

## Mobile communication and new sense of places: a critique of spatialization in cyberculture

André Lemos

**Resumo:** A ideia básica deste artigo pode ser colocada da seguinte forma: tecnologias informacionais móveis têm permitindo novas formas de comunicação e sociabilidade com base naquilo que chamo de “territórios informacionais”. O que está em jogo aqui é uma nova relação entre as tecnologias informacionais e as dimensões do local, do território, da comunidade e da mobilidade. Vamos mostrar como as novas tecnologias móveis, sob o rótulo de “mídias locativas”, criam novas formas de territorialização (controle, vigilância, monitoramento) e, contra as tese de “não-lugar” ou de um “não sentido dos lugares”, o que estamos vendo são novas significações no espaço público urbano. Além disso, discutiremos as ideias de anomia e de isolamento com o surgimento de formas de sociabilidade e de vínculo comunitário criadas pelos serviços baseados em localização (LBS).

**Palavras-chave:** cibercultura; mobilidade; comunicação; mídias locativas

**Abstract:** The underlying idea of this paper can be expressed as follows: informational mobile technologies have enabled new means of communication and sociability based on what I call “informational territories”. What is at stake here is to question some visions about the relationship between informational technologies and place, territory, community and mobility. I will argue that, under the label of “locative media”, new mobile technologies are creating new forms of territorialization (control, surveillance, tracking) and new meanings of space, place, and territory, contradicting the theory of “non-place” or “no sense of place”. Moreover, this impels us to argue the ideas of anomie and isolation with the emergence of new forms of sociability and community created by location-based services.

**Keywords:** cyberculture; mobility; communication; locative media

### Locative media

Locative media is a combination of location-based technologies and location-based services (BENFORD et al, 2006 2005; CHANG; GOODMAN, 2006; MCCULLOUGH, 2006; POPE, 2005; BARKHUUS et al., 2005; RAO and MINAKAKIS, 2003; SMITH et al., 2005). The term locative media was proposed in 2003 by Karlis Kalnins, at the Center for New Media, in Riga, Latvia, to distinguish corporate use of location-based services from artistic proposes. Location-based technology is the set of digital devices, sensors and digital wireless networks (GPSs,

mobile phones, laptops, palms, Wi-Fi, Bluetooth and Wi-Max, RFID, etc.) constructed to allow exchanges of information with the physical. Locative media could be used for locating, mapping, access to services and information, art or games (BENFORD, CRABTREE et al., 2005; BENFORD and MAGERKURTH, 2005; BENFORD et al., 2004).

The content and the information exchange generated by these devices and networks are location-based services. Location-based services can be classified into information and directory services, tracking services, emergence services, navigation, advertising and promotion, art and games. These can be grouped into four basic categories: search for location (maps, real time traffic, services), personalized services (based on the profile of the user), niche consumption, corporate and industrial applications (track material, consumers, suppliers and employees), art projects and games (KARIMI; HAMMAD, 2004; LONTHOFF and ORTNER, 2007). Locative media has mass media and “post-mass media” functions as I explained in other paper (LEMOS, 2006 e 2007c, 2007d).<sup>1</sup>

Locative media are ubiquitous and pervasive. Mark Weiser proposed the term “ubiquitous computing” in 1991 when he founded UbiComp. We can define ubiquitous computing as a computational process integrated and sensitive to the external environment, widespread in diverse objects (WEISER, 1991 and 1993). Locative media are examples of applications and services using the ubiquitous and pervasive computing proposed by Weiser. HINSKE et al. (2007) explain that IBM introduced the term “pervasive” in 1998 to describe the “paradigm that deals with the integration of computers in our surroundings.” For the purpose of this paper, I will not differentiate between pervasive and ubiquitous computing.

I show in other papers (LEMOS, 2006, 2007a, 2007b, 2007c, 2007d, 2007e) that locative media projects can be classified in four main fields: 1. “Urban Electronic Annotations” (new ways to “write” the urban space with mobile devices, like Yellow

---

1 Post-mass media functions operate from technologies and networks where the user can produce information, “releasing” the editorial center. They are not State concessions and allow customization, publication and dissemination of information worldwide, with multimedia capabilities. The product is customizable and the communication is biased by conversation (the role of the mass media is “information”, while the post-mass media function is “communication”). We can see these functions with the development of blogs, free software, podcasting, wikis, and collaborative maps. They operate under what I call the three basic principles of cyberculture: “release of the emission”, “bidirectional connection” and “reconfiguration” of cultural institutions and industry (LEMOS, 2006). Also, we must think in terms of function, not of devices (a large portal on the internet tries to act as a massive journalistic mass media, while printer fanzines and flyers have post-media functions).

