

New Media and the Prolongations of Urban Environments

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Abstract / The article addresses the relationships between new media and public urban environments. It advances an anti-reductionist argument, which seeks to understand the material and the immaterial as two irreducible yet intertwined layers or levels of the social sphere. In order to do so, the notion of prolongation is proposed. This notion, together with those of territory and visibility, is explicitly designed to escape both reductionist monism (material as immaterial or vice versa) and dualism (material versus immaterial). The hypothesis is that the environments created and edited by the new media can be conceptualized and studied as specific visibility regimes of urban territoriality. The use of the concepts of territory, prolongation, and visibility also leads to de-exceptionalizing the new media, insofar as new media are explained as a specific techno-social configuration, determined by a pattern of the same analytical variables that are at stake in the social sphere at large.

Key Words / immaterial / locative media / material / prolongation / territories / urban environments / visibility

Between 'Immaterialism' and 'Sheer Materiality'

How do new media impact on urban environments? What are the possibilities that the architecture of new media opens up for users and what are the constraints that it imposes upon them? Do new media compress physical space to the point of erasing places, as it is sometimes radically claimed, or do they lead towards new spatial formations? Does it make sense to think new media at a city scale, or should they be imagined as inherently global?

In the attempt to tackle these conceptual questions the article sides with anti-reductionist arguments. It considers two levels or layers of the social sphere, the material and the immaterial, as essentially irreducible to each other yet constantly interwoven. It reviews how 'ubiquitous' computing and the diffusion of locative media significantly

impacts on the relationship between the two levels and claims that new media reshape the articulation of the two levels but never flatten the one onto the other. New media do not replace place, they do not annihilate space; yet at the same time the material and the immaterial should not be conceived in purely dichotomous terms. On the contrary, they can never be conceived of as separated. The article suggests that scholars who introduced the notions of augmented, hybrid or mixed reality (Ohta and Tamura, 1999; Manovich, 2001; Page and Phillips, 2003; Bolter et al., 2006; de Souza e Silva, 2006) have moved in the right direction, but have sometimes failed to distinguish between the analytical point of view (the material and the immaterial are distinct) and the empirical point of view (the material and the immaterial are in fact inseparable and ceaselessly prolong into each other).

But, how precisely does this mixing or hybridization of the two levels take place? Criticizing the thesis of the dematerialization of space, some authors have stressed the materiality and the spatiality of communication, but sometimes leaning towards metaphors that remind one of mid-20th-century social physics – speaking for instance of the ‘viscosity’ of locations (Shiravane, 2006).

In an attempt to navigate between ‘immaterialism’ and ‘sheer materiality’, in this article the notion of *prolongation* is fleshed out in order to make sense of the molecular articulation of the two irreducible yet interwoven layers. From a theoretical standpoint, the concept of prolongation leads to ‘de-exceptionalize’ the new media, insofar as they are revealed as a specific techno-social pattern interwoven with the same analytical variables that are at stake in the social sphere at large. De-exceptionalization also opens up the possibility of a better empirical appraisal of the socio-technical and socio-material transformation introduced by the new media. Empirical research could take advantage from what is here called a territorialological analysis of the social (Brighenti, 2010a), where emphasis is put on the socio-material configuration of a field of forces in which locales prolong towards other locales and are symmetrically reached by them. My argument is that, far from being outdated, the notions of territory and territorial prolongations are precisely what we need in order to understand and investigate the new media-urban nexus.

Urban Media

Both the city and the media cross-cut the levels of the material and the immaterial. On the one hand, the city has, and has always had, an imagined dimension. Kevin Lynch (1965) described the mental image of the city held by citizens in terms of the city's *legibility*: a peculiar characteristic that joins together visual and imaginative elements. For Lynch, the visual legibility of a city produces environmental images made of three major components: identity, structure, and meaning. In a similar vein, Henri Lefebvre (1996) observed that the specificity of a city is to have both a material and a psychic constitution. Cities have a material basis upon which a unique set of social relationships develops that makes the city more similar to a work of art than a mechanical product. More recently, Gary Bridge and Sophie Watson (2003: 7) suggested that the relationship between the city and the imagination should be explored in the double direction of ‘how the city affects the imagination and how the city is imagined’.

Apparently, there is no intrinsic necessity for new media to be discussed or analysed at a city scale. Were new media either fully delocalized or beyond the grasp of place, the

global scale might indeed appear as a more apt dimension for investigation. However, as noticed by Crang (2000: 302), 'the city is both object and metaphor in a reflexive system where the imagining of electronic space is vital to creating it'. In other words, not only is the city mediated, but new media themselves are 'urbanized' and urban media: they are designed on the basis of a model of social relations that is soaked in the urban experience of modernity. In parallel to what Castells (1983) argued in his analysis of grass-roots movements – namely, that the city matters not only because these movements are based in cities, but because they take it as the most relevant socio-political unit – we can argue that the city matters not only because media are used in cities, but because they are inscribed in an urban socio-political (as well as socio-technical) imagery. The very idea of 'personal' and 'mobile' media cannot be adequately explored without analysing the type of individuality and the types of mobilities created by urban life.

