Urban Sociology in the Twenty-First Century¹

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Resumo: Partindo de uma interrogação que o próprio autor se colocava a si próprio em 1968, sobre a eventual existência de uma sociologia urbana - num posicionamento que rapidamente se colocaria como uma referência fundamental naquela época sobre a questão urbana – o presente texto abre para diversos pressupostos que possam permitir hoje, uma resposta afirmativa à questão então colocada. Comentando os dois paradigmas fundamentais (representados então pelo autor, mas também por H. Lefebvre) que, a partir daquela época, integraram a "nova sociologia urbana", o autor justifica a obsolescência dessa postura, num contexto de generalizada urbanização à escala global e perante a emergência do que designa de Era Informacional, surgindo assim a necessidade de uma "novíssima" sociologia das cidades. Este novo paradigma é então sustentado em três eixos fundamentais: ao nível funcional, em que a sociedade em rede se organiza em torno da oposição do global e do local; no quadro do conhecimento, em que aquela sociedade se caracteriza pela oposição entre individualismo e comunalismo; ao nível da forma espacial, na base das tensões e articulações entre o espaço de fluxos e o espaço de lugares. No final do artigo, o autor sistematiza temas para uma sociologia urbana do século XXI, terminando por enfatizar a necessidade de novos instrumentos de análise, quer em termos conceptuais, quer no quadro de novas metodologias.

Palavras Chave: "nova" e "novíssima" sociologia urbana; paradigmas analíticos e contextos históricos e societais; padrões espaciais e processos urbanos num mundo globalmente urbanizado; global e local; individualismo e comunalismo; espaços de fluxos e espaços de lugares; temas de uma sociologia urbana do século XXI.

A Retrospective Perspective

In 1968 I published my first academic article, under the title "Is there an urban sociology?" (Castells, 1968). Thirty-two years later, with the hindsight of historical perspective and a life of practicing social research on cities, the answer is: yes, there was; no, there is currently not; but perhaps, with luck, it will resurge in the twenty-first century, with new concepts, new methods, and new themes, because it is more necessary than ever to make sense of our lives – which will be lived, for the large majority of people, in urban areas of some sort.

Urban sociology was one of the founding fields of modern social science. It originated from the issues raised by fast urbanization as a consequence of industrialization, breaking down the patterns of rural life that had characterized the livelihood of humankind for millenniums. It was built around the central theme of social integration in a new, urban society made up of recent rural immigrants, and where the traditional institutions of social integration were crumbling under the weight of population growth, economic development, social mobility, and social struggles. Because American metropolitan areas were the epitome of growth, immigration, and change, they provided the social laboratory in which social scientists could explore the conditions of integration into the urban society of the masses of uprooted immigrants, flocking to the new Babylon from both the countryside and overseas. Chicago was simultaneously the center of social struggles (May I commemorates the killing of striking workers in Chicago), of Bertolt Brecht's theater ("St Jeanne of the Slaughterhouses"), and of some of the most innovative sociologist of the

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time (Park *et al.*, 1925; Zorbaugh, 1929; Wirth 1938), who created the Chicago School of urban sociology, the founding act of urban sociology as scholarly discipline.

The Chicago School was ideologically biased around the notion of urban culture - a unified culture that would characterize city dwellers regardless of their class, gender, or ethnicity. Yet, by emphasizing the conditions and contradictions of social integration for an extraordinarily diverse local society, the Chicago sociologists were dealing with the central problem of American society at the time: how to make a society out of a collection of disparate communities and competitive individuals fighting for survival. While the conditions in European cities were not so extreme, the issue of the reconstruction of patterns of social interaction for former peasants and transients in an urban--industrial context was equally poignant, even though a lack of interest among socialist ideologies in the urban question led to the reduction of urban contradictions to the secondary dimension of broader class conflict.

Alongside the study of social integration, urban sociology focused on the study of spatial patterning, also formalized by another stream of Chicago School sociologists, linked to social Darwinism in the development of what came to be known as human ecology (Hawley, 1956; Schnore, 1965). Thus, the study of forms and processes of human settlements under the notion of competition and social selection, and the analysis of the social conditions for cultural integration, were the founding themes of an urban sociology that, while ideologically biased, responded to the historical issues raised by industrialization and urbanization in the first half of the twentieth century. Regardless of the theoretical and political divergences I have with the Chicago School, urban sociology blossomed under its influence because the Chicago sociologists were dealing, with as much rigor and imagination as early sociologists could do, with the key issues of their time - with the process of formation of a new society, spatially organized in large urban centers. Because of the strength of this scholarly tradition, its themes, methods, and theoretical framework greatly outlasted the relevance of the approach - although history has its surprises, as I will elaborate later.

