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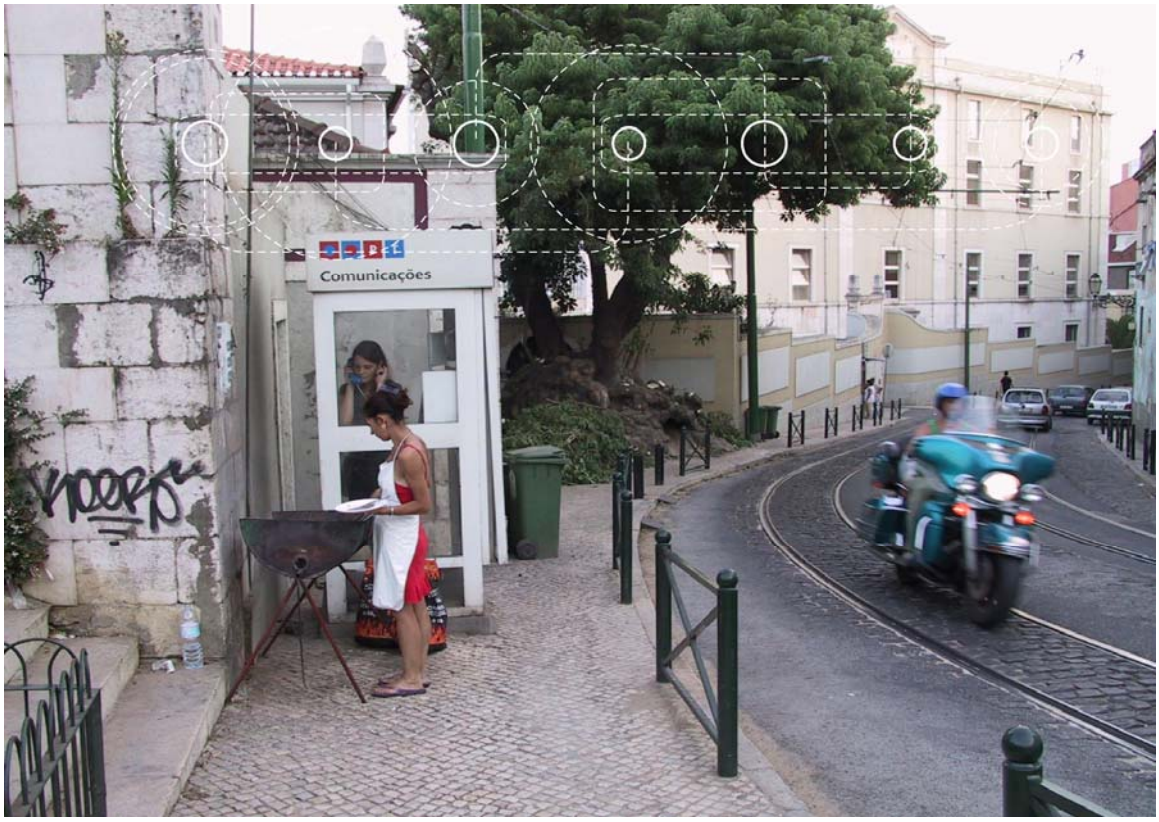
Conditions to re-conceptualise the contemporary Urban Local Scale:

Considering communication networks to attain conditions for space appropriation



1. Introduction

Much of contemporary urban change seems to involve, at least in part, the application of new telecommunications infrastructures to transcend spatial barriers instantaneously. This and a general increase in mobility have placed accepted notions about the nature of space, time and distance under question[1]. The way in which space and time have become compressed has resulted in processes of 'distanciation' and 'disembedding', erasing social relations out of local contexts [2], and questioning the traditional concept of urban local scale.

Following this, there is the necessity to develop new or alternative strategies for the possibilities of local places and its processes for today and for the future of cities. Telecommunications and

[1] Harvey, 1989 [The condition of Postmodernism]
[2] Giddens, 1991 [The Consequences of Modernity]

high-speed infrastructures have to be seen as producing a new urban time dimension that has fundamentally changed urban lived spatial practices; and the contemporary local condition needs to be re-considered in its relation within the urban, the metropolitan and the global, as a whole.