The Materiality Factor

All media are material. New media have materiality, too, and it is not as tenuous as sometimes claimed. Marshall McLuhan (1964) and Walter Ong (1977) first observed that media work as extensions and interfaces. Sensorial, physical experience is at the centre of this view of media. British cultural studies scholars, notably Raymond Williams (1974), criticized McLuhan's view as formalistic and grounded in technological determinism. Williams reproached McLuhan for being unabashedly apologetic of the media, analytically overlooking both the cultural forces that produce the media and the immaterial and symbolic content that circulates through the media. However, McLuhan's excessive insistence on the materiality of the medium was sustained by a justified concern for an 'invisibilization of the medium' that characterized so-called 'content studies'. In short, the 1970s debate over the media alerted us about the double, physical and symbolic, nature of all media.

The emergence of a new generation of media since the late 1980s has initially determined a different type of reductionist thinking: the dematerialization thesis. This idea can be found in techno-enthusiast as well as techno-apocalyptic authors, such as, respectively, William J. Mitchell (1995) and Paul Virilio (2004). For these authors new media are contracting space and time to the point of erasing places. Manuel Castells (1996), too, has argued that the space of places, typical of the early modern city, is being increasingly eroded by the space of flows, typical of contemporary network capitalism. Virilio is probably the most radical thinker in this vein: he has advanced a gloomy view underpinned by an unresolved 'nostalgia for a lost immediacy' (James, 2006: 330). Instead, Mitchell's later work has been advancing a more fine-tuned analysis of the interplay of the spatial and the symbolic in the city (Mitchell, 2003, 2005) and cybercity literature is expanding in interesting directions (see Graham, 2004).

Concurrently, British media theorists such as Roger Silverstone and David Morley attempted to bridge the gap between the two opposing views of McLuhan and Williams explicitly rescuing the two dimensions of materiality and immateriality. For instance, Silverstone (1994) introduced the conception of 'double articulation' of the material and the symbolic (see also Silverstone, 2005; Livingstone, 2007) and Morley (2000: 156) sought to explore specifically the 'interface between physical and symbolic forms of cultural division as registered in residential patterns, in media representations and in

patterns of cultural consumption'. Consequently, in recent scholarship, the domains of the technological, the cultural and the spatial are regarded as tightly interconnected. In parallel, the dichotomy between real and virtual space has been criticized by authors such as Manovich (2001) and Page and Phillips (2003), who contended that what the new media actually produce is a 'mixed reality'. Such a mixture of the digital and the embodied is not restricted to new media only, but affects all types of physical spaces (Kabisch, 2008).

While thinking the material and the symbolic in dichotomous terms is now recognized as misleading, it is to my mind useful to retain the analytical – rather than empirical – value of a tension that exists at the core of the mediation process. Such tension is caused by two layers which, following Leibniz (1714), are 'actually distinguished but inseparable'. I suggest calling these layers 'material' and 'immaterial', rather than 'material' and 'symbolic', and I choose to do so because the symbolic dimension itself contains material and immaterial elements (Eco, 1984). The symbolic bridges the gap between the two levels of the material and the immaterial, but while the symbolic pertains to a *representational* regime, in many cases the articulation between the material and the immaterial is *practical* and *tacit*. How, I ask, does this non-representational relationship take place?

While there is no one-to-one correspondence between the two layers of the material and the immaterial, exchanges constantly occur insofar as the two layers are porous to each other and in themselves unfinished. The prolongations between these two layers define a field of visibility: it is not simply that the immaterial is invisible and the material visible, rather, visibility is a property or an element of receptivity in which the whole social process unfolds (Brighenti, 2010b). Such a perspective offers a view on the complex co-determination of the technological and the social as two poles or territorial modes, which recognizes the existence of *zones of indistinction* between the two domains. Media function as devices to edit spaces and social relationships and, as classical sociologists like Simmel (1950 [1908]) first observed, the city is the elective environment of these stratifications. Thus, we have to turn again to the urban form of media to understand how materiality and immateriality prolong into each other, given that urban public space is where these prolongations become most visible.

Urban Interaction, Urban Materialities

The modern city is as much a place of settlement and mooring as it is an environment of flows and circulation, in which mobility is essential (Urry, 2007; Canzler et al., 2009). Materially *and* immaterially, the modern city is both a place to live in and one to pass through. Richard Sennett (1994) singled out the significant parallel between the medical discovery of blood circulation in the 17th century and the emergence of a new urban model. The image of the fluidity of blood pumped around the human body by the heart described by English physician William Harvey (1578–1657) is at the root of the type of social organicism that inaugurated the discipline of sociology. Yet the discovery of blood circulation, while factually inaccurate as a metaphor of the city, had the powerful effect of setting in motion the imagery of urban life. Especially in early American sociology, the image of the city was turned into a diagram of zones (Park et al., 1967 [1925]) produced by short- and long-term human ecological flows and clashes.