Arrow,<sup>2</sup> Sonic City,<sup>3</sup> 2. “Mapping and Geo-Localization” (to attach information – photos, text, video, sound – to maps, to build bottom-up maps that represent communities – like “Neighbornode”,<sup>4</sup> “Peuplade”,<sup>5</sup> or Citix,<sup>6</sup> or to plot and tracing with a GPS device, like my project SUR-VIV-ALL,<sup>7</sup> in Edmonton, Canada); 3. “Location-Based Mobile Games” (on-line games that uses mobile device with locative capabilities in urban space, like “Uncle Roy All Around You”,<sup>8</sup> “Pac-Manhattan”,<sup>9</sup> or the Brazilian “Senhor da Guerra”<sup>10</sup> and Alien Revolt.<sup>11</sup> Here the city becomes a playground, the “game board”) and; 4. “Smart Mobs” (political and/or aesthetic – Flash Mobs – mobilizations coordinated by mobile devices, usually cell phone and SMS texts to perform an action and disperse rapidly, like political protests in Philippines, against President Estrada, in Madrid, after the terrorist attack on the trains in 2004; in São Paulo with the criminal organization PCC plotting attacks all over the city, or student protests in Chile in 2006 and 2007 against Microsoft, in Shanghai in 2007 against the expansion of maglev tracks, in Pakistan against President Pervez Musharraf, or in Uganda for women rights).

## **Old and new means of...**

All of these experiences with locative media indicate that mobile technologies do not aim to produce virtual worlds with which to replace the real world, or to a deterritorialization process. Instead, they put the emphasis on control, territorialization, and the production of content that is bound to objects and places. We must avoid a romantic and dichotomous view of these new cyberculture processes and try to understand new and old meanings of concepts such as territory, place, mobility, and community.

---

2 <http://yellowarrow.net/index2.php>

3 <http://www.tii.se/reform/projects/pps/soniccity/index.html>

4 <http://www.neighbornode.net/>

5 <http://www.peuplade.fr/home/>

6 <http://www.citix.net/pages/sobre>

7 <http://www.facom.ufba.br/ciberpesquisa/andrelemos/survival/>

8 <http://www.uncleroyalaroundyou.co.uk/street.php>

9 <http://pacmanhattan.com/index.php>

10 <http://www.senhordaguerra.com.br/>

11 <http://www.alienrevolt.com/pt/>

## **Territory**

We constantly encounter territories and boundaries. Territories are controlled areas with defined borders where the mobility and through flow is regulated (in terms of speed, forms of access, power, and amplitude). Borders are membranes and allow communication. Control and surveillance are means of monitoring and tracking movements and flow within territories. So, in thinking about territory one must take into account mobility and flow, surveillance, violence and means of exercising control. To understand mobility and flow using the new locative media technologies, we must consider not just the physical territories, but also new forms of informational territory, as will be shown later.

This concept is complex, referring to various fields, from the demarcation of an area of political and economical sovereignty (international relations), the expression of collective identities (anthropology), forms of control and hierarchies within social relationships (sociology), and the “inner space” in relation to privacy, comfort and emotional subjectivity (psychology). The notion of territory can be understood as a dynamic struggle between flows across the borders (religious flow, identity flow, geographical flow, economic flow, etc.) around places. Globalization has created new problems with borders, increasing their porosity and developing new methods of communication. This has created a crisis in the territory dimension (nation state, body, subjectivity, culture, politics, economy). Now more than ever, we must see territories (physical, geographical, subjective, political, informational) not as sealed “boxes”, but as “hubs”.

Space, places and territories are social productions. Places act as locus’ of meaning and memory, permeated by intense flows that create a sense of belonging. Within these places, there are zones of control and tension within borders and territories. Territory is a polysemic concept. The complex dynamic between territorialization (control and institutionalization) and deterritorialization (movement, smooth space) gives social meaning to places and space (LEMOS, 2006). Place is “events” created by territories, fluid areas of control produced by territorial negotiation

(horizontal dynamics) and negotiations between places (vertical dynamics). Space produces places and is produced by places. Moreover, space, place and territories can be seen as waves of territorialization and deterritorialization in an endless process. Consequently, we must not see territory as “natural”, but as a cultural artifact, a social product linked to desire, power and identity (DELANEY, 2005). Social life produces significance in space and the places that reshape spaces.

## **Place**

Place is an essential dimension of human existence. It is a form of seizure of the world, an “a priori” for Kant, an ontological need for Heidegger. We have “to build a dwelling” to inhabit the world. This construction is a production of place. Men need to transform the external environment through technique, language, and institutions to fill it with meaning so that it can be inhabited. Without that production, man does not exist as a cause and place “produces” society, not the opposite. Places are created by territorialization dynamics. They are “events” (THRIFT, 1999; LEFEBVRE, 2004). For Tuan (1974), space is generic; it is movement, and place, the particular, the stop, the “home” of community. Place can be seen as fixed borders, institutionalization, and permanent control of an area of the generic space. As Cresswell (2004, p. 12) put it, “place focuses on the realm of meaning and experience. Place is how we make the world meaningful and the way we experience the world”.

With the evolution of society in the industrial age and the growth of movements and flow of goods, capital, people and information, places cannot be seen as fixed portions of space or as anchoring points for communities. Seen as a point of attachment and roots, places disappear with the increasing mobility of modern societies. We now have new dimensions of place, and they have become intersections of flows (SHIELDS, 1999; CRESSWELL, 2004; MASSEY, 1997; AMIN and THRIFT, 2002; COULTRY; MCCARTHY, 2004), “hubs”, dynamically produced in time. This goes against the idea that globalization is causing places to dissolve into “no places”, that “lose their senses”, and that speed and space, and time compression are “erasing them”: Tuan (1974, 2003, Harvey (1989), Meyrowitz (1985), Virilio (1984), Augé (1995) that sustain a diagnosis

that places are dissolved into “no places”, that it “lose their senses”, and that speed and space, and time compression are “erasing them”. Then, mobility and flow destroy, erase and weak places. As Pred (1984, p. 279) argues, “places are never ‘finished’ but always ‘becoming’”. Place is what takes place ceaselessly, what contributes to history in a specific context through the creation and utilization of the physical setting”. Or as Thrift (1994, p. 212-213, apud CRESWELL, 2004, p. 48) puts it, “places are stages of intensity. Traces of movement, speed and circulation”. Places are in process, and as Massey (apud CRESWELL, 2004, p. 69) says, “[...] instead of thinking of places as areas with boundaries around, they can be imagined as articulated moments in networks of social relations and understandings”.