In the 1960s and 1970s, social problems in general, and urban issues in particular, were very

different from those that gave birth to the Chicago School. Social/cultural integration was not the issue any longer. The struggle over the control and orientations of an urban-industrial society was now at the forefront of urban problems. Furthermore, new social movements were arising, challenging the very notion of development and industrialization, calling for the pre-eminence of human experience over economic growth and for new forms of relationship between society and nature. Gender issues were raised as fundamental. The diversity of the urban experience throughout a multicultural world was finally acknowledged by social science, disqualifying the ethnocentric theory of modernization as Westernization. Widespread state intervention in people's lives by means of its control of social services and public amenities became the key element in the organization of both every day life and urban processes. When everything was contested, debated, fought over, and negotiated between social groups with conflicting interests and alternative projects, the very notion of integration in a shared culture appeared utterly obsolete. Thus, a new urban sociology emerged from a new urban reality. It took different orientations in America and in Europe. In America, pluralist political science placed political conflict and bargaining at the center of urban social analysis (Banfield and Wilson, 1963; Monenkopf, 1983). While I disagree with its consideration of social actors and interest groups outside the constraints of their class interests and cultural frameworks, the approach of urban political science, philosophically rooted in the tradition of liberalism, represented a major break with the theme of social integration, putting conflict and its negotiation at center-stage of urban social science. However, for reasons that historians of knowledge will explore some day, during the 1970s, the field of urban sociology was strongly revitalized by the so-called "new urban sociology" school, which originated in France, essentially around the work of two individuals who were in sharp intellectual disagreement: the great Marxist philosopher Henri Lefebvre (1968), and myself. The new urban sociology, which was never a unified school of thought, was built around four major themes, two introduced by the first theorist, the other two by the second. The first two themes, later elaborated by David Harvey and Edward Soja, were the production of space and the right to the city. Space was to be considered as a process of production

(e.g. capitalist production), whose outcome would ultimately frame people's lives in spatially constrained patterns. As a corollary, when capital did not consider it profitable or useful to keep people in the city, but could not send them back to the countryside because they were needed as urban workers, a new, intermediate space was built: the suburb – high rise and working class in the European version; single family dwelling and middle class in the American version, but equally anti-urban. Thus, after being expelled from their rural communities, people were now expelled, or induced to move out, from the city they had made into a liveable place. Now they were losing their right to the city.

The two other critical themes of the new urban sociology were built on the notions of collective consumption and urban social movements. The city was considered as a system organized around the provision of services necessary for everyday life, under the direct or indirect guidance/control of the state. Housing, transportation, schools, health care, social services, cultural facilities, and urban amenities were part of the elements necessary to the economy and to daily life that could not be produced or delivered without some kind of state intervention (e.g. public housing and public transportation in Europe, federally backed housing mortgages and subsidized highway systems in the United States). Collective consumption (that is, state-mediated consumption processes) became at the same time the basis of urban infrastructure, and the key relationship between people and the state. Cities became redefined as the points of contradiction and conflict between capital accumulation and social redistribution, between state control and people's autonomy. Around these issues, new urban social movements - that is, movements centered both on the control of community life and on the demands of collective consumption emerged as new actors of social conflict and political power. Urban sociology was turned upside-down, from the discipline studying social integration to the discipline specializing in the new social conflicts of postindustrialism.

Then, suddenly, in the last years of the twentieth century, a deep silence. Urban sociology receded into obscurity, in spite of the orderly pursuit of academic careers and the regular publication of scholarly journals that dutifully printed thousands of papers re-stating, re-elaborating, and refining the issues, themes, and concepts produced in the two big waves of urban sociology, in the 1920-30s and in the 1960-70s. Yet, by and large, urban sociology ceased to connect with the new issues arising in cities, space, and in society at large. The "new urban sociology" became obsolete vis-à-vis its new urban context, marked by the early stages of the Information Age, just as the Chicago School had become obsolete in relation to the mature industrial society. The lack of excitement of both students and intellectuals vis-à-vis urban sociology reflects an understanding of the exhaustion of its sources of inspiration from the challenges happening in the real world.

In order to understand the crisis of urban sociology at the turn of the millennium, and the avenues for its intellectual reconstruction, we have to recast the transformation of cities and urban issues in the new historical period, which I conceptualized as the Information Age. This could be a long and complicated detour, but I will build on the analysis of this matter presented in chapter 9 of this volume, "The Culture of Cities in the Information Age." Thus, here I will simply underline the key trends of urban transformation at the turn of the century to link them to the theoretical challenges to be answered by urban sociology in the twenty-first century.