The complex territorial composition of urban vectors, trajectories, paths and directions is sustained top-down, through planning, and simultaneously shaped bottom-up, through interaction. Urban fluxes and trajectories can be constrained, segmented, enclosed (Amin and Thrift, 2002). Urban planning seeks to do so and, to this aim, it interweaves with other types of knowledge, such as – as acutely noticed by Michel Foucault (1975) – medical knowledge. Foucault (2004 [1977]) then described the birth of police apparatuses as part of a process of ‘urbanization of territory’ aimed at regulating the coexistence of the population and the circulation of goods. Urban mobility is also intimately interwoven with the type of *interaction in public* that has been explored by interaction sociologists such as Erving Goffman (1959, 1963, 1971). Here, the urban public domain corresponds to an impersonal, role-based type of interaction, which can be observed at a small scale and retrieved even in the most ephemeral episodes of everyday life. In urban social interaction, the management of reciprocal visibilities, for instance through civil inattention, becomes essential. Visibility essentially regards the activity of introducing, establishing and negotiating thresholds that join together interpersonal territories and separate them. This is an aspect that is sometimes overlooked in the discussion on the invisibilization of new information technologies in the city. In urban public spaces one looks and is looked at: those who access public space become observable. Yet the city – even if we confine ourselves to its public spaces – does not coincide with the public realm: islands and layers of private territories coexist and intermingle with the public. As summarized by Isaac Joseph (1998), circulation and visibility are the most important features of public space in the city.

The urban ecological environment results from a layering and mixing of different types of social territories, or *interaction regimes*. Lyn Lofland (1998) terms these regimes the *realms* of city life. She distinguishes three such realms: the private, characterized by ties of intimacy among primary groups’ members, such as families; the parochial, characterized by a sense of commonality among members of neighbourhood networks and other cultural and religious communities; and the public, characterized by the co-presence of strangers, people personally unknown or only categorically known to one another. The stranger is an outsider to the private and parochial realms, but a crucial figure of the urban public realm, which is founded precisely on the capacity of people to interact with strangers, to accept and understand them despite (or, in virtue of) the fact that they are not personal acquaintances, correligionaries or members of an ethnic community. These three realms, Lofland observes, are social, not physical territories. The fact that certain physical spaces become private, parochial, or public realms depends on the proportions and densities of the type of performed social relationships.

Urban Mediations

Urban circulation and the public realm are mutually constitutive. The public is defined by a series of well recognizable and recognized aspects. First of all, we have a situation of social *diversity*, where differences are encountered. Stranger contact in practice means the mixing of people from various socio-cultural and economic backgrounds within a single space. Typically, contact and mixing take place in a condition of density and concentration of both people and the built environment. The built urban environment mirrors the urban crowds. City space is a space of concentration, vis-à-vis the dispersal that characterizes the territory, the countryside. As a consequence, the public realm is

characterized by *compression*. This is not only space compression, but also time compression, or acceleration. Borrowing from Virilio (1977), we may term this phenomenon 'urban dromology'.

As Iveson (2009) has recently argued, from the importance of urban interaction we should not draw the conclusion that the city is opposed to the media, that the only real urban space is defined by immediacy. On the contrary, media are fundamental for the definition of the public realm. The modern media system – including newspapers, magazines, and the film industry first; radio and TV later, and, lastly, the new media – created not only a public sphere – in Habermas' sense, a space for the mediation between the civil and the political society – but also the modern public, the *audience*. The audience is a profitable economic resource as well as a cultural phenomenon of ongoing production of meaning.

The relationship between the mass, the crowd and the public has been crucial in sociology since its birth. In particular, the work of Gabriel Tarde (1989 [1901]) provided the first attempt to define the specific difference between the crowd and the public. The reason why I refer to this sometimes overlooked classic author is that, interestingly, Tarde was the first to adopt the features of modern mediated interaction as the defining character of the public, in opposition to the crowd. Whereas the crowd can only exist as a state of physical concentration, he observed, the public in fact exists as a dispersed phenomenon. The public is inherently made possible by the media, which grant *synchronicity in dispersal*. As it will be argued more extensively later, each media technology defines a specific public regime or, even better, a *regime of public-ness*.

This idea, which can be found in Habermas' (1989 [1962]) theorization of the public sphere as a discursive space where political opinions are formed, was later developed by scholars interested in the processes of nationalism and nation-building, such as Ernest Gellner (1997 [1983]) and Benedict Anderson (2006 [1983]). John Thompson's (1990, 1995) work on modernity also revealed the pivotal role played by mass media communication in the constitution of modern society. Yet these classic contributions sometimes lost sight of the specifically material dimensions of communicative processes.