Changes in the functions of places is what Foucault (1984) called heterotopy. Heterotopias are functions of places,

real spaces – spaces that exist and are trained in the very foundation of society – which is something like counter-sites, species of utopias held in which all the other real sites that given culture can be found, and where are both represented, challenged and reversed.

I have demonstrated in a previous paper how cyberculture is creating new heterotopias based on Foucault’s five principles (LEMOS, 2006). We can hypothesize that informational territories create new heterotopias of places and new informational functions. Informational society has created a new heterotopy (informational control) within places. Places (public or private) as squares, shopping centers, schools, offices, hospital, library, banks, and so forth are changing with informational networks and informational territories. There are also new temporary uses of these spaces and a merging of different functions, including new forms of control, access, and surveillance, and new forms of openness and closeness (passwords, access profiles, etc.). Informational territory creates new heterotopias, new functions for places and a redefinition of social and communication practices. It is not the end of squares, schools, homes, shopping centers, hospitals, offices, etc., but rather, a new meaning (new functions) for these spaces. New heterotopias create a revitalization of places.

Locative media projects can help us to see places and space differently. Locative media do not point to a world of electronic cyberspace apart from the physical world. Instead, they insist that what they produce are “augmented realities” for playing on the street, in annotation, mapping and tagging real things. What we are seeing now are

several examples of integrated, mixed processes that merge electronic and physical territories, creating new forms and new senses of place. Therefore, the fears of loss of reality and deterritorialization appear to be unfounded. When we create tags and maps, use a GPS with a mobile phone to find a location, produce content and electronically annotate a place, play location-based mobile games or organize mobilization in public space by SMS, we are controlling the space and creating a new sense of place and new forms of territorialization.

## **Informational territory**

It is not out of context to think that the contemporary information society creates new kind of territories: informational territory. It is plausible to think that the information society produces new territories. Informational territories can be understood as areas where informational flow in the intersection between cyberspace and urban space is digitally controlled. Here users can either control inputs and outputs of information data. The informational territory creates a new function of place, a heterotopy. For informational territory I understand the area of control (and to be controlled by) of digital information flow in an intersection with a physical area. So place, as a result of territorialization (geographic delimitation, laws, and regulations) gains new layer information that's a new territory created by electronic networks and mobile devices.

By informational, I mean digital, electronic informational flow. All territory is made of information. Although, in using the term informational territory, I want to differentiate digital information layers from other forms of "information". Wireless networks, sensors and mobile technologies that open up new uses of place create digital information layers. The informational territory is not cyberspace, but the territory in a place formed by the relationship between the physical dimensions of territorialities and the new electronic flows, creating a new form of territorialization. The place becomes more complex because this territory is now related with other territorialities (laws, regulations, subjectivities, cultures, and politics). Empirically, we can see these informational territories by examining the use of public spaces equipped with the new infrastructure of wireless networks and devices or from ethnographic research showing

the relationship of users with the space before and after the formation of informational territories.

It's correct to see cyberspace as a "digital territory", as Kameas and Stamatiou (2006) argue. They say that artificial digital worlds or cyberspace can be mathematically modeled as a "digital" or informational territory:

Nowadays, it seems that we are close to the development of the foundations of yet another "Artificial" concept: the **Digital Territory (DT)**. [...] In a few words, the concept of a Digital Territory seems to integrate Artificial Life with Artificial Intelligence: it describes worlds with moving agents which, however, move in complex terrains which contain elements of both the physical and digital world (as opposed to organisms living within a computer simulation program) as well as "real" intelligence since it integrates devices with human beings in a complex pattern of interactions. (KAMEAS; STAMATIOU, 2006)

Others speak in terms of a "bubble" (BESLAY and HAKALA, 2005) or a "cloud" (VANDER WAL apud ROUSH 2006). These images are interesting and show a picture of the "form" of the territory informational. However, both "digital bubble" and "digital cloud" do not offer the ontological dimension of place; they don't inform about the basic principles of these bubbles or clouds. I propose the concept of informational territory because, although it may take the form of a "bubble" or "cloud", it indicates here not a form but a function, a way the place is reconfigured by technology, sensors and digital mobile networks. If we think about territories, we can see the new dynamics, new forces and new powers being established in places through these devices and networks (here we can face political problems like surveillance, monitoring, privacy, the digital divide, and so on).

Thinking about territory is thinking about control and power that the image of the bubble or cloud doesn't reveal. A place is always controlled (by law, ethics, moral, rules); it is always consists of territorialization and tension with deterritorialization (new laws, changes in ethics or morals, etc). The notion of informational territory allows us to see a new processes of control (information), adding more complexity to places. It means that the user can control what to receive and what to produce in terms of information, but has to deal with other forms of power and control (other territories) present in any place.