A New Urban World

Spatial transformation must be understood in the broader context of social transformation: space does not reflect society, it expresses it, it is a fundamental dimension of society, inseparable from the overall process of social organization and social change. Thus, the new urban world arises from the formation of what I have analyzed as the emergence of a new society, characteristic of the Information Age, as a result of the interaction between the information-technology revolution, socioeconomic restructuring, and cultural social movements. The key developments in spatial patterns and urban processes associated with these macro-structural changes, can be summarized under the following headings:

• Because commercial agriculture has been, by large, automated, and a global economy has integrated productive networks throughout the planet, the majority of the world's population is already living in urban areas, and this will be increasingly the case: we are heading toward a largely urbanized world which will comprise between two-thirds and three-quarters of the total population by the middle of the century.

• This process of urbanization is concentrated disproportionately in metropolitan areas of a new kind: urban constellations scattered throughout huge territorial expanses, functionally integrated and socially differentiated, around a multi-centered structure.

• Advanced telecommunications, the Internet, and fast, computerized transportation systems allow for simultaneous spatial concentration and decentralization, ushering in a new geography of networks and urban nodes throughout the world, throughout countries, between metropolitan areas, and within metropolitan areas.

• Social relationships are characterized simultaneously by individuation and communalism, both processes using, at the same time, spatial patterning and on-line communication. Virtual communities and physical communities develop in close interaction, and both process of aggregation are challenged by increasing individualization of work, social relationships, and residential habits.

• The crisis of the patriarchal family, with different manifestations depending on cultures and levels of economic development, shifts sociability from family units to networks of individualized units (often women and their children, but also individualized co-habiting partnerships), with considerable consequences in the uses and forms of housing, neighborhoods, public space, and transportation systems.

• The emergence of the network enterprise as a new form of economic activity, with its highly decentralized, yet coordinated, form of work and management, tends to blur the functional distinction between spaces of work and spaces of residence. The work-living arrangements characteristic of the early periods of industrial craft work are back, often taking over the old industrial spaces, and transforming them into informational production spaces. This is not just New York's Silicon Valley or San Francisco's Multimedia Gulch, but a phenomenon that also characterizes London, Barcelona, Tokyo, Taipei and Buenos Aires, among many other cities. Transformation of productive uses becomes more important than residential succession to explain the new dynamics of urban space.

• Urban areas around the world, but particularly in the developed world, are increasingly multiethnic and multicultural; an old theme of the Chicago School, now amplified in terms of its extremely diverse racial composition.

• The global criminal economy is solidly rooted in the urban fabric, providing jobs, income, and social organization to a criminal culture, which deeply, affects the lives of low-income communities and of the city at large. This gives rise to increasing violence and/or widespread paranoia of urban violence, with the corollary of defensive residential patterns.

• The breakdown of communication patterns between individuals and between cultures, and the emergence of defensive spaces, lead to the formation of sharply, segregated areas: gated communities for the rich, territorial turfs for the poor.

• In a reaction against trends of suburban sprawl and individualization of residential patterns, urban centers and public space become critical expression of local life, measuring the vitality of a given city. Yet commercial pressures and artificial attempts at mimicking urban life often transform public spaces into theme parks where symbols rather than experience, create a life-size, urban virtual reality, ultimately destined to the real virtuality projected in the media. This gives rise to increasing individualization, as urban places become consumption items to be individually appropriated.

• Overall, the new urban world seems to be dominated by the dual movement of inclusion into transterritorial networks and exclusion by the spatial separation of places. The higher the value of people and places, the more they are connected into interactive networks. The lower their value, the lower their connection. At the extreme, some places are switched off and bypassed by the new geography of networks, as in the case of depressed rural areas and urban shanty towns around theworld.

• The constitution of mega-metropolitan regions, without a name, without a culture, and without institutions, weakens the mechanism of political accountability, of citizen participation, and of effective administration. On the other hand, in the age of globalization, local governments emerge as flexible institutional actors, able to relate at the

same time to local citizens and to global flows of power and money; not because they are powerful, but because most levels of government, including the nation-state, are equally weakened in their capacity of command and control if they operate in isolation. Thus, a new form of state emerges, the network state, integrating supranational institutions made up of national governments, nation-states, regional governments, local governments, and even non-governmental organizations. Local governments become a node in the chain of institutional representation and management, able to input the overall process, yet with added value in terms of their capacity to represent citizen at a closer range. Indeed, in most countries, opinion polls show that people have a higher degree of trust in their local governments, relative to other levels of government. However, institutions of metropolitan governance are rare (and when they exist they are highly centralized, with little citizen participation), and there is an increasing gap between the actual unit of work and living (the metropolitan region) and the mechanisms of political representation and public administration. Local governments compensate for this by cooperating and competing, yet, by defining their interests as specific sub-sets of the metropolitan region, they (often unwillingly) contribute to further fragmentation of the spatial framing of social life.