The public realm has a material basis defined by bodily experience, density and urban dromology. But the peculiar regime of public interaction in urban spaces cannot be reduced to that material basis. Its social features and the interactions it creates must also be taken into account. Now, in traditional ontology, *spaces* and *relations* are two different sets of things. However, the distinction between the spheres of the material and the immaterial is far from being fixed or absolute. Indeed, technology plays a crucial role in defining and redefining the balance between the two spheres. In particular, the massive introduction of media and new media to everyday life and the concurrent mediatization of everyday urban environments during the 20th century have been significantly reshaping the balance, enhancing the rhythm of prolongations.

The urban public realm changes its constitution according to the specific material-cum-immaterial organization that is put in place. Embedding ICTs in everyday spaces may turn cities into 'sentient cities' (Crang and Graham, 2007) and one might even say that today it is software that makes space (Dodge et al., 2009). Yet these new environments created by the new media can be conceptualized and studied as specific territorial and visibility regimes in the city, which enables us to account for the material and the immaterial dimensions and the prolongations between the two layers: the new media

can be analysed from the perspective of the specific reconfiguration of techno-social prolongations of visibilities and territories they operate. The urban 'informational landscape' (Crang et al., 2007) should not be regarded as the immaterial counterpart of the physically built environment: information is always materially grounded and embedded, and a territory is precisely the prolongation between these layers.

Territories Prolonged

A *territory* is to be understood not as an object, nor as a space, but rather as an *act*: a territory is something one makes vis-à-vis others (Brighenti, 2010a). Emphasis on the act leads to the recognition that territories are not simply *relational*, but also and above all *processual* and *directional* entities. Deleuze and Guattari (1980) identified three movements, or vectors, in the territorial process: deterritorialization, reterritorialization and territorialization. They made clear that this progression is not temporal and they began the description of territoriality from deterritorialization to remark that territories are actualized when one leaves them. It is the moment of *exit* that makes a territory visible. What happens after exit? One cannot leave a territory without at the same time creating another territory somewhere else. One cannot deterritorialize from some relations without concurrently reterritorializing on some others. It is this double movement of deterritorialization and reterritorialization that evokes the primitive movement of territorialization, which otherwise tends to be given for granted and perceived as the *zero grade* of territory, as non-movement. These three territorial movements proceed together precisely as movements, or directional vectors. This means that each territory is constantly crossed by deterritorializing tendencies: forces that push some element out of a territorial series towards other series (from intra- to inter-series). Prolongations are an example of such deterritorializing forces. Because of these forces territories are always heterogeneous. Not simply do political power and legal forms mix on a territory, but phenomena such as authority and law are inherently territorial (Brighenti, 2006).

Territorializing is a way of carving the environment through some boundary-drawing activities. Consequently, trajectories and boundaries should be conceived as complementary rather than opposite elements. Boundaries are not the opposite of flows but rather the moment when flows become visible. Boundaries are a type of *operation* that leads to the constitution of territories. Boundary-drawing can be described on the basis of the following aspects: Who is drawing – what type of individual or collective agency is involved? How is the drawing made – what are the drawing technologies that are employed? What type of drawing is being made, or in which domain is the demarcation operated, and, strictly related, why? – that is to say, what are the rational aims and the affective drive involved in the process of territorial constitution. Mattias Kärrholm (2007) has remarked that territorial complexity is due to the balancing between processes of territorial *production* and of territorial *stabilization*. Building on actor-network theory (ANT) (Latour, 2005), Kärrholm has identified various forms of territorial production and stabilization. In particular, territorial production is described as composed of territorial strategies, tactics, associations and appropriations. Territorial strategies and tactics are 'intentional attempts to mark or delimit a territory', while 'territorial associations and appropriations represent productions that are not planned or intentionally established but are consequences of established and regular practices' (Kärrholm, 2007: 441). Following

de Certeau (1984), strategies are impersonal and planned-at-a-distance, while tactics are personal and situational. As to the second couple, whereas appropriations are the result of active usage of territories (although not of formal claims), associations are ascribed, that is, attributed by others.

The concept of *prolongation* draws in part from a McLuhanian conception of medium. McLuhan (1964) famously advanced the image of media as *sensorial extensions*. He claimed that one cannot conceive these extensions as if they were not mediated. Media are hardly neutral because their expressive characteristics affect the content they mediate. They are by nature content modifiers. In his most famous 'probe' (Meyrowitz, 2003), McLuhan declares that the mediated content is irrelevant compared to the medium itself. Because 'the content of any medium is always another medium' (McLuhan, 1964: 15), every mediation is, in practice, a re-mediation (Bolter and Grusin, 1999; Deuze, 2006). Mediations work in series, in the sense that each new mediation prolongs the previous one. The notion of remediation entails that there is no 'zero degree' of mediation. From the user's point of view, remediating thus means managing the trade-off between different forms of mediations of one's social interactions through different media. From a systemic perspective, the sociology of technology and innovation confirms that a 'new' medium does not appear in a vacuum for the simple reason that its creators are embedded in socio-technical and cultural contexts where other media are present and where the very problems to tackle are defined in terms of those older media. However, McLuhan and followers remain fundamentally unclear and ultimately uninterested in explaining the social ontology of prolongations. On the contrary, insofar as McLuhan's original formulation tends to conflate the layers of content and expression, it turns into a reductionist thesis, which fails to distinguish, at the very least, between the *mediating* medium and the *mediated* one.