It is known that there is a shift of power as disciplinary confinement (FOUCAULT, 1984) to tracking and control mobility (DELEUZE; GUATTARI, 1980): CCTV, passwords and profiles, RFID tracking systems, cell phone ID surveillance, GPS

tracking, and so on. Informational territories reflect new dimensions of territoriality, new relations of power and new social practices of mobility in contemporary society. Mobile technologies and networks create new forms of mobility (informational, as we'll show) in institutions of confinement by allowing deterritorialization. Informational territory implies at the same time, dissolution and creation of new forms of controls and mobilities redefining places nowadays. We have to understand mobility to get all the dimensions of locative media today.

## **Mobility**

Projects in locative media, such as urban annotation, location-based mobile games, mapping, flash and smart mobs can be seen as a new city language, spoken using new mobile technologies and networks. Just as Tonkiss (2005, p. 140) argues in her analysis of graffiti and skate practices, we can say that locative media “take(s) the surface of the city as a space in which demands might be advanced, inscribed identities and challenges issued”. Mobile technologies and networks change our everyday experience of places. Consider the use of mobile device like cell phones and laptops: the search for hotspots makes people sit in one place instead of another; the exchange of phone calls or SMS creates a new movement on the streets and new forms of synchronicity or meetings; the current methods of locating and mapping change the way people view, and interact with, the city structure; access to information on mobility in blogs, micro-blogs or social software changes the way people produce content about their experience and link them to their community. These technologies are producing a new pace to everyday life, and new mobilities within places.

Mobility is inherent to man. A historical perspective shows the systematic creation of mobility throughout history in the development of artificial methods of transport and communication. This need for mobility is also correlated to the need to establish a fixed place, to build a memory, a point in a generic and abstract space, as we have seen. Mobility brings together communication, technological, geographical, economic, cultural and social issues (URRY, 2000; SOROKIN, 1964; McDOWELL et al., 2008; HANNAN; SHELLER; URRY, 2006; HÖFLICH; HARTMANN, 2006;

CASTELLS et al., 2007; KELLERMAN, 2006; KWAN, 2007).

There are three ideal types of mobility: “physical/spatial” (transport), “virtual/informational” (media, art) and “cognitive/imaginary” (thoughts, religion, dreams). There are three possible interactions between these mobilities: replacement (if one type of mobility annuls another e.g. working at home or studying on-line can eliminate the need to move to physical places), complementariness (we can move to have access to information) and, additivity (for example, the use of GPS provides access to information on mobile devices and this complements the daily displacement) (KELLERMAN, 2006, p. 8). Also, transport and communication systems create new dynamics between private and public spaces, between proximity and distance, between locomotion and shelter, between curiosity and apathy, between lines of escape and striated space, and between personal and community networks. Mobility allows us to go from one point to another, whether in imagination, physically or virtually, it allows us to “dis-place”. This dis-placement is not a denial or an end of place, but a way of re-meaning it. Mobility and power are complementary processes that create tension between virtual, physical, and imaginary forms.

Communication technologies (with mass and post-mass media functions) reinforce these physical and virtual mobilities. We can understand media as artifacts of informational mobility in space and time (since the invention of writing to the internet). Today, space-time compression increases through virtual, imaginary and physical mobilities. Wireless technologies meld the physical and virtual, bringing new problems of border between private and public, between “dis-placement” and place. This virtual/informational mobility has direct impacts on physical/spatial mobility, as well as on imaginary mobility. As suggested by Bonss & Kesselring (KELLERMAN, 2006, p. 55), there have been stages of mobility, from the “traditional” (by the end of the eighteenth century), “territorial” (the emergence of the nation state in the nineteenth century), “global” (through new means of transport and communication in the twentieth century) and “virtualized” (with the new media, internet and mobile technologies). Today, virtual/informational mobility acquires greater importance with the advances in mobile technology and the post-mass media functions because we it is now possible to exercise a global mobility that incorporates the physical, imaginary and informational simultaneously. According to Kellerman (2006, p. 64):

individuals “carry” with them their own territories. Some of this is becoming

apparent through the growing use of mobile phones, laptops and mobile memories, which permit one to carry his / her whole personal library and to have immediate access and communications without any regard to location..

Place remains essential. Without informational AND physical layers, this total mobility cannot exist. So what is new? The possibility to *consume and produce* information on the go. We can think about the users' status, but we can also think about places that are mobile (like airplanes, boats, cars, and trains) that have new virtual/informational mobility with wireless network device capabilities. As Kellerman explain (2006, p. 74):

emerging wireless transmissions, whether through laptop computers, or through mobile telephones, which imply an intersection between enhanced physical mobility, or the growing ability of humans to move fast and efficiently across the globe, on the one hand, and their enhanced parallel virtual mobility, on the other.

The new informational territories are products of this new state of mobility. Mobility is not just an act of bodies or information, but an act of power. Bonss & Kesselring (apud KELLERMAN, 2006) have proposed the term “motility”, borrowed from medicine and biology, to think about potential or virtual mobility, “the propensity to be mobile ... which is likely to vary in intensity from one person to another” (KAUFMANN apud KELLERMAN, 2006, p. 8). Mobility should not only be seen as the route between points or as a means of accessing certain information, but as a dimension of power and potential power. Today, we face a global increase in “motility”. However, this potential is constrained by the “extensive power” i.e. the ability of a person or group to overcome distance (physical, virtual, or imaginary), and the “accessibility power” i.e. the opportunities available to perform the movement (virtual, physical, or imaginary) (KWAN, 2007). We can see the balance of power here in the differences between those who have and those who don't have access to transportation or communication devices.