• Urban social movements have not disappeared, by any means. But they have mutated. In an extremely schematic representation, they develop along two main lines. The first is the defense of the local community, affirming the right to live in a particular place, and to benefit from adequate housing and urban services in that place. The second is the environmental movement, acting on the quality of cities within the broader goal of achieving a better quality of life: not only a better life but a different life. Often, the broader goals of environmental mobilizations become translated into defensive reactions to protect one specific community, thus merging the two trends. Yet, it is only by reaching out to the cultural transformation of urban life as proposed by ecological thinkers and activists that urban social movements can transcend their limits of localism. Indeed, enclosing themselves in their communities, urban social movements may contribute to further spatial fragmentation, ultimately leading to the breakdown of society.

It is against the background of these major trends of urban social change that we can re-think the issues, themes, and prospects of urban sociology in the coming years.

The Newest Urban Sociology

To make the transition from the observation of urban trends to the new theorization of urban sociology, we need to grasp, at a more analytical level, the key elements of socio-spatial change. I think the transformation of cities in the Information Age can be organized around three axes: the first relates to function, the second to meaning, the third to form.

Functionally speaking, the network society is organized around the opposition between the global and the local. Dominant processes in the economy, technology, media, and institutionalized authority are organized in global networks. But day-to-day work, private life, cultural identity, and political participation are essentially local. Cities are supposed to link up the local and the global, but this is exactly where the problems start since these are two conflicting logics that tear cities from the inside when they to respond to both, simultaneously.

In terms of meaning, our society is characterized by the opposing development of Individuation and communalism. By individuation, I understand the enclosure of meaning in the projects, interests, and representations of the individual; that is, a biologically embodied personality system (or, if you want, translating from French structuralism, a person). By communalism, I refer to the enclosure of meaning in a shared identity, based on a system of values and beliefs to which all other sources of identity are subordinated. Society, of course, exists only in-between, in the interface between individuals and identities mediated by institutions, at the source of the constitution of "civil society" - which, as Gramsci argued, does not exist against the state but in articulation with the state, forming a shared public sphere, à la Habermas. Trends I observe in the formative stage of the network society indicate the increasing tension and distance between personality and culture, between individuals and communes. Because cities are large aggregates of individuals, forced to coexist, and the settlement for most communes, the split between personality and commonality brings extraordinary stress upon

the social system of cities as communicative and institutionalizing devices. The problematic of social integration again becomes paramount, albeit under new circumstances and in terms radically different from those of early industrial cities.

This is mainly because of the role played in urban transformation by a third, major axis of opposing trends, this one concerning spatial forms. This is the tension and articulation between the space of flows and the space of places, as defined in chapter 8. The space of flows links up electronically separate locations in an interactive network that connects activities and people in distinct geographical composites. The space of places organizes experience and activity around the confines of locality. Cities are structured and destructured simultaneously by the competing logics of the space of flows and the space of places. Cities do not disappear in the virtual networks. But they are transformed by the interface between electronic communication and physical interaction, by the combination of networks and places. As William Mitchell (1999), from an urbanist perspective, and Barry Wellman (1998), from a sociologist perspective, have argued, the informational city is built around this dual system of communication. Our cities are made up at the same time of flows and places, and of their relationships. Two examples will help to make sense of this statement, one from the point of view of urban structure, another in terms of the urban experience. Structurally speaking, the notion of "global cities" was popularized in the 1990s. Although most people assimilate the term to some dominant urban centers, such as London, New York, and Tokyo, the concept of global city (Castells, 1989; Sassen, 1991) does not refer to any particular city, but to the global articulation of segments of many cities into an electronically linked network of functional domination throughout the planet. The global city is a spatial form rather than a title of distinction for certain cities, although some cities have a greater share of these global networks than others. In a sense, most areas in a cities, including New York and London, are local, not global. And many cities are sites of areas, small and large, which are included in these global networks, at different levels. This conception of global city as a spatial form resulting from the process of globalization is in fact closer to the original analysis by Saskia Sassen than to its popularized version by city

marketing agencies. Thus, from the structural point of view, the role of cities in the global economy depends on their connectivity in transportation and telecommunication networks, and of the ability of cities to mobilize human resources effectively in this process of global competition. As a consequence of this trend, nodal areas of the city, connecting to the global economy, will receive the highest priority in terms of investment and management, as they are the sources of value creation from which an urban node and its surrounding area will make their livelihood. Thus, the fate of metropolitan economies depends on their ability to subordinate all other urban functions and forms to the dynamic of certain places that ensure their competitive articulation in the global space of flows.