Is there any zero grade in mediation? Is there any un-mediated social event? How do territories prolong into each other? If one compares the two ideal typical situations of a face-to-face conversation and that 'same' conversation on the phone or through some chat platform on the web, one understands that the problem for a theory of prolongations is not to retrieve the 'original' phenomenon supposed to exist at an un-mediated zero grade of mediation, but rather to explain how a *quantitative* worth (in this example, a spatial distancing) becomes a *qualitative* one (in this example, a mediated interaction) – or, with Bergson, how a difference of degree is replaced by a difference of nature. In fact, even face-to-face conversation involves mediation. In short, there is no absolute zero grade (Rice, 1999). The transformation associated with mediation has been explored and theorized by thinkers such as Régis Debray (1996), who spoke of a techno-social 'middle realm' in which the social and the technical meet and mix. Frédéric Vandenberghe (2007: 26) has described this mixing as the process through which 'the spirit gets materialized into technology at the same time as the social gets organized into society and reproduced through history'.

Events, Series and Zones of Indistinction

Each technological arrangement opens up a set of coordinated possibilities to create events and make them meaningful. Once we accept that mediation entails much more than mere transmission, we necessarily come to question the *singleness* of social acts and

events. In particular, attention to mediation shifts the focus from presumed single and unique events to *series* of events. In the case of the conversation considered earlier, it becomes clear that there is not any single conversation, but rather a cascade or series of conversations, a series in which each conversation is confined into or, on the contrary, pushed to the limits of its technological mediation. The convergence between the social and the technological is best captured in Leroi-Gourhan's statement: 'l'outil n'est réellement que dans le geste qui le rend techniquement efficace' (Leroi-Gourhan, 1964: 35): the tool becomes real only in the act of using it. Just like the act (*geste*) described by Leroi-Gourhan, the concept of prolongation draws attention precisely to the existence of *series* and to relationships within and across such series. In practice, every mediation works through prolongation. It is also important to notice that a prolongation does not have a single direction. Prolongation is not an evolutionary category, it has no *télos*. Quite the contrary, as we will see later, it constantly multiplies the directions of events, determining a constant back-and-forth. An analysis of prolongations is also necessarily an analysis of the *gestures* (everyday, technically expert, political gestures) produced in new media uses.

The concept of prolongation can be understood in relation to the phenomenological concept of *lifeworld*. The lifeworld is an environment, ambient or ambience. Edmund Husserl (1970 [1936]) describes the *Lebenswelt* as a 'pre-given world', something which is 'always already there', the horizon within which objects can be perceived by an experiencing subject. In interaction sociology and ethnography, the category has been translated into Goffman's (1971) 'situation', Garfinkel's (1967) 'plenum', and Geertz's (1988: § 1) 'there'. The lifeworld, we may say, is the here-and-now of experience. It provides the field for experience without becoming its object and, by doing so, it makes it possible for social experience to take place. The here-and-now, the locale of social experience is unique, incommensurable, it has a *Stimmung*, in other words, a mark; in a sense, it has its own voice (*Stimme*). But it is not an isolated system. Each locale is porous because it prolongs towards an elsewhere which, though not present in the here-and-now of the locale, becomes part of the plenum through that same prolongation. Hence, objects, actors, events, practices and concatenations not present in the here-and-now are important and even crucial for the plenum. Processes of import and export come about essentially through the media, which act as bridges, corridors or thresholds that traverse the plenum in multiple directions and connect the various here-and-now. Portions of elsewhere and at-other-times are constantly imported into the locale, just as portions of the here-and-now are constantly exported, projected towards somewhere-else and at-other-times. The media that accomplish this import/export task work essentially by prolonging the locales. Thus, they can be imagined as corridors enabling both the extension and the compression of here-and-now.