Considering Castells, "people still live in places. But because function and power in our society are organised in the space of flows, the structure domination of its logic essentially alters the meaning and dynamic of places. Experience, by being related to places, became abstracted from power, and meaning is increasingly separated from knowledge. It follows a structural schizophrenia between two spatial logics that threaten to break down communication channels in society. The dominant tendency is toward a horizon of networked, unhistorical place of flows, aiming at imposing its logic over scattered, segment places, increasingly unrelated to each other, less and less able to share cultural codes. Unless cultural and physical bridges are deliberately built between those two forms of space, we may be heading toward life in parallel universes whose times cannot meet because they are warped into different dimensions of a social hyperspace".[3]

Thus, while the life experience of the vast majority of people is still connected to places, most power and informational networks are increasingly organised in the place-less of flows. However, how can life be 'divided' between these two different forms of spaces? And which and why "bridges" should be "deliberately" built between these two spaces?

The notions of the public domain and public space as highly localised and historicised concepts should be brought into relation with the extreme sophistication of contemporary networks, virtual or physical. This should lead towards a more general understanding of public space and requires a careful analysis of the processes of space appropriation in today's urban environment and into the future of cities.

The aim of such analysis is not simply a critique of locative media practices, or the realm of electronic mediation in general, but much more an attempt to understand how new forms of sociality and public space can be brought about through such practices.

2. Technologies and the public space

The appearance of new technologies had been changing society and shaping the urban territory for a long time now. At the nineteenth century new technologies of transports, energy and communication had visibly produced new urban practices, urban structures and space dynamics.
The end of the nineteen's century, had known the development of electricity and gas, the tram and the telephone. With them, it was possible to diminish horizontal distances and change existent urban centre scale. Changes in the urban field were then accentuated with high-rise buildings located in city centres (especially in the United States) and suburban extensions in the

[3] Castells, 1996 [The Rise of the Network Society] p. 428

periphery of the existing cities. These types of urbanization were not simply produced by new techniques, but were a way out from the enormous pressure that cities were living back then[4].

But the city space had changed, essentially due to the automobile development and its individualization use. It had changed progressively from a pedestrian to an automobile dominance. The section of a street had changed in its proportions and had delimitated zones and with it rules of utilization which had became common to everyone.

In parallel, telecommunications development at those times did not erase the need for space and real physical connections and displacements. With the use of the telephone, people movement had not decreased but on the contrary, had increased. Telecommunication made possible new relations, provoked and had encouraged new dislocations. Into this extend, the urban public space remained an essential element in the structure of society and a vital element for city cohesion.

The space of the urban public domain had in this way been shaped and reshaped adapting to new mobility developments, readjusting constantly with it new lifestyles. Changes were physically visible and materialized in the city.

Today, with the new invisible contemporary telecommunication technologies which creates a whole new virtual environment independent from place and time coexistence - what for ages had been the essential condition for things to happen – we assist to the introduction of an imminent problematic of uses, means and needs of urban public space.

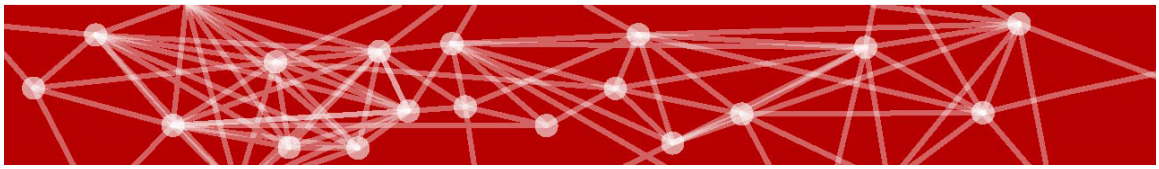
The question to be posed now is: into what extend contemporary telecommunication technologies had change public space physical structure and its way of being use?

The tendency is to say that the physical condition of the city had not changed after the appearance of contemporary telecommunication technologies. No, the urban public spaces as we know it did not changed, although people lives did, and with it urban public spaces practices changed.