From the point of view of the urban experience, we are entering a built environment that is increasingly incorporating electronic communication devices everywhere. Our urban life fabric, as Mitchell (1999) has pointed out, becomes an etopia, a new urban form in which we constantly interact, deliberately or automatically, with on-line information systems, increasingly in the wireless mode. Materially speaking, the space of flows is folded into the space of places. Yet their logics are distinct: on-line experience and face-to-face experience remain specific, and the key question then is to assure their articulation in compatible terms.

These remarks may help the theoretical reconfiguration of urban sociology in response to the challenges of the network society, and in accordance with the emergence of new spatial forms and processes.

The Themes of Twenty-first Century Urban Sociology

It should now be clear why the issue of *social integration* comes again at the forefront of urban sociology. Indeed, it is the very existence of cities as communication artifacts that is called into question, in spite of living in an urban world. But what is at stake is a very different kind of integration. In the early twentieth century the quest was for assimilation of urban subcultures into the urban culture. In the early twenty-first century the challenge is the sharing of the city by irreversibly distinct cultures and identities. No more dominant

culture because only global media have the power to send dominant messages, and the media have, in fact, adapted to their market, constructing a kaleidoscope of variable content depending on demand, thus reproducing cultural and personal diversity rather than superimposing a common set of values. The spread of horizontal communication via the Internet accelerates the process of fragmentation and individualization of symbolic interaction. Thus, the fragmented metropolis and the individualization of communication reinforce each other to produce an endless constellation of cultural sub-sets. The nostalgia of the public domain will not be able to countervail the structural trends toward diversity, specification, and individualization of life, work, space, and communication, both face to face and electronic. On the other hand, communalism adds collective fragmentation to individual segmentation. Thus, in the absence of a unifying culture, and therefore of a unifying code, the key question is not the sharing of a dominant culture but the communicability of multiple codes. Since this is not a policy paper but theoretical text, the matter to be considered is not what to do to restore communication (thus city life), but how to research the processes underlying it. The notion of symbolic communication protocols is central here, protocols that may be physical, social, and electronic, with additional protocols being necessary to relate these three different planes of our multidimensional experience.

Physically, the establishment of meaning in these nameless urban constellations relates to the emergence of a new monumentality and new forms of symbolic centrality which will identify places, even through conflictive appropriation of their meaning by different groups and individuals. Urban semiotics appears, surprisingly, at the forefront of new urban research, enabling us to understand the processes by which new cathedrals and new agoras are created, whatever their surprising forms may be in the Information Age. However, the methodological prerequisite for urban semiotics to fulfill its promise is to return to its origins in formal linguistics, using the new tools of survey research and computerized modeling, instead of escaping into the much easier path of metaphoric commentary and interpretative narration.

The second level of symbolic analysis refers to social communication patterns. Here, the diversity of expressions of local life, and their relationship to media culture, must be integrated into the theory of communication by doing rather than by saying. In other words, how messages are transmitted from one social group to another, from one meaning to another in the metropolitan region, requires a redefinition of the notion of public sphere - moving from institutions to the public place. Public places, as sites of spontaneous social interaction, are the communicative devices of our society, while formal, political institutions have become a specialized domain that hardly affects the private lives of people; that is, what most people value most. Thus, it is not that politics, or local politics, does not matter. It is that its relevance is confined to the world of instrumentality, while expressiveness, and thus communication, refers to social practice, outside institutional boundaries. Therefore, in the practice of the city, its public spaces, including its transportation networks and their social exchangers (or communication nodes), become the communicative devices of city life. How people are, or are not, able to express themselves, and communicate with each other, outside their homes and off their electronic circuits - that is, in public places-is an essential area of study for urban sociology. I call it the sociability of public places in the individualized metropolis.

The third level of communication refers to the prevalence of electronic communication as a new form of sociability. Studies by Wellman (1999) and by Jones (1998), and by a growing legion of social researchers, have shown the density and intensity of electronic networks of communication, providing evidence to sustain the notion that virtual communities are often communities, albeit of a different kind than face-to-face communities. Here again, the critical matter is the understanding of the communication codes between various electronic networks, built around specific interests or values, and between these networks and physical interaction. There is no established theory yet on these communication processes as the Internet is still in its infancy. But we do know that on-line sociability is specified, not downgraded, and that physical location does contribute, often in unsuspected ways, to the configuration of electronic communication networks. The sociology of virtual communities is the third axis of the newest urban sociology.