What does the concept of prolongation add to the conventional notion of medium? A prolongation is a type of connection that falls neither under the categories of evolution nor under those of system. The concept of prolongation can be traced back to the phenomenology of crowds and power developed by Elias Canetti (1973 [1960]). The type of relationship existing between the individual and the mass, or between climbing and trading, between jaws and prison, between excrement and morality – as they are explored by Canetti – can be allocated to the category of prolongation. A prolongation is neither an organic evolution nor a systemic prescription. Least of all is it just a metaphor. Rather,

the concept of prolongation points towards the existence of *zones of indistinction* between radically heterogeneous (material and immaterial) yet crucially intertwined spheres. Approaches such as actor-network theory, stressing the continuity *cum* ontological heterogeneity of the social, share some resemblances with our notion of prolongation – except that, criticizing *in toto* the concept of ‘the social’ (see Latour, 2005), ANT by definition tends to systematically fall outside the domain of sociology. Therefore, while the concept of prolongation bears some similarities with what Latour (1993) calls ‘mediation work’ or, elsewhere, ‘factiche’ and ‘collective of beings’, it is a fully sociological concept and it sides only up to a degree with ‘post-humanist’ accounts of the social sphere.

More recently, the concept of prolongation appears to be implicit in augmented reality research (Manovich, 2001). Augmented reality is based on real-time overlay of computer-generated images with the physical environment. Stressing the combination of physical and virtual elements into a single user’s experience, augmented or mixed reality provides a new paradigm that replaces the older paradigm of pure virtuality (Bolter et al., 2006; de Souza e Silva, 2006). Wearable technology (Cranny-Francis and Hawkins, 2008) and attentive user interfaces (Vertegaal and Shell, 2008) provide two examples of how the embodied actor engages with the material interface of an information system to create new forms of hybrid browsing through urban environments. Most of this type of research is technical and little concerned with theory, though. On the contrary, the concept of prolongation is designed to provide social theory with the capacity of being responsive to phenomena emerging from new technologies.

Prolongations constitute territories that are hybrid, material-cum-immaterial constructs. Territories bridge spatial and temporal dispersals, they keep people engaged in social relations. Recognizing that territories exist in the tension between the material and the immaterial enables us to avoid reductionism of both the message-as-medium type (McLuhan) and the space-extinction type (Virilio). Because, as said, territories are *imagined, relational and materially processual* entities, we can also describe them, in a single word, as *practices*. Territories are practices insofar as a practice is a set of repetitions and differences that span various environments. Extensions and compressions (taking place as territorial rhythmic patterns and melodic landscapes) are inherent to prolongations, just as they are to practices. Connecting past knowledge to present circumstances, a practice enables one to encode and decode signs, to share a meaningful environment – in other words, to territorialize certain environments.

Mobility to Prolongations

In the attempt to understand the impact of new media on urban environments, the usefulness of the notion of *prolongation* lies in the fact that it cuts across the spheres of the material and the immaterial. Prolongations span *urban space* and *public sphere*. This is of course a doubly articulated opposition. On the one hand, not all that is urban is public; yet, on the other hand, the public is undoubtedly a type of urban territoriality. The media determine the degree of complexity that the relationship between the regimes of the public, the parochial and the private assumes.

Features of *portability*, or ‘dispersal’, and *digitality*, or ‘convergence’ associated to new media (see Burke and Briggs, 2000: §7) are of particular concern to us here. More

and more, locative media are portable devices integrated with various types of network protocols. *Interactivity* (or 'hypertextuality') is also relevant to the extent that it fosters higher degrees of cognitive and emotional involvement. As observed by Martin Lister et al. (2003: 30), 'ubiquitous computing offers a future in which there are no media free zones in everyday life'. In respect of this, McCullough (2007) has rightly remarked that pervasive computing can be imagined as either universal and placeless or as situated. The latter model is more insightful than the former because it invites us to observe the specific material locations where new media are embedded (see e.g. Galloway, 2004; Hampton and Gupta, 2008). Spreading in everyday urban environments, new media are capable of creating *spatially mobile territorialities* that carve – or inflate – urban spaces from the inside. On the one hand, new media are embedded in domestic and urban everyday life settings. On the other hand, they enable a peculiar stratification of territories, insofar as users are simultaneously engaged in multiple interactions of different types that prolong into each other.

Portability is both determined by the user's mobility and, in its turn, determinant of that mobility. Connected, always-online people do not disappear from places but they live in a peculiar stratification of territorialities. The prolongation between the material and the immaterial leads to new forms of stratifications of mobility that create new 'layers' of mobility and new social inequalities between people with different degrees of mobility. This may sound somewhat logically contradictory, but it is precisely what goes on from an environmental, ecological perspective. The editing of the environment by a medium is most effective when the medium itself becomes *environmental*, that is, *invisible* to users. In the words of McLuhan (1969: 22), 'media effects are new environments as imperceptible as water to a fish, subliminal for the most part'. It is a process that can be grasped only if we replace the principle of causation with a principle of 'synchronicity' (Jung, 1949). Even without buying Jung's metaphysical conception, the point of view of synchronicity invites us to observe, not the causal sequence of phenomena taking place one after (because of) the other, but the simultaneity of events and the inner relations defined by such coevalness. Synchronicity suggests a centripetal rather than centrifugal observation of the socio-technological sphere. Synchronicity is the dimension in which prolongations occur.