Contemporary telecommunication technologies had produce a process into individualization set in motion by a society changing from nation-based industrial society to a globalized post-industrial society. From a society dominated by the masses to a society defined by a multiplicity of interfering networks. Today, and in the coming decades, individualization will become something that has to be deal with, to be accommodated to cities which still result and are conceived from collective society ideas.

Some of the biggest problems in architecture and urbanism, like urban sprawl, segregation, lack of social cohesion, historic centres turning into exclusively tourism and recreational centres, and uncertainties about what public space is, are immediately related to the new invisible forms of communications and the individualization condition in our urban life. The city is threatening the very nature of what we had learned to consider urban planning, as this always founded its legibility in a unified, homogeneous culture, continuous space that was supposed to be shared by all, at least within the same city. Individuals organize themselves in very different ways than they traditionally would when their lives were limits to particular territories, networks of media and mobility increasingly allow them to do so.

[4] Ascher,F., 1995 [Metapolis]



3. Which is the relation between urban space and communication networks? Can we conceptualise the functional and spatial-temporal relations between the fixity of urban places and the mobility supported by high-speed transportation and the instantaneity of telecommunication systems?

The fragmented and sprawled condition created by increased mobility, had lead to an urbanism of distant relationships and to social habits that no longer are physically contained in geographical continuous areas, it have been spread out and re-articulated by artificial means. The city is now a non-linear urban territory and more and more a non-evident-hierarchic systems of relations; where new complex types of continuity, proximity and relationships are turning out to be 'virtual'.

With advances in telecommunication technologies and high-speed mobility, public space did not suffer dramatic transformations in its physical space; however, it did in its use and experiences – in its spatial practices, due to new relations established between time and space. D. Harvey advances the concept of 'time-space compression' to signal "processes that so revolutionize the objective qualities of space and time that we are forced to alter, sometimes in quite radical ways, how we represent the world to ourselves" (1989; p.240). Harvey points out that many of the transportation and communication technologies have had the effect of shrinking space. As distances have been overcome, time too becomes compressed.[5]

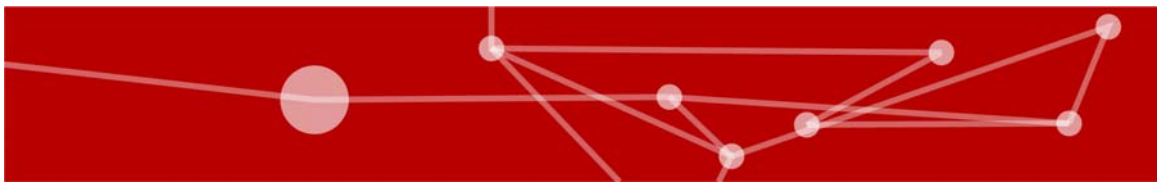
Hence, it can be understood that telecommunications and mobility infrastructures are changing people's everyday lives by reducing space and overlapping time. But to what extend does it change its social and spatial practices? To what extend does it change the parameters of the local?

The variety of approaches which analyse the relationships between urban places and 'communication spaces', specially referring to telecommunication technology systems differ in (a) the technological determinism that read the urban as a result of technology implementations and the social an effect out of it, a consequence [Hall, 1988; Brotchie, 1991]. (b) The futurism and utopian approach where telematics technologies are presented as solutions for social, economic, spatial and physical urban problems; the anything, anytime, anywhere dream, the de-massified society [Toffler, 1981; Martin, 1981]. (c) Urban political economy as being fully inscribed into the political, economic and social relations of capitalism that creates new solutions to the tensions inherent within capitalism, between 'fixity' and the need for 'motion' [Harvey, 1993], the need for geographical differences, where cities can not be seen merely as artefacts [Castells, 1989] and places and social processes to which communication technological systems act and effect in both directions [Gillespie and Robins, 1989] (d) The social constructivism approach stress that technology does not spring from some disinterested fount of innovation, rather, it is born of the social, the economic, and technical relations that are already in place. [Guthrie and Dutton, 1992].