Furthermore, the analysis of code-sharing in the new urban world also requires the study of the interface between physical layouts, social organization, and electronic networks. It is this interface that Mitchell (1999) considers to be at the heart of the new urban form, what he calls e--topia. His intuition is most insightful. We now have to transform it into research. In a similar vein, but from a different perspective, Graham and Marvin's (2001) analysis of urban infrastructure as splintered networks, reconfigurated by the new electronic pipes of urban civilization, opens up the perspective of understanding cities not only as communication systems, but as machines of deliberate segmentation. In other words, we must understand at the same time the process of communication and that of incommunication. The contradictory and/or complementary relationships between new metropolitan centrality, the practice of public space, and new communication patterns emerging from virtual communities, could lay the foundations for a new variety of urban sociology, the sociology of "cyborg cities" or hybrid cities made up of the intertwining of flows and places.

Let us go farther in this exploration of the new themes for urban sociology. We know that telecommuting - meaning people working full-time on-line from their home - is another myth of futurology. Many people, including you and me, work on-line from home part of the time, but we continue to go to workplaces, as well as moving around (the city or the world) while we keep working, with mobile connectivity to our network of professional partners, suppliers, and clients. The latter is the truly new spatial dimension of work. This is a new work experience, and indeed a new life experience. Moving physically, while keeping, the networking connection to everything we do, is a new realm of human adventure of which we know little. The sociology of networked spatial mobility is another frontier. To explore it in terms that would not be solely descriptive we need new concepts. The connection between networks and places has to be understood in a variable geometry of these connections. The places of the space of flows - that is, the corridors and halls that connect places around the world – will have to be understood as exchangers and social refuges, as homes on the run, as much as offices on the run. The personal and cultural identification with these places, their functionality, their symbolism, are essential matters that do not concern only the

cosmopolitan elite. Worldwide mass tourism, international migration, and transient work are experiences that relate to the new huddled masses of the world. How we relate to airports, to train and bus stations, to freeways, to customs are part of the new urban experience of hundreds of millions. We can build on an ethnographic tradition that addressed these issues in the mature industrial society. But here, again, the speed, complexity, and planetary reach of the transportation system have changed the scale and meaning of the issues. Furthermore, the key reminder is that we move physically while staying put in our electronic connection. We carry flows and move across places.

Urban life in the twenty-first century is also being transformed by the crises of patriarchalism. This is not a consequence of technological change, but I have argued in my book The Power of Identity (Castells, 1997) that it is an essential feature of the Information Age. To be sure, patriarchalism is not historically dead. Yet it is contested enough, and overcome enough, so that everyday life for a large segment of city-dwellers has already been redefined vis-à-vis the traditional pattern of an industrial society based on a relatively stable patriarchal nuclear family. Under conditions of gender equality, and under the stress suffered by traditional arrangements of household formation, the forms and rhythms of urban life are dramatically altered. Patterns of residence, transportation, shopping, education, and recreation evolve to adjust to the multidirectionality of individual needs that have to share household needs. This transformation is mediated by variable configurations of state policies. For instance, how childcare is handled by government, by firms, by the market, or by individual networking - largely conditions the time and space of daily lives, particularly for children. We have fully documented how women are discriminated against in the patriarchal city. We can even empirically argue that women's work makes the functioning of cities possible, while rarely being acknowledged in the urban studies literature. Yet we need to move forward, from denunciation to the analysis of specific urban contradictions resulting from the growing dissonance between the de-gendering of society and the historical crystallization of patriarchalism in the patterns of home and urban structure. How do these contradictions manifest themselves? What

are people's strategies to overcome the constraints of a gendered built environments? How do women in particular reinvent urban life, and contribute to re-designing the city of women, in contrast to the millennial heritage of the city of men? These are the questions to be researched, rather than stated, by a truly post-patriarchal urban sociology.

Grassroots movements will continue to shape cities, as well as societies at large. They will come in all kind of formats and ideologies, and we should keep an open mind on this matter, not deciding in advance which ones are progressive, and which ones are regressive, but taking all of them as symptoms of society in the making. We should also keep in mind the most fundamental rule in the study of social movements. They are what they say they are. They are their own consciousness. We can study their origins, establish their rules of engagement, explore the reasons for their victories and defeats, link their outcomes to overall social transformation, but not interpret them, not explain to them what they really mean by what they say. Because, after all, social movements are nothing else than their own symbols and stated goals, which ultimately means their words. Based on the observation of social movements in the early stages of the network society, two kinds of issues appear to require privileged attention from urban social scientists. The first one is what I called "the grassrooting of the space of flows", that is, the use of the Internet for networking in social mobilization and social challenges. This is not simply a technological issue because it concerns the organization, reach, and process of formation of social movements. Most often these "on-line" social movements connect to locally based movements, and they converge, physically, in a given place at a given time. A good example was the mobilization against the World Trade Organization meeting in Seattle in December 1999, which, arguably, set a new trend of grassroots opposition to uncontrolled globalization, and redefined the terms of the debate on the goals and procedures of the new economy. The sociology of social movements on-line, and their interaction with their place-based frame of reference (which can be multiple), assigns new tasks to the study of urban social movements, renewing the tradition of urban researchers in the 1960-70s.

