitchell the computer escapes its box and weaves itself into every corner of our daily life, transforming or replacing bookstores into bitstores, galleries into virtual museums, theaters into entertainment infrastructures, schoolhouses

⁶ *City of Bits*, p.5

⁷ *City of Bits*, p.7

⁸ *City of Bits*, p.7

⁹ *City of Bits*, p.24: It seems contradictory that Mitchell and many other cyber-advocates whose speculations abound surrounding the apparently revolutionary importance of the “information superhighway” borrow traditional urban metaphors for the emergent and fundamentally non-spatial electronic network.

into virtual campuses, hospitals into telemedicine, trading floors into electronic trading systems, department stores into electronic shopping malls. Nothing is sacred in this rapidly approaching world. Even corporations and firms will soon not be defined by concrete walls or physical space, but by collaborative networks linking geographically distributed teleworkers together. Mitchell writes, “we are entering the era of the temporary, recombinant, virtual organization.”¹⁰

Mitchell relocates human activities and transactions to a multi-centered on-line community. He argues that this will progressively reduce our reliance on physical proximity and material exchange. Instead of traveling physically to services and work, these relationships are mediated from our homes through electronic flows. Consequently, service provider locations, firms, organizations and corporations and the transport to it will increasingly disappear enabling the potential to relieve urban congestion.

Mitchell forecasts that new reinvigorated communities will emerge as cities for transactions are becoming increasingly irrelevant and people exercise their new freedom to locate in small-scale neighborhoods which are interconnected locally as well as globally via the telematic. They are likely to be characterized by the relaxation of home-work-service relationships. And according to Mitchell, its citizens will have the opportunity “to know their neighbor and to participate in local affairs.”¹¹

Lampugnani accepts the pass over of some activities and services to the electronic net. But in contrast to Mitchell, he argues from historical perspective that the dense and compact city will not become obsolete. Several kinds of communications and interactions, Lampugnani writes, cannot be mediated electronically and thus cities are still the predestinated places to allow physical proximity for such activities. Lampugnani even sees an epoch-making opportunity for a reevaluation of the city with the dispersal of physical activities and services to the electronic net. He argues that due to less commuting and commercial traffic, there will be less congestion, noise, and pollution and streets and places will again be available for the pedestrian. Furthermore he suggests that the increased vacant spaces in the city should be used for social housing and new public places and parks (instead of leaving it for more profitable, unrestrained private speculations which might lead to a gentrification in which only the affluent return to the city). Consequently, urban life might be more comfortable, sustainable and less costly in the future and

¹⁰ City of Bits, p.97

¹¹ City of Bits, p.171: More persuasively argued in “The wired neighborhood” by Stephen Doheny-Farina.

thus city centers may appear to be quite attractive habitats for the electronic household. The city will again become imaginable in its original functions as a place where people can live, work, recreate and especially have the possibility to mingle and gather with other people.¹²

The development of tele-services and tele-activities for basic functions such as banking, shopping and other information services, which don't require more than two senses, may help to underpin the withdrawal of the physical presence and material exchange of these activities from cities. But I argue that most tele-services and tele-activities are too remote and inaccessible, except to the housebound, isolated, hyperactive or techno-enthusiast. For most people, physical activities are a social, visual, tactile, stimulating, if sometimes exhausting, occasion and that the whole point is to leave the confines of the home.

It is also highly questionable that telecommuting will replace the cost, stress and environmental effects of physical transportation as argued by both Mitchell and Lampugnani. There are conflicting tendencies, especially since the growth of movement and mobility within and between cities which is facilitated mainly by telematic, allows people and firms to synchronize themselves in such a way as to make the transport predictable, useful and effective. While there may well be potential for trade-offs between the physical and electronic movement of people and information goods and services, it has to be stressed that many aspects of our lives still require physical goods and services. We cannot ignore that we are first of all material beings who require physical space and sustenance to live. Lampugnani agrees and points out that even the flow of information needs powerful machines such as computers and airplanes. Furthermore, many functions will continue to require spatial propinquity within urban districts based on the need for face-to-face interaction that cannot be easily telemediated. Thus, it is more likely that tele-services and tele-activities will parallel physical activities and not totally substitute them.