The Uses of New Media

Dana Cuff (2003) famously celebrated the new type of public domain created by the new media as an 'immanent' one, a term which promises a form of liberation from more hierarchical forms of organization. However, the degree of immanence is not automatically guaranteed by the mere saturation of urban space with computing capacities. It is rather to be ascertained on the basis of the prolongations that are activated or actualized within and between specific situations and specific locales. Graham (2007) has reviewed three major types of use of new media: commercial, military and artistic. Commercial uses are functional to enhance capitalist flows, military uses become evident in 'war on terror' urban scenarios, while artistic uses are linked to playfulness and art-ivism. Crang, Crosbie and Graham (2007) have also argued that everyday neighbourhood life is increasingly remediated through ICTs and people are increasingly busy with setting trade-offs between various forms of mediations in their daily routine, as a sort of structure or pool of

communicative opportunities. But, what connects the user-centred perspective – and perception – to the systemic picture?

The new media, as I suggested earlier, can be observed as part of what Foucault called the governmental process of urbanization of territory. Governmentality is *not imposition* of conducts but rather *pre-disposition* of a field of possible events, calculation of ranges and thresholds. From this point of view, Winner (1986) would have called the new media 'intractable' or 'inherently political' artefacts. The view that the new media subordinate the personal syntagm to the structural paradigm has been expressed by Manovich (2001), who has observed that what the user actually gets is only one actualized possibility (a syntagm) within a larger matrix of possibilities envisaged and foreknown by engineers and programmers (a paradigm). What the users get is in fact an epiphenomenon of the matrix. In the terms introduced earlier, users only get *occurrences*, *not events*. These reflections seem to implicitly suggest that the architecture of new media is more suitable for control than freedom. If the syntagm is but an actualization of the paradigm, nothing unexpected can be produced.

However, this critique overlooks the occurrence of tactical uses. Resistant uses of the new media can be appreciated as 'tactical' in de Certeau's (1984) sense, as opposed to 'strategic'. Strategy is the *dominant* model in the political, economic, and scientific realms. It is essentially a territorial form exercised upon proprietary bounded *loci*, discursively articulated. In the strategic logic, outsiders are regarded as subordinates or adversaries. By contrast, tactic entails a degree of deterritorialization because those who practice it have no territory of their own and have to act on a territory that belongs to others. Consequently, tactics are articulated not into explicit discourses, but rather as practical ways of operating; they are based on the identification, not of territorial outsiders, but of temporal allies.

Whereas strategy is self-centred, territorial, and spatially bounded, tactics are fragmentary, deterritorialized, and temporally-structured. They have no cumulative character: a tactic cannot build on its own victories, nor achieve any overall coherence; it can only combine heterogeneous elements and constantly try to turn events into opportunities. Resistance is always of tactical nature (Brighenti, 2008). Its social locations do not correspond to any institutionalized field of knowledge. Rather, these locations are an archipelago of informal, implicit and sometimes even trivial practices through which runs the subtle 'art of not being governed' (Scott, 2009). Resistance is the acknowledgement that one cannot win on the enemy's field, but this acknowledgement does not stop short of the attempt at constantly creating new fields for the game. Tactics are composed with the vocabulary of established media languages, and thus subordinated to their official syntactic form, yet they trace territorial trajectories informed by 'other interests and desires that are neither determined, nor captured by, the system in which they develop' (de Certeau, 1984: xviii).

Tactical Uses and the Limits of Resistance

Tactical uses of new media transform media into alternative media and lead to the most innovative acts that contribute to reshaping urban environments. Hence, the importance of the collective imaginative dimension, or imagination as a social force that 'works through' the possibilities of technical apparatuses. An interesting sociological literature is

developing that describes how, exploiting the enhanced degree of connectivity made possible by new media infrastructures, people create new social meaning in the form of new 'commons'. It is a diffused, shared and collective creativity made possible by a type of open-ended social networking; it is innovation that spontaneously arises among the multitude of non-professional users somewhat engaged in a 'scene'. However, these new commons are constantly under assault of privatizing forces such as brands that aim to poach and exploit them through the mechanism of 'crowdsourcing' (Arvidsson, 2006). As described for instance by Toni Negri (2000), the common is a productive force that inherently resists privatization: the movement is one of creation through rejection.

However, one should not fall into a flat apology of new media 'user empowerment'. When it is the whole that changes, individual and even group resistance might be practically overcome. In a sense, it is the very notion of 'user' prevents us from appreciating the socio-political stake of the new media. An ecological perspective is more promising because it invites us to observe the plenum, or locale, as a selective arrangement and meeting point of forces, specific prolongations of environments. Rather than starting from users, we start from media as integral to the infrastructure of environmental prolongations. If we take the perspective of the heterogeneous plenum represented by the locale, the here-and-now or plenum – if, in other words, we take the perspective of the ecology of relationships, we can conceptualize users as the *poles of a series of prolongations* that shape social territories. Users themselves are but *thresholds* in the field of the visible. The ecological perspective thus conceptualizes users as parts of the processes of territorialization that define simultaneously the urban space and the public sphere, and consequently analyses the new media on the basis of the *territorial processes* that they produce and stabilize.