Urban places did not disappear in the urban everyday lives and digital spaces have not erased the need for specific locality. "We live in a fundamentally urban civilisation: cities as [fixed] places still matter and will continue to matter. Urban places remain the unique arenas that bring together the webs of relations and 'externalities' that sustain global capitalism. They are of fundamental importance as the terrain for social and cultural life; they house the vast majority of our population." [6]

[5] Harvey, 1989 [The condition of Postmodernism]
[6] Graham and Marvin, 1996 [Telecommunication and the City] p.383

Considering the hypothesis that telecommunication technologies and mobility infrastructure have a relational structure with urban space; urban places and 'communication spaces' can be seen to influence and shape each other and to be recursively linked. It is this recursive interaction that should define the futures of cities. Dualities such as visibility/invisibility, fixity/mobility and real space urbanity/real time urbanity are conceptualizing new notions of space, time and the processes embedded within them.



4. What is the role of urban place in the relaying of space and time networks?

There are two tendencies on the actual reading of the local scale, public space and place. On the one hand we find a nostalgic feeling of loss of the public space as key roles of supporting communication, social and collective everyday life space through concentration and proximity – where 'old places' are seen as marked by identity, social relations and history, while 'new places' lack the essential characteristics that would make it possible to call them places, they are dominated by their transitory character, where people do not repose, just pass time.[7] On the other hand, the end of the traditional urban relations between space and time had give place to the 'real-time' city, where new and much more fluid societal processes should introduce new conditions for future developments and understanding of urban spaces and place.

Today, urban spaces do result from a rapidly varying distribution of intensities as a set of serial 'encounters' that construct particular spaces and times. Cities are "spatially open and cross-cut by many different kind of motilities, from flows of people to commodities and information…This is not just a simple statement of multiplicity, but a recognition that urban life is the irreducible product of mixture. Further, this mixture increasingly tales place at a distance, so challenging conventional notions of place. Even face-to-face contact increasingly involves a vast penumbra of distanciated interactions." [8] Places are seen as secondary to movement and presented as a coincident point in distanciated relationships. The local can no longer be seen as an entity in its own limits but needs to be conceptualised in relation to the constitutive framework of distanciated and different relations, which are performed *through* it. Places also do not enfold these relations smoothly and without transforming the relations themselves: they enrol processes of translation and transduction, becoming the productive and transformative interface between different scales and speeds of movements and actions, becoming active points of relay in multiplex networks. Place is the point of gathering, translation and instantiation of the things or events we encounter in ordinary extensive space, an emergence out of the intensive spaces of communication networks (as instantaneous telecommunication between people and, movement and flows, infrastructural high-speed networks) which produce and sustain them.

The role of place in translating the effects of higher scaled circuits into local conditions implies that place mediates between different circuits and can be seen as an 'interface' between those circuits. The intension is to read space not as simple physical location inhabited by city users, but as a conveyer of different produced and lived space-times, and as a coordinator of urban life practices - particularly those of consumption, but also in terms of the 'production' of contemporary everyday life as theorised by Lefebvre and de Certeau. Communications technology systems may be considered directly within this theorisation for the way they introduce an infrastructure of instantaneity. Seen as a whole, communications systems, physical space and spatial practices

[7] Augé, 1992 [Non-Lieux]; Casey, 1998 [The Fate of Place]
[8] Amin and Thrift, 2002 [Cities, Reimagining the urban] p.3

(with their respective network infrastructures) establish a framework for understanding the role of the local in establishing potentials and constraints for situated action and in establishing the qualities of local place and activity.

Consequently, this hypothesis for a re-conceptualisation of the local, confront the traditional idea of place and stress the inertia of old concepts (still in use) on the treatment of today's space and time relation through linear, homogeneous and over simplified models, that still contemplate traditional society parameters (community ideals) or modernism 'utopian' ideologies.

5. How may urban place be induced to support diverse, multi-layered activity patterns? Under what circumstances does space appropriation occur?

As Lefebvre argues, "no change [in the physical space] can be made without the production [through spatial practices] of an appropriate space (…) new social relationships call for a new space, and vice versa" (1991; p.59). The principal of space appropriation is to be understood from the interwoven relation between spatial practices and physical space, in other words, through how we think, represent, live in, and recreate space. Already Heidegger suggested that the crucial point about the connection between the physical space and experience is not, that place is properly something only encountered 'in' experience, but rather that place is integral to the very structure and possibility of experience.