Social/ psychological aspects of the telematic

Boyer, who focuses mostly on the social/ psychological side, suggests that the electronic communication and the computer revolution together both demand and reveal a new imagery for the city. CyberCities, according to Boyer, are a mixture of cyberspace and post-urban places of disorder and decay. With the attempt to make suggestive connections, Boyer relies on this

¹² In: The Permanent Side

analogy together with three main assumptions, which are randomly repeated and transformed throughout the collection of essays by juxtaposing them to an unnecessary large number of other people's ideas and words - from Walter Benjamin to William Gibson.¹³ Both, the analogy and the assumptions underpin that a transformation has taken place from the planned and organized city¹⁴ of a disciplinary society to a space of flows¹⁵ characterized by global networks of computers, connectivity and control.¹⁶

First of all, Boyer assumes that it is not anymore the machine with its “integrative totalization and functional harmonization”, but the computer with its “binary on/off choices, command structures and disjunctions”¹⁷ that affect the way we think, imagine, grasp reality and thus model the city.” In her second assumption, she argues that the city is disappearing from critical debate.¹⁸ She tends to agree with the cyber-advocates, such as Mitchell or Gibson, “that what is happening in the space behind the screen is more interesting than that what is happening in front of it.” And finally, she assumes like Mitchell that the distinctive categories of space, time, and architecture¹⁹ “have been condensed or eradicated by our instantaneous modes of telecommunication, telemarketing and telepresence.”²⁰ Thus both Boyer and Mitchell agree that the boundaries and distinctions between physical and electronic space become blurred – “superimposed, intertwined, and hybridized in complex ways”²¹ and more radically “the proscenium dividing the real world from the virtual will disappear.”²²

While Mitchell argues that being released from reality and all of its messy and uncontrollable chaos enables the virtual to recover reality, Boyer writes that paradoxically it implicates a “*total* withdrawal from the world.”²³ Thus in contrast to the Aristotelian logic that

¹³ Baudrillard, Foucault, Virilio and many others.

¹⁴ Metropolis

¹⁵ Netropolis

¹⁶ CyberCities, p.18: “Deleuze maintains, disciplinary societies that molded behavior are being replaced by numerical societies of modulating control facilitated by computer technology. ”

¹⁷ Boyer assumes “that the machine is to modernism what the computer is to postmodernism.”

¹⁸ In contrast to the major focus on the city in the modernist discourse.

¹⁹ Siegfried Giedon's famous triptych, 1940s

²⁰ CyberCities, p.11

²¹ City of Bits, p.44

²² City of Bits, p.20

²³ CyberCities, p.9

inspires the “bit city” and that holds out the promise of multi-centered, open-ended ordered forms defining a “new participative community”, Boyer announces that “human unity and community are totalizations lying along the major conceptual fault lines that CyberCities display.”²⁴ She argues, that the computer matrix brings to the city “a systemic order that hides its heterogeneous nature and the disjunctive positions we hold within it.”²⁵ Boyer believes there is an inherent danger here: “Transferred, plugged in and downloaded” reality becomes increasingly immaterial²⁶ and we are incapable to map and understand the city and thus “to weave things together and to be able to act.”²⁷ In CyberCities we are “constantly on the move” which “offers us no foundation on which to stand, to criticize, to remember the past, or to plan the future.”²⁸ Even more radically, Boyer insists, that cyberspace displaces and substitutes for the increasingly unsatisfactory, unsafe and decaying urban space and urban experience.²⁹

Consequently, Boyer fails to develop the promised image of the city or to make any animating suggestion.³⁰ In CyberCities the combined onslaught of crass commercialism, massive disinterest and militant apathy that characterizes the ongoing dismantling of the public realm is even getting worse. Her call to reinstall a social agenda becomes lost in what she characterizes as “associative thinking,” building upon analogy, metaphorical associations, and circumlocutions” that allow her to “dance with data, enjoying recursive reflexivity, strange loops, and nonlinear inclusive structures.”³¹ Lampugnani by contrast argues a methodology for how the telematic can be used in a creative and liberating way and how it can be applied to strengthen the material and civic dimensions of cities.

Lampugnani agrees with Mitchell and Boyer that the computer's ability to simulate things and situations can be helpful and that “surrogate and reality” can and will exist in parallel. While for both Boyer and Mitchell contamination is unavoidable, Lampugnani emphasizes that “the boundaries may not be blurred and the different possibilities and applications may not be