## **Temporality**

Mobility is also linked to temporality. Locative media are temporary practices in

urban spaces. We always use the urban space temporarily: in a car or on public transportation, using public restrooms, sitting on a square or strolling through the streets. Moreover, the practice of staying too long in a public space (sleeping on a bench or sitting on the floor in a shopping center, for example) is often suppressed by public authorities. The concept of temporary use has two important dimensions. Use is obviously to use; spend. But use also implies a right; enjoyment. Hayden and Temel (2006, p. 26-27) explain that:

uses is, in any case, not a quality that is inscribed in things, but rather buildings or spaces social relationship in the triangle of property, possession and right to use. In that sense, use is a more or less flexible relationship within which people can make various uses of one and the same thing or, expressed more generally, can relate to this thing in different ways – and thus pursue different interests.

Today, in the age of global networks and flows of information, temporary use of space is increasing: traveling, commuting, and even our homes, which, although designed as a permanent location, are, in most cases, a temporary shelter. With the constant and increasing flow of people, commodities and information, cities are produced by this flow of movement and temporary use of spaces. However, places are designed (by urban planners, architects, engineers) to be permanent: houses, squares, buildings, monuments, schools, factories, shopping malls... The modern city locates things and stabilizes movements with planning rules and by laws (territorializations, striated space, as proposed by Deleuze and Guattari, 1980).<sup>12</sup>

A temporary urban space can be defined as a fixed space with unusual uses; unscheduled, and often illegal (artists using squares as dormitories, meetings of political protest, graffiti, skates, *parkour*, performances, carnivals, etc.), creating a social meaning and a temporary place. These temporary uses of space create a new meaning of place. Alternative locative media projects are creating new heterotopias in old places, where standard temporary use can become smart or flash mobs, location-based mobile games, electronic annotations, GPS drawing and mapping. Temporary informational use of a place, in addition to the conventional uses (“regular” uses of mobile technologies and networks - cyber cafés, public hotspots, cell phones), also evidence a “tactical” (DE CERTEAU, 1984) temporary social production of space. Informational mobile

---

12 Indeed, break these laws was the desire of situationists: make the urban objects mobile, put art out of the museums and place them in bars or cafes (deterritorialization of the museums), put the books out of the libraries, on the streets, walk and write stories beyond the sights of official maps.

technologies appropriation places for temporary use (strategic and ruled, and tactical and free as well).

## **Community**

The city is a place that insulates people, where there is a lack of contact and a guarding of privacy. Community is a social pre-urban form, and only remains today in identity aggregation and sub-cultures as a reaction against societal breakdown. Tönnies marks this difference by introducing the two ideal-types “Gemeinschaft” and “Gesellschaft” though they are interdependent (TÖNNIES, 1971). For Simmel (1950) cities put people “not only into indifference, but, more often than we aware (...) a slight aversion, a mutual strangeness and repulsion.” Indifference and aversion are two characteristics of modern urban life that are used to preserve “psychological private property” (SIMMEL, 1950, p. 410). The crowd brings both a collective dimension and a sense of isolation.

Despite the city being characterized by “anonymity, instrumentality and atomization” (TONKISS, 2005, p. 14), community continues to emerge, whether in organized social groups, social classes or new tribes. Here we see the main characteristics of modernity: instrumental rationality, anomie, individualism, abstract, impersonal, contractual and institutionalized relationships (PARK, 1925). Thinking about mobility today, and new practice of locative media, obliges us to review our social relations and communication practices. Could locative media recreate community feelings of belonging? What are the goals of bottom-up projects if not to create more effective communication between people and new ways to fight against anomie and separation?

We need to think about communities in real places, as well as in electronic networks. As many studies about “digital community” showed in the late 1990’s, communities can exist without physical proximity (“virtual communities”). Moreover, mobility and flow can improve communities. If we think about place as flow and events, and mobility as a way to move around in physical, informational and imaginary space, we can see communities arising around location-based services and technologies. Fixed

place is important to create memory and social meaning and locative media projects, as we have seen, do not point to a “virtual” cyberspace, but to informational territories that relate cyberspace and places, that use urban places as physical subtracts of informational layers, and that use the street level and real communities (see examples above).

Think about mobile social networks, collaborative maps, urban annotations, bottom-up mobilizations, location-based games, and smart and flash mobs. They are good examples of bounded community. These experiences can be seen as a way to combat the emptiness of urban space, to rebuild social bond and as a complementary act of physical contacts. Electronic relationships can reinforce communities and the community meaning of place (FALKHEIMER; JANSSON, 2006). For young people, community consists of their friends and family members that they can meet both face to face and through the exchange of mobile digital information in blogs, micro-blogs, social software, SMS texts, and cell phone photos and videos. These on-line relations strengthen face-to-face relations and the use of urban spaces, creating new meanings and temporalities to place and communities. So, chats on Facebook, updates to micro-blogs, synchronization of activities by SMS, and perpetual contact through cell phones are all new activities that reinforce social relationship and community belonging. We must avoid a nostalgic vision of communities, places and cities as, in taking this view, we risk losing sight of the urban realm that is growing before us.