The other major issue in the area of social movements is the exploration of the environmental

movement, and of an ecological view of social organization, as urban areas become the connecting points between the global issues posed by environmentalism and the local experience through which people at large assess their quality of life. To redefine cities as ecosystems, and to explore the connection between local ecosystems and the global ecosystem, lays the ground for the overcoming of localism by grassroots movements. On the other hand, the connection cannot be operated only in terms of ecological knowledge. Implicit in the environmental movement, and clearly articulated in the "deep ecology" theory, as reformulated by Fritjof Capra (1996), is the notion of cultural transformation. A new civilization, and not simply a new technological paradigm, requires a new culture. This culture in the making is being fought over by various sets of interests and cultural projects. Environ mentalism is the code word for this cultural battle, and ecological issues in the urban areas constitute the critical battleground for such struggle.

Besides tackling new issues, urban sociology will still have to reckon in the twenty-first century with the lingering questions of urban poverty, racial and social discrimination, and social exclusion. In fact, recent studies show an increase in urban marginality and inequality in the network society. Furthermore, old issues in a new context become, in fact, new. Thus, Ida Susser (1997) has shown the networking logic underlying the spread of AIDS among New York's poor along networks of destitution, stigma, and discrimination. Eric Klinenberg (2000), in his social anatomy of the devastating effects of the 1995 heat wave in Chicago, shows why dying alone in the city, the fate of hundreds of seniors in a few days, was rooted in the new forms of social isolation emerging from people's exclusion from networks of work, family, information, and sociability. The dialectics between inclusion and exclusion in the network society redefines the field of study of urban poverty, and forces us to consider alternative forms of inclusion (e.g. social solidarity or, otherwise, the criminal economy), as well as new mechanisms of exclusion - technological apartheid in the era of the Internet.

The final frontier for urban sociology, indeed for social science in general, is a study of new relationships between time and space in the

Information Age. I have proposed the notion of the emergence of timeless time as characteristic of our society, in parallel with the formation of a space of flows. By timeless time, I mean the destruction of the sequence, at the source of chronological time, either by time compression (as in instant financial transactions in the electronic markets) or by the blurring of the sequence (as in the discontinuous pattern of working time in the week or throughout life). In the same way that the space of flows coexists with, and contradicts, the space of places, timeless time coexists with chronological time, and is opposed by "glacial time", that is, by the time of very slow motion, as in the ecological processes that characterize the planet's ecosystem. Each form of time and space is embodied in the projects of social actors, and formalized in the organization of society, always in flux, as the actual spatio--temporal processes depend on the overall process of social change. In my analysis of the new relationships of time and space I went further, proposing the hypothesis that, in the network society, space structures time, in contrast to the time-dominated constitution of industrial society, in which urbanization and industrialization were considered to be part of the march of universal progress, erasing place-rooted traditions and cultures. In our society, the network society, where you live determines your time-frame of reference. If you are an inhabitant of the space of flows, or if you live in a locality that is in the dominant networks, timeless time (epitomized by the frantic race to beat the clock) will be your time - as in Wall Street or Silicon Valley. If you are in a Pearl River delta factory town, chronological time will be imposed upon you as in the best days of Taylorism in Detroit. And if you live in a poor village in the Atitlan lake in Guatemala biological time, usually a much shorter life-span, will still rule your life. Against this spatial determination of time, environmental movements assert die notion of slowmotion time, the "clock of the long now" in the words of Stewart Brand (1999), by broadening the spatial dimension to its planetary scale in the whole complexity of its interactions - thus including our great-grandchildren in our temporal frame of reference. Thus, the newest urban sociology has a great deal to accomplish in the twenty-first century - a task that can only be undertaken with the help of new concepts and new methods.

Urban Sociologists in the Trenches of Research

For urban sociology to renew itself by confronting the extraordinary range of issues that I have outlined, it must create new tools, both theoretical and methodological. It must also abandon futile exercises of deconstruction and reconstruction enclosed in the verbal games of most postmodernist theorizing, and go back to its origins, in fieldwork research, in the generation of new information, in the discovery of the hidden realms of society, and in the fascination for urban life with all its glamour and miseries. We do not need new urban ideologies or well-meaning utopias - we should let people imagine their own myths. What urban sociologists of the twenty-first century really need are new tool boxes (including conceptual tools) to take on the hard work necessary to research and understand the new relationships between space and society.