²⁴ CyberCities, p.20

²⁵ CyberCities, p.9

²⁶ CyberCities, p.11

²⁷ CyberCities, p.19

²⁸ CyberCities, p.31

²⁹ CyberCities, p.11

³⁰ CyberCities, p.15

³¹ CyberCities, p.10

confused and mixed up”. And so next to “the nightmare of CyberCity as the hollow surrogate of the material city, whose superficial glint relies on a mixture of borrowed images for its potency,”³² Lampugnani’s vision arises in which the new technologies nestle in both discrete and helpful.³³ He hopes that the city will become liberated from the need to carry “incessant, flickering media-walls” and will instead be enriched “with other kind of information that make the city more viable and livable.”³⁴ He writes, liberated not only from its utilitarian but also from its commercial functions, which are offered electronically direct into our homes, the city in its solid appearance will gain a new freedom and will be revalued in its authenticity. And so instead of fostering manipulated and alienated individuals who are permanently plugged into the commercialized and controlled “information super-highway”, Lampugnani’s future city stirs and inspires an active and critical citizenry “who will remember their particular past and work for a better future.”³⁵ Lampugnani concludes that the city will “contain public space in the best sense”³⁶ and thus give identity and community within a social space.

Boyer might be right that plugged into cyberspace, we cease to interact with our physical environment in any meaningful way. I would argue that this “we” has first to be identified. Boyer’s “we” are not the poor who even can’t afford a basic telephone line. They are also not the critical and active citizens who according to Lampugnani use their latest electronic equipment in a liberating way. I would argue that only the most out-nerded techno-geeks as described by Mitchell can be persuaded to spent most of their time plugged into cyberspace. Although Lampugnani’s vision for a future city that is more equal, less manipulated and more sustainable is desirable and animating, it underestimates the power of transnational capitalism as argued by Clark. It requires social, political, philosophical, cultural and planning action against the backdrop of economical power.

³² In: *The Architecture, the Book, and the Diskette*

³³ In: *The Architecture, the Book, and the Diskette*

³⁴ In: *The Architecture, the Book, and the Diskette*

³⁵ In: *The Architecture, the Book, and the Diskette*

³⁶ In: *The Architecture, the Book, and the Diskette*

II. RURAL – URBAN [decentralization - centralization]

The evolution of monopoly capitalism into a transnational corporate capitalism which is mainly facilitated by the telematic and which is characterized through a reorganization of production, labor, finance, government, service provision and competition, on an international, and transnational basis,³⁷ has led to diverse decentralizing as well as to centralization tendencies.

Decentralization

All four commentators and others agree that there is a broad-scale decentralization of routinized functions, such as manufacturing and low-order producer and consumer services. Telematics are used here to access cheap labor, services and property in newly industrialized countries, less developed countries and in peripheral regions in industrialized countries.

Mitchell for example forecasts a shift of production from centralized specialist buildings in the city to “back-offices” or “satellite office clusters”, to “resort offices”, to the “office-in-a-briefcase” and to “homes”. He writes that these could be located anywhere – “in suburbs, exurbs, smaller towns or offshore locations.” Mitchell argues, that because telematic overcomes the time and space constraints which forced activities to locate in close proximity within cities, it permits that work, home and services can be scattered throughout rural territory and so weakening the glue of urban agglomerations. Mitchell puts himself in the line with utopianists and technological determinists from the 60s and 70s. He writes, “there is some evidence that these theorists were right.”³⁸ For most of them the “logic” of telecommunications and electronic mediation is interpreted as inevitably supporting urban decentralization or even urban dissolution.

³⁷ Urban World/ Global City, p.79

³⁸ Mitchell mentions Melvin Webber, who predicted in his assertion that society had reached for the "post-city age", that "for the first time in history, it might be possible to locate on a mountain top and maintain intimate, real-time and realistic contact with business and other societies. All persons tapped into the global communications network would have ties approximating those used in a given metropolitan region [Webber, 1968].

And Marshall McLuhan for whom the emergence of the “global village” meant that the city “as a form of major dimensions must inevitably dissolve like a fading shot in a movie [McLuhan, 1964].”

Centralization

Clark in contrast shows that the telematic has reinforced the centrality of cities and helped to concentrate large and growing numbers of people in urban places.³⁹ He argues that dispersed routinized functions accelerate urban and not rural development in the peripheral areas within the world-economy.⁴⁰ And he argues further, by drawing on Sassen, that “because of this territorial dispersal ... agglomerations of certain centralizing activities,”⁴¹ such as transnational corporations, global finance, and producer and personal services have sharply increased in size and have extended their spheres of operation across the globe.