## **Maps**

The use of maps and mapping processes with locative media is unprecedented. With new systems such as GIS and GPS, and free software and web systems such as Google Maps and Google Earth, mapping is a new practice of place. Maybe we’re realizing Borges vision in “Del Rigor en la Ciencia”. In this one paragraph, Borges shows a place where the map of an empire has the dimensions of the territory. The map is the territory and mapping is a new means of perceiving our cities (ABRAMS; HALL, 2006; DORLING and FAIRBAIRN, 1997; HARMON, 2004; WILFORD, 2000): we can send a SMS to Google to find X café, log onto a system with a cell phone to find

where we are, access on-line systems to find Y cinema and the schedule of a film. These systems are enhancing our movements around our cities and creating an “augmented reality” i.e. informational layers that interconnect physical and electronic information.

Mapping our moves on the streets allows us to control the space; it is territorialization. It is not only about dispossession and getting lost. The use of GPS and other devices for location and location-based services puts the emphasis on control and domination over a territory. These new locative devices allow greater control over an area rather than raising new possibility for getting lost. As the cartographer Paul Mijksenaar shows, the use of maps and GPS is an evidence that people are “frightened of their environment... and do not want to be lost (...) most planner and designers regard the experience of being lost or disoriented as the urban equivalent of a fatal disease” (apud ABRAMS; HALL, 2006, p. 14). Controlling or losing control, the locative media, one way or another, is given new functions to places.

The relationship between cities and maps has always been close but, today, the power of locative media create new and more efficient correspondence between the two. Electronic maps and mapping with locative media build control and create power over places, offering a new social production of space. Maybe the map is becoming the territory or, to put in another way, the map is producing new social meanings for places. Mapping is now a creative intervention in urban space, shaping both the physical city and the urban life experience. Technicians, governments and private companies traditionally control mapping yet, now, we have an ownership shift because the bureaucratic power is moving to the users; ordinary people. The tactical use of maps (psycho-geography) began with the surrealists, Dadaists and situationists in the 50’s and 60’s, and was reinforced by Michel de Certeau’s “rhetoric of walk”. With the popularity of electronic mapping, the urban space is being used as a means of giving sense to daily life and of dealing with the constraints of rationalization in urban modernity (TONKISS, 2005).

Mapping and geo-tagging with locative media can be seen as ways to combat the bureaucratization and impersonality of urban space. One example is the uses of GPS for drawing. GPS was originally a military navigation technology, not a tool for artists to play in urban space. “Writing” and “drawing” invisibly lines in space is not so much about location, but rather, is a way to propose new readings of space. It creates a deterritorialization of the device and a territorialization of the city. We know that maps are constructions, ideologies representing the world and serving the constitutive powers

(Rome, Spain and Portugal, British Empire, American military power). Today, with the internet and locative media, mapping can be used to represent people, community, and a more legitimate space and place that show how people see and feel their environment. We have a button-up process of representing the world, unmediated by the instituted powers. As Denis Wood (apud DORLING; FAIRBAIRN, 1997 p. 65 and 71) put it:

the authority of the map is not derived from its accuracy, but from the authority of the person who draws it. The picture is a map when it is drawn by someone with the authority to draw maps. [...] Maps are about social control and are usually created to serve the designs of their creators rather than to inform “the public”.

## **Conclusion**

Alternative projects in locative media (as opposed to the commodification of mobility, and the consumerism of mobile data promoted worldwide by large conglomerates) can help us to understand that new informational technologies reinforce our sense of place and create new uses of urban space. It is not cyberspace, or the “virtual” versus the “real”, but the social production of space (and place and territories) with mobile technologies and networks. It’s all about physical places, real objects, and real people. These examples can be seen as a new research field, crossing geographical, sociological, communicational, urban, design, and informational boundaries. We face a new turning point in communication studies with new forms of “spatialization”. New mobile technologies and networks show us not the end of place (or cities, or geographies) but new processes of territorialization, mobility and temporary uses of urban space.

The relationship between media and spatialization processes is not new. Spatialization is created by changes in space, by producing places. Spatialization is thus a process of intense flows that create a sense of belonging. In the 19<sup>th</sup> and 20<sup>th</sup> centuries, with the rise of the mass media, we were in the realm of broadcasting. We could consume information in private or semi-public space, but it was difficult to produce content and impossible on the go. At the end of the 20<sup>th</sup> century, with the emergence of post-mass media functions, the relationship between mobility, place, and media has changed. We face a new mobility that puts together physical and virtual mobilities and

allows the rise of new forms of places as a result of the relationship between informational territories and the territories that constitute them. This spatialization has grown from its post-mass media function through the creation of an informational territory and the overlap of physical and electronic space in temporary physical and informational mobilities.

At the beginning of the 21<sup>st</sup> century, locative media and bottom-up processes reinforce the hybridization of physical space and cyberspace, bringing a new sense of place and community. These processes are bound to the real world and, far from an absolute deterritorialization, create new forms of territorialization through informational control (the capacity to produce and consume information while mobile). So the thesis of dematerialization, the end of places and, as a consequence, the end of community, seems to be unfounded. We must think about flows, events, and augmented reality, rather than fixed places, rooted communities or deterritorialization in cyberspace with the replacement of the “real” with the “virtual”.