Concepts: networks, space of flows, space of places, local, global, communities (physical, virtual, face-to-face), urban social exchangers, mobile places, de-gendered homes and cities, switched-off locales, links of inclusion, glocal social movements, shared time/spaces, time-space regimes, individuation, communalism, urban constellations, metropolitan regions, urban monumentality, multi-nodal centrality, meaning, function, form. I deliberately provide a list that reads like Borges's Chinese encyclopedia because to structure and assemble this collection of concepts, or even to define them, would constitute a theoretical framework, and this is not my purpose in this text, although it must be done sometime, somewhere, through collective, interactive theorizing. I simply want to indicate a style of inquiry, and to evoke the kind of concepts that could fit into a research design able to address the questions that I consider critical for twenty-first century cities. For readers irritated by the allegorical character of this elaboration I can refer to work I have already initiated toward a systematic theorization of the network society (Castells, 2000), a perspective that needs, however, to be specifically focused on the study of cities and spatial processes.

Urban sociologists also need new methods. The Internet is not only an object of research, but a research tool. It allows access to a wide variety of sources. And helped by automated translation programs, the Internet will enable true multiculturalism in the sources and issues of urban research. A global system will be tackled from a global perspective, even if the entry points of the analysis will continue to be culturally and institutionally singular.

New computing power, and its ubiquitous distribution, will allow at last, the use of simulation modeling as a tool of formalization and verification of hypotheses on the basis of qualitative material. The new mathematics of complexity, powered by fast computer processing, will free statistical analysis from the constraints of linearity, in a giant leap toward understanding a social reality that, by definition, is non-linear. Hard-to-do ethnographic fieldwork will continue to be the essential, distinctive tool of urban social scientists, but here, also, new technological tools will enable researchers to record, check, and analyze their observations against their database in real time. Mobile computing capacity, on-line connection to modeled systems of analysis, and interactivity will allow urban social scientists to systematize qualitative observations, to build their database as they go on their fieldwork, and to feed back into their observation and interviewing the meaning of these observations for their overall analytical framework.

Yet, with all these new tools, urban sociology will only be up to the task if urban sociologists in the twenty-first century continue to have the same passion for cities, and the same empathy for their fellow citizens, that most of us, earlier urban sociologists, felt in the twentieth century.

References

BANFILD, E.; WILSON, J. Q., 1963, *City Politics*. Cambridge, MA, Harvard University Press.

BRAND, S., 1999, *The Clock of the Long Now*. New York, Basic Books.

CAPRA, F., 1996, The Web of Life. New York, Doubleday.

CASTELLS, M., 1968, "Y a-t-il une sociologie urbaine?," Sociologie du Travail 1, pp. 172-190.

CASTELLS, M., 1989, *The Informational City*. Oxford, Blackwell.

CASTELLS, M. (1995) "L'école fançaise de sociologie urbaine vingt ans aprés," *Les Annales de la Recherche Urbaine*, 64, pp. 58-60.

CASTELLS, M., 1996, *The Rise of the Network Society*, 2nd ed. 2000. Oxford, Blackwell.

CASTELLS, M., 1997, *The Power of Identity*, Oxford, Blackwell.

CASTELLS, M., 2000, "Materials for an exploratory theory of the network society", *British, Journal of Sociology*, 51 (1), pp. 5-24.

GRAHAM, S.; MARVIN, S., 2001, Splintering Urbanism. London, Routledge.

HARVEY, D., 1973, Social Justice and the City. London, Edward Arnold.

HAWLEY, Amos, 1956, Human Ecology, New York, Free Press.

JONES, S. (ed.), 1998, Cybersociety, q London, Sage.

KLINENBERG, E., 2000, "The social anatomy of a natural disaster: the Chicago heat wave of 1995", Unpublished PhD thesis, University of California, Department of Sociology, Berkeley, California.

LFEBVRE, H., 1968, Le Droit a la Ville, Paris, Anthropos.

MITCHELL, W. J., 1999, E-topia. Cambridge, MA, MIT Press.

MOLLEKOPF, J., 1983, *The Contested City*. Princeton, NJ, Princeton University Press.

PARK, R.; BURGESS, E. W., McKenzie, R. D,1923, The Cify. Chicago, University of Chicago Press.

SCHNORE, L. F., 1965, *The Urban Scene*. Glencoe, III., The Free Press.

SASSEN, S., 1991, *The Global City: New York, London, Tokyo*. Princeton, NJ: Princeton University Press.

SUSSER, I., 1997, "Inequality, violence and gender relations in a global city. New York, 1986-96," *Identities: Global Studies in Culture and Power*, 5 (2).

WELLMAN, B. (ed.) (1999, Networks in the Global Village. – Life in Conumporag Communities. Boulder, CO, Westview Press.

WIRTH, L. (1938) "Urbanism as a way of life," American Journal of Sociology, 44, pp. 1-24.

ZORBAUGH, W., 1929, The Gold Coast and the Slum, Chicago, University of Chicago Press.