Clark writes, that most of these activities have their headquarter functions concentrated in a small number of world cities.⁴² Here the telematic is utilized by the most powerful and important urban centers to reinforce their centrality as control of command and coordination functions of geographically dispersed activities. Clark concludes, that “the new economy order is one of peripheral production and manufacturing, and core control, research, development, design and administration.”⁴³

Concentration of telematic in cities

Clark mentions that the concentration of telecommunication providers in cities is a further factor that supports the metropolitan and urban dominance. Large, dynamic and globally oriented cities benefit most from advances in telecommunications because, as established locations for global business, they are the places that first receive and derive the advantages of new services and applications. Clark writes, that “telecommunications are initially made available in major cities where traffic levels, revenue and profits are greatest, and they subsequently spread down and outwards to successively lower-order centers.”⁴⁴

It is dangerous to assume that the direction of change is simply one-dimensional, leading inevitably to decentralization or recentralization of cities. One needs to be aware of the different

³⁹ Urban World/ Global City, p.164

⁴⁰ Urban World/ Global City, p.187

⁴¹ Sassen, 1991

⁴² Large global dynamic cities.

⁴³ Urban World/ Global City, p.84

⁴⁴ Urban world/ Global City, p.160

trends and hierarchies within the city's economic sectors. Most likely decentralization will accelerate urban growth in peripheral regions or continue around the fringe of cities within the context of extended metropolitan regions for locating back offices and tele-service centers. This is in fact associated with the downsizing of centrally located firms and dispersal of factories. There may be increased teleworking but this is also likely to be focused in or around urban centers. The option for "resort offices" in attractive rural and tourist areas and the "office-in-a-briefcase" as mentioned by Mitchell is mainly provided for small elite groups of self-employed professionals, such as consultants and writers. The main teleworkers are those employed by large and small firms. They may well work at home part-time, at a neighborhood office part-time, from their cars or hotels when convenient. But the key is a flexible combination of physical and electronic interaction and spaces, not a total substitution of the physical by the electronic. This means most people need to stay within reasonably easy access of the main business cities by air, road or rail.

Mitchell also doesn't consider that this decentralization and dispersal in return drives a centralization of higher order control and decision-making functions in cities that cannot be transferred into flows, as mainly argued by Clark.⁴⁵ This concentration of headquarters, producer service, finance firms, specialized education institutions, specific production centers, in turn generates spiraling demands for a wide range of lower order consumer services such as restaurants, retailing, cleaning, leisure, etc. Against Mitchell and other prophets of urban dissolution, developments in telematics compound the many existing advantages of cities. These stem from their nodal positions on global transport networks, their concentrations of a wide range of services, their social and cultural milieus,⁴⁶ their locational prestige, their size as centers of property investment, the flexibility that derives from their highly skilled and large labor markets,⁴⁷ and the versatility that comes from the many possible suppliers and clients within these cities.

⁴⁶ For example the need to maintain face-to-face contacts for global business.

⁴⁷ For example the concentration of specialized information.

III. SOCIAL AND GEOGRAPHICAL POLARIZATION

In *CyberCities*, Boyer argues that multinational corporations shape the telematic and the new urban forces in their own image.⁴⁸ As a consequence society and culture is characterized by a marketplace mentality of privatization, competition, colonization and commercialization.⁴⁹ The way in which telematic is used here supports the already existing social and geographical polarization within cities. They are increasingly being redeveloped and fragmented into controlled and commodified “packaged” or “themed” and “simulated” elements. The best examples for this “City as a Theme Park and Control Center” are post-modern office blocks, indoor shopping malls, gentrified or new housing estates, heritage and tourist areas. These tend to be carefully controlled to tailor to consumers and social élites while excluding social “undesirables”.⁵⁰

At the same time, the old public parks and spaces of cities are decaying. In New York, for example, Boyer notes a trend towards a fragmented and privatized urban landscape where corporate developments, backed by the City authorities, are “focussing on the provision of luxury spaces within the center of the city” while investment and planning ignores “the interstitial places” and public parks which have become “littered with broken glass, trash and abandoned cars.”⁵¹ The growing division between affluent and poor areas can lead to rising fear of crime, the “fortressing” of neighborhoods and buildings through electronic surveillance systems, and an increasingly home-based culture where people’s working, shopping, access to services and social interaction may become mediated more via telematics rather than by social interaction in the public spaces of cities. These trends blur the distinction between the public and private spaces of cities with the multiplying of “private public spaces”⁵² and “public private spaces”.⁵³

⁴⁹ *CyberCities*, p.145: “What might be the image of the city in a culture - such as America - that constitutes itself as an image, a culture in which the public spaces have been usurped by a series of simulations or variations on a theme park, and in which every aspect of metropolitan life seems thoroughly impregnated by the logic of the private market?”