In the course of these processes, visibility can become empowering – *qua* recognition – as well as disempowering – *qua* control. More precisely, three possible visibility regimes should be considered: surveillance, resistance against surveillance, and sousveillance. To begin with, the very characteristics that determine the success of new media also make them particularly suitable as surveillance devices. Surveillance is increasingly based on data flow-tracking and data mining rather than mere visibility (Haggerty and Ericson, 2000; Lyon, 2007) and new media are highly trackable. Locative media in particular provide specific geo-reference to material territories so that it becomes possible to quite literally 'follow the actor'. Cities increasingly turn into surveilled spaces where a wide range of technologies explicitly designed for securitization and sanitization are deployed to produce social sorting. Practices ranging from automated vehicle identification to the diffusion of RFID (radio frequency identifiers) locative microtransponders implanted in objects and bodies make a clear case of the surveillant use of new media technologies (for a recent review, see Lahlou, 2008). Security imperatives are often used to backup anti-immigrant, anti-panhandler and anti-busker policies of public space (see e.g. Kohn, 2004). Therefore, resistance against surveillance aims in the first place to visibilize the visibility asymmetries associated with surveillance. In other words, resistance is about producing a *visibility of second order*, visibility as discussion in the public sphere, thus opposing the invisibility of the environmentalization of control.

If resistance is usually portrayed as reclaiming the streets and the right to the city on the part of collective social movements, ambiguous practices such as sousveillance (Mann, 2003) should lead us to question ourselves about what kind of public space life we are imagining. Sousveillance accepts the premise that some degrees and forms of control are

inescapably linked to new media, but attempts to turn them into a diffused and pluralized control rather than a central and monopolized one. The use of phone videocameras and voice recorders during demonstrations and political rallies is a counter-surveillant tactic, which is in fact based on *sousveillance*. But while some usages have relevant potential for the democratic control of power – for example, denouncing police brutality, as it happened in 2001 at the anti-G8 demo in Genoa – other uses of new media for *sousveillance* are far less edifying. The ‘dog shit girl’ case reported by Dennis (2008) – the story of a Korean girl who ran away from the subway without cleaning up her dog’s crap, but was filmed with a mobile phone and publicly disgraced on the internet through blogs, to the point of contemplating suicide – reminds us that *sousveillance* can be tragically used for persecutory, afflictive and do-it-yourself forms of popular ‘justice’ and vigilantism. On the other hand, alternative media (Jankowski and Jansen, 2003) may also be counted somewhat as forms of *sousveillance*, in the sense that they challenge the traditional organizational structures and working logic of mainstream media, pursuing a politics of visibility that is explicitly designed to contest the visibilities and reveal the invisibilities of mainstream media.

Other urban uses of new media are even more ambiguously located in between various forms of visibility. For instance, smart mobs (Rheingold, 2002), groups of people who rally via SMS just for partying in urban public places such as squares and railways stations, seem to make the case that the syntagm is not always a mere actualization of the paradigm, despite the fact that the revolutionary potential of these practices is questionable. In another context, describing how SMS texting strengthened the People Power II movement in the Philippines, Rafael (in Chun and Keenan, 2006), points out that new media can individualize but also collectivize. By the name ‘personal’ (Lüders, 2008), new media can in fact help precipitate new urban crowds and new passions. Anne Galloway (2004) has also insisted on the significance of playfulness made possible by the new media, and indeed plenty of art projects turn the city into a playground where it becomes possible to situationally experiment with social interaction (see e.g. Brighenti and Fernandez, 2009): for instance, a project for the London underground like *Undersound* – in which musicians upload their songs at a specific platform in an Underground station, and commuters download on their mobile devices and share them – raises a number of issues concerning interaction in public places, how people make acquaintances, intellectual property, commercialization of expressive creations, distribution and retail, and so on.

This review of tactical uses of new media in public urban environments is simply a suggestion about how the notion of prolongation could enhance the comprehension of the interplay between the layers of the material and the immaterial within the social sphere. The editing of urban environments enabled by new media leads to a redefinition of the boundaries of the here-and-now, as well as the condition of differential mobility. New media transform urban dromology and reveal spatially mobile territorialities, whereby new translocal territories are superposed to other local relational territories. Yet this is also a process of urbanization of territory, functional to the Foucaultian ‘police of space’. Ultimately, in each situation, in each encounter, thresholds of visibility define cut-off points between visible and invisible, relevant and irrelevant, virtual (‘as if-’) and actual (‘affective’) phenomena. This is, properly speaking, the domain of social visibility: a *corps-à-corps* of strategies and tactics, of arts of governing and arts of not being governed.

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