Locative media projects produce experiences that create informational dynamics and events that are embedded in physical objects and locations. Mobile information technologies, post-mass media functions and informational territories are creating new forms of territorialization, new spatialization processes, new senses of places and new ways to reinforce real communities, as well as collaborative and autonomous productions of content. But we are at the beginning and everything is potential. Only a political view can reinforce these perspectives.

## References

ABRAMS, J.; HALL, P. (eds.) (2006). *Else/where: mapping: new cartographies of networks and territories*. Minneapolis: University of Minnesota Press.

AMIN, A.; THRIFT, N. (2002). *Cities: reimagining the urban*. Cambridge: Polity.

AUGÉ, M. (1995) *Non-places: introduction to an anthropology of supermodernity*. London, Verso.

BARKHUUS, L., CHALMERS, M., TENNENT, P., HALL, M., BELL, M., SHERWOOD, S., BROWN, B. (2005). *Picking Pockets on the Lawn: The Development of Tactics and Strategies in a Mobile Game* (pp. 358-374). Tokyo: Ubicomp.

BENFORD, S., SEAGAR, W., FLINTHAM, M., ANASTASI, R., ROWLAND, D., HUMBLE, J., STANTON, D., BOWERS, J., TANDAVANITJ, N., ADAMS, M., FARR, J.R., OLDROYD, A. AND SUTTON, J. (2004). *The error of our ways: The experience of self reported position in a location-based game*. Proceedings of the 6th International Conference on Ubiquitous Computing. Nottingham: UbiComp. 70-87.

BENFORD, S., CRABTREE, A., FLINTHAM, M., DROZD, A., ANASTASI, R., PAXTON, M., TANDAVANITJ, N., ADAMS, M. ROW FARR J (2005). *Can You See Me Now?* In ACM Transactions on Computer-Human Interaction, ACM Press.

BENFORD, S., MAGERKURTH, C., LJUNGSTRAND, P. (2005), *Bridging the Physical and Digital in Pervasive Gaming*, In *Communications of the ACM*, vol. 48, pp. 54-57. :[http://www.jisc.ac.uk/uploaded\\_documents/jisctsw\\_05\\_01.pdf](http://www.jisc.ac.uk/uploaded_documents/jisctsw_05_01.pdf).

BENFORD, S.; FLINTHAM, M.; DRODZ, A. (2006). The design and experience of the location-based performance uncle Roy all around you. In: Leonardo On-Line, Electronic Almanac. V. 14, n. 03, July. Available at: <[http://leoalmanac.org/journal/Vol\\_14/lea\\_v14\\_n03-04/roy.asp](http://leoalmanac.org/journal/Vol_14/lea_v14_n03-04/roy.asp)>.

BESLAY, L., HAKALA, H. (2005). *Digital territory: Bubbles.*, Draft Publication, European Community, in <http://cybersecurity.jrc.es/docs/DigitalTerritoryBubbles.pdf>.

CASTELLS, M.; FERNÁNDEZ-ARDEVOL, M.; QIU, Jack Linchuan; SEY, Araba

(2007). *Mobile communications and Society: a global perspective*. Cambridge/London: MIT Press.

CHANG, M.; GOODMAN, E. (2006). *Asphalt games: enacting place through locative media*. In: Leonardo On-Line. Electronic almanac. v. 14, n. 3, July. Available at: <[http://www.leoalmanac.org/journal/vol.14/lea\\_v14\\_n03-04/changgoodman.asp](http://www.leoalmanac.org/journal/vol.14/lea_v14_n03-04/changgoodman.asp)>.

COULTRY, N., MCCARTHY, A. (2004). *Mediaspace: place, scale and culture in a media age*. London: Routledge.

CRESSWELL, T. (2004). *Place: a short introduction*. Malden/Oxford/Victoria: Blackwell Publishing.

DELEUZE, G. ; GUATTARI, F. (1980). *Mille plateaux : capitalisme et schizophrénie*. Paris: Minuit.

DE CERTEAU, M. (1984). *The practice of everyday life*. Berkeley: University of California Press.

DELANEY, D. (2005). *Territory, a short introduction*. Massachusetts: Backwell Publishing.

DORLING, D.; FAIRBAIRN, D. (1997). *Mapping: ways of representing the world*. Edinburgh: Addison Wesley Longman Limited.

FALKHEIMER, J.; JANSSON, A. (eds.) (2006). *Geographies of communication: the spatial turn in media studies*. Nordicom: Göteborg.

FOUCAULT, M. (1984). De outros espaços. *Architecture, Mouvement, Continuité*. Available at:<<http://www.rizoma.net/interna.php?id=169secao=anarquitectura>>.

GOTTMANN, J. (1973). *The significance of territory*. Virginia: University Press of Virginia.

HABERMAS, J. (1991). *The structural transformation of the public sphere*. Cambridge: MIT Press.

HANNAN, K.; SHELLER, M.; URRY, J. (2006). Mobilities, immobilities and moorings. *Mobilities*, n. 1, march 2006.

HARMON, K. (2004). *You are here: personal geographies and other maps of the imagination*. New York: Princeton Architectural Press.

HARVEY, D. (1989). *The condition of postmodernity*. Oxford: Basil Blackwell.