⁵⁰ Boyer, 1993

⁵¹ *CyberCities*

⁵² Privately owned and managed public spaces offered for public use.

⁵³ Public interaction mediated electronically within private homes.

The parallel shift toward market-based telematic regimes can add further momentum to this polarization and growing unevenness in the social and geographical landscape of cities. The fortified, privatized and affluent segments of cities are the centers of most rapid development of infrastructure and services and the beneficiaries of the market-led processes of telematic development. The areas of ghettoization, growing poverty, high structural unemployment, under-education and rising crime are the sparse regions on the network maps, the “forgotten places” of telecommunications giants, and the districts where access even to basic information and communication services is problematic. Boyer writes, “the city, the region, and even the world can be grouped into information-rich [have] or information-poor societies [have-nots].”⁵⁴ According to Boyer, it is exactly the spatial and temporal disjunctions that the binary logic of the computer matrix performs that enable the inhabitants of CyberCities to think of cities and neighborhoods around the world as if they were “naturally bipolar places of uneven development.”⁵⁵

I do not agree with the inevitable and universal emergence of some urban dystopia. The diversity of experience of cities in the age of telematic has to be stressed. Not all cities are like Los Angeles, Las Vegas, or New York. Just because the rhetoric emanating from these cities dominates Boyer’s and other dystopian commentators⁵⁶ assumptions does not mean that the situation is not more positive elsewhere.

Nevertheless, much of what I have found in my research does seem to support the rather pessimistic outlook mentioned. As part of the ongoing economic, social and cultural change surrounding the shift to a transnational capitalism, the telematic does seem to support the emergence of new, more highly unequal and polarized social and geographical landscapes. The truly public space dimensions of cities where citizens encounter each other in physical space, as envisioned by Lampugnani, is unlikely because it goes on against the backcloth of broader economical trends. Urban trends, especially in America, seem to support instead a shift towards tightly regulated private and semi-private spaces – both physical and electronic – oriented towards the exclusion of groups and individuals deemed not to belong. Most of these are directed towards

⁵⁴ CyberCities, p.228

⁵⁵ CyberCities, p.21

⁵⁶ For example Mike Davis.

market-based consumption and treat people very differently according to their ability to consume rather than according to universal notions of rights or citizenship. In the context of the American city, this is the direct result of public/ private partnerships which have been the dominant paradigm of major urban development since the early 1980's. These partnerships shift the responsibility for providing and maintaining open public space away from the city to the private developer.⁵⁷ Related shifts in telematic policy away from public, social orientations and towards telematic markets and consumerism are involved. The telematic redefines how space is perceived, used and controlled. Crucially, they facilitate increasing control over space for powerful groups while creating new physical and electronic ghettos for marginal, low-income and disenfranchised households.

There is a need for a set of urban ideals, and mechanisms to overcome the growing polarization and commercialization of both electronic spaces and urban places.

IV. GLOBAL/LOCAL

One criticism which could be leveled at the arguments put forth by Mitchell, Boyer and Lampugnani is that they do not take into account the socio-political contexts of different cultures. Urbanism in the European context is completely different from urbanism in American and Asian contexts. Diverse economic and political structures as well as different social agendas and priorities are the true determinants of urbanism within a given culture. It is perhaps more prescient to first look at the effects of the telematic on the "invisible" framework of economic and political bodies which govern a given society. The telematic will first have to be adapted to these individual structures before any formal repercussions are realized.

For Boyer the polarization of both urban place and electronic space is in turn interwoven with a shift towards a globalized 'post-modern' culture and a kind of "generic urbanism".⁵⁸ She

⁵⁷ For example New York's 42nd street development. In general this is referring to the process of exactions and linkage fees which the city exercises in order to have the developer provide open public space in exchange for building variances.

⁵⁸ *CyberCities*, p.121: A kind of "United Colors of Benetton philosophy, an illusion of a happy ending that disavows the uneven development of cities and neighborhoods around the world by suppressing the acceptance of real differences that painfully still exist."

argues that this erases local differences; it superimposes western cultures over non-western ones; and it leads to a cacophony of signs and overflut of information, which often alienates urban inhabitants within an “uprooted” and bewildering global culture.⁵⁹