Telecommunications networks and mobility infrastructures clearly enrol experience, transforming space and time perceptions. Nevertheless, they do not determine directly physical public space transformations, but rather, it is through the possibilities they offer that new spatial and geographical configurations might be elaborated. These possibilities should account not only metropolitan and global scales, as they are already doing, but all different levels of scale. Communications systems should be read as the new urban time dimension and as a potential spatial mechanism capable on inverting social preconceived physical relational systems and linear understanding of spatial practices.

Following, space appropriation under telecommunication networks and mobility infrastructures refers to the determination of the physical space as a point of relay. Stressing time and urban space as a site of localized flows and contact networks, space appropriation comes out from the distinctive crosscutting of economic, social interaction, and/or information, which can grow and/or be transformed in certain spatial urban points. This enrolment and motion will produce particular spaces and time, because of the ways that the actors in these networks relate to one another. Space appropriation process is as *moments of encounter*, not so much as fixed in space and time, but as variable events or occurrences; twists and fluxes of interrelation capable on producing spatial meaning through economic, social and/or informational relations.

On this regard, space appropriation should be established as a process through three enchained steps: 1. the performance of the intensive (abstract) network space itself (as abstracted movements, connectivity and flows, visible or invisible); 2. The process of translation and transduction (energy and modal changes): where pure relations in the network intensive space are relayed and become actual and concrete in the ordinary extensive space; 3. How space becomes social; how certain relations become fixed (institutionalised) and produce social 'meaning' in place.

6. Conclusion

Between communication networks and urban space, city-life is building-up new perceptions of time and new notions of space. The coexistence of the physical and the virtual environment in cities everyday-life pre-define new conditions for space appropriation processes. These conditions, should take into account that today, the local scale results from distanciated relations, which are performed through determinate spaces.

This idea of the local as being an active point of relay in multiplex networks - a productive and transformative interface point between different scales, speeds of movements and actions – refers to the understanding of the local spatial behaviour and appropriation of space through a time-defined network; where communication networks and physical space have to be co-analysable. Here is where new spatial concepts come in, as concepts that take into account the mutual interactions of time and space through the overall effects of acceleration, territorial expansion and more flexible lifestyles through less synchronized daily life's.

Bibliography

Augé, M. (1992) **Non-Lieux, Introduction à une Anthropologie de la Surmodernité**, France: Seuil

Amin, A. and N. Thrift (2002) **Cities, Reimagining the Urban**, Polity Press, Blackwell Publishing Ltd

Ascher, F. (1995) **Métapolis: ou l'avenir des villes**, Editions Odile Jacob

Barabasi, A-L. (2003) **Linked, How everything is Connected to Everything Else and What it Means for Business, Science, and Everyday Life**, USA: PLUME

Casey, E. (1998) **The Fate of Place, A philosophical History**, California: University of California Press

Castells, M. (1996) **The Rise of the Network Society**, Blackwell Publishers, Malden.

Certeau, M. (1984) **The Practice of Everyday Life**, Berkeley: University of California Press.

Giddens, A. (1990) **The Consequences of Modernity**, Oxford: Polity Press.

Graham, S. & Marvin S. (1996) **Telecommunications and the City - Electronic Spaces, Urban Places**, UK: Routledge

Graham, S. & Marvin S. (2001) **Splintering Urbanism, Network infrastructures, technological mobilities and the urban** condition, UK: Routledge

Harvey D. (1990) **The Condition of Postmodernity**, U.S.A.

Lefebvre, H. (1991) **The Production of Space**, Oxford: Blackwell.

Lessig, L. (2001) **The Future of Ideas, The Fate of the Commons in a Connected World**, New York: Vintage.

Mitchell, W. (1996) **City of Bites**, Massachusetts: MIT press.

Mitchell, W. (2000) **E-topia, Urban Life, Jim-but not as we know it**, Massachusetts: MIT press.

Mitchell, W. (2003) **ME++ The Cyborg Self and the Networked City**, Massachusetts: MIT press.

Roberts, M., T. Lloyd-Jones, B. Erickson and S. Nice (1999) **Place and Space in the Networked City: Conceptualizing the Integrated Metropolis**, in journal of Urban Design, Vol. 4, No. 1, 1999