HAYDEN, F.; TEMEL, R. (eds.) (2006). *Temporary urban spaces*. Basel: Birkhäuser.

HEIDEGGER, M. (1958). *Essais et conférences*. Paris: Gallimard.

HINSKE, S., LAMPE, M., MAGERKURTH, C., RÖCKER, C. (2007). *Classifying Pervasive Games: On Pervasive Computing and Mixed Reality*. In Magerkurth, C., Röcker, C. (Eds.) (2007). *Concepts and technologies for Pervasive Games - A Reader for Pervasive Gaming Research*. Vol. 1. Shaker Verlag, Aachen, Germany: <http://www.vs.inf.ethz.ch/publ/papers/hinske-pg07-pervasivegames.pdf>

HÖFLICH, J. R.; HARTMANN, M. (eds.) (2006). *Mobile communication in everyday life: ethnographic views, observations and reflections*. Berlin: Frank & Timme GmbH.

KAMEAS, A. STAMATIOU, Y.C. (2006). *The Digital Territory: a mathematical model of the concept and its properties*. In: Intelligent Environments, 2006. IE 06. 2nd IET International Conference, July: <http://www.ieeexplore.ieee.org/iel5/4197732/4199343/04199399.pdf?tp=&isnumber=4199343&arnumber=4199399>

KANT, I. (1965). *Critique de la raison pure*. Paris: Presses Universitaires de France.

KARIMI, H. A.; HAMMAD, A. (eds.) (2004). *Telegeoinformatics: location-based computing and services*. Florida: CRC Press.

KELLERMAN, A. (2006). *Personal mobilities*. New York: Routledge.

KWAN, M. (2007). *Mobile Communication, Social Networks, and Urban Travel: Hypertext as a New Metaphor for Conceptualizing Spatial Interaction*. |*The Professional Geographer*. Washington, v. 59, n. 4, November 2007.

LEFEBVRE, H. (2004). *The production of space*. Oxford: Blackwell.

LEMOS, A. (2006). Les trois lois de la cyberculture : libération de l'émission, principe en réseaux e réconfiguration culturelle. *Revue Société*, Bruxelas.

\_\_\_\_\_ (2007a). Cidade e mobilidade: telefones celulares, funções pós-massivas e territórios informacionais. *Matrizes, Revista do Programa de Pós-Graduação em Ciências da Comunicação*, São Paulo, ano 1, n. 1, p. 121-137.

\_\_\_\_\_ (2007b). The unplugged city and the global nomad. In: RAJAN, Nalini (ed.). *Digital culture unplugged: probing the native cyborg's multiple locations*. London/New York/New Deli: Routledge.

\_\_\_\_\_ (2007c). Comunicação e práticas sociais no espaço urbano: as características dos Dispositivos Híbridos Móveis de Conexão Multirredes (DHMCM). *Revista Comunicação, Mídia e Consumo*, São Paulo, v. 4, n. 10, p. 23-40, jul. 2007.

\_\_\_\_\_ (2007d). Mídia Locativa e Território Informacional In: ARANTES, Priscila; SANTAELLA, Lúcia. *Estéticas tecnológicas*. São Paulo: PUC-SP. (no prelo)

\_\_\_\_\_ (2007e). Ciberespaço e tecnologias móveis: processos de territorialização e desterritorialização na cibercultura. In: MÉDOLA, Ana Silvia; ARAÚJO, Denise; BRUNO, Fernanda (orgs.) (2007). *Imagem, visibilidade e cultura midiática*. Porto Alegre: Sulina. pp. 277-293.

LONTHOFF, J., ORTNER, E. (2007). *Mobile Location-Based Gaming as Driver for*

*Location-Based Services (LBS) – Exemplified by Mobile Hunters.*, In *Informatics* 31 (2007) 183-190.

LYMAN, S. (1967). *Territoriality: a neglected sociological dimension.* *Social Problems*, v. 15, n. 2, pp. 236-249.

MASSEY, D. (1997). *A global sense of place.* In: BARNES, Trevor; GREGORY, Derek (eds.) *Readings human geography.* London: Arnold. pp. 315-323

MCCULLOUGH, M. (2006). *On the urbanism of locative media.* *Places* 18.2, p. 27.

MCDOWELL, S. D.; STEINBERG, P. E.; TOMASELLO, T. K. (2008). *Managing the infosphere: governance, technology and cultural practice in motion.* Philadelphia: Temple University Press.

MEYROWITZ, J. (1985). *No sense of place: the impact of electronic media on social behavior.* London: Oxford University Press.

PARK, R. E.; BURGESS, E.; MCKENZIE, R. (1925). *The city.* Chicago: University of Chicago Press.

PARR, A. (ed.) (2005). *The Deleuze dictionary.* New York: Columbia University Press.

POPE, S. (2005). *The shape of locative media.* *Mute Magazine*, n. 29, 9 Feb. 2005. Available at: <http://www.metamute.com/look/article.tpl?IdLanguage=1&IdPublication=1&NrIssue=29&NrSection=10&NrArticle=1477>.

PRED, A. (1984). Place as historically contingent process: structuration and the time-geography of becoming place. *Annals of the Association of American Geographers*, 74:2, p. 279-297.

RAO, B., MINAKAKIS, L. (2003). *Evolution of Mobile