Clark acknowledges the persuasiveness of various theories that propose a generic globalization and the dissolution of the particular sense of place.⁶⁰ But unlike Boyer he is skeptical of extreme claims: “Global urbanism is a simple, superficially plausible, but highly questionable concept.” Despite the unprecedented rise and proliferation of translocal or delocalized cultural phenomena, he argues that people still live in particular places and local cultures continue to flourish. Clark suggests that we may witness an era during which the world itself is a city, a vast extension of urban aspiration, architectural forms and behaviors. Yet the result he points out does not seem to be uniformity or a single global urbanism, but rather a larger version of the diversity that marks our historical cities. By drawing on recent research he suggest that mass media are in fact contributing to the creation of highly varied patterns of urbanism at the global scale, and he writes “that the ideas of cultural imperialism lack empirical support.”⁶¹ He concludes that despite the worldwide reach of telematic, we do not and will not live in a global village where an all-encompassing and uniform Western urbanism replaces outdated and unwanted ways of life. He writes, “rather than a single global village with homogenous culture, the trend is towards a plural world-wide urban society.”⁶²

It is increasingly impossible to understand the forces that are shaping cities from purely local perspective; contemporary cities can only be understood through their relations to global economical, social, and technological changes. The instantaneous quality of the telematic seems a key facilitator of this linking of the “local” into “global”, largely through the construction of corporate telematic networks. The global urban world now operates as a vast set of international systems based on electronic flows of ideas, information, money, and services.

⁵⁹ Boyer quoting Baudrillard, p.23: "The code is the unseen, ob-scene vehicle by which that power [the power of corporations] moves towards global control, toward the profitable creation and regimentation of ever more sign-oriented, media-bound, simulated and simulationist cultures."

⁶⁰ Urban World/ Global City, p.187: "Today, the lifestyles and values of urbanites are being extended across the globe, both as direct corollary of urban growth and urbanization, and because they can be observed, copied and adopted via telecommunications."

⁶¹ Urban World/ Global City, p.131

⁶² Urban World/ Global City, p.135

V. CONCLUSION: TELEMATIC – CITY RELATIONS

I have built up the argument that contemporary cities can only be understood as parallel constructions between electronic space and urban place. Rather than revolutionizing cities by suddenly disinventing them - spreading their contents equally across regions, nations and transglobal networks – the telematic is involved in complex and diverse urban changes across all areas of urban life. It is dangerous to assume that the direction of change is simply one-dimensional leading inevitably to the dissolution or disappearance of the city as argued by Mitchell and Boyer. As we have seen their impacts on cities are not all the same; they are even not all in the same direction.⁶³ The telematic has a range of complex contradictory effects – facilitating the decentralization, immaterialization, privatization and globalization of some activities while it is also used to reinforce the centrality, materiality, locality and the public realm of the city.

Urban places remain the unique arenas, which bring together the webs of relations, and “externalities” that sustain a knowledge-based society. They are of fundamental importance as the economical, social, and political container and cultural dynamo of our society. Much of what goes on in cities cannot be telemediated: “only the most out-nerded technogeeks could be persuaded to trade the joys of direct human interaction for solitary play with their laptops in darkened rooms.”⁶⁴

I do not argue that cities are unaffected by the remarkable extension of electronic spaces; their pervasive growth critically affects all aspects of urban development. Of key importance here is the inherent logic of polarization, which seems to be locked into current processes of economic and social development in cities. This polarization is both reflected in and supported and reinforced by the development of electronic spaces. Patterns of economic health become more starkly uneven at all spatial scales; and processes of change seem to reinforce the privilege and power of social élites while marginalizing, excluding and controlling larger and larger proportions of the population of cities.

⁶³ Graham and Marvin, 1996

⁶⁴ City of Bits, 1995

New telematic technologies bring new options and capabilities within which urban processes can be shaped. But the complex interactions between the social and technological lead to diverse effects, some intended, some unintended, and to the emergence of new problems. As shown and argued in this paper the same technologies can be used to strengthen the public, local and civic dimensions of cities as well as to support social fragmentation, isolation and alienation. Social conflict and struggle between unevenly equipped groups and organizations is a key feature of the processes at work. But once technologies are available, political and social problems and actions can redirect their application and change their effects – just as political and social influences can redirect the shaping of urban politics and the built environments of urban places.

I have adopted a synoptic approach consistent with the aim of drawing together recent literature available on the subject. While this might be questionable it underlines that it is increasingly impossible to understand the forces that are shaping our cities from only one perspective or scale. This paper suggests that the understanding of the contemporary city requires that one should grasp the complex interactions between urban places - as fixed and stable sites which hold down social, economic and cultural life - and electronic spaces, with their diverse flows of ideas, information, capital services, labor and media which flit through urban places on their instantaneous paths across geographical space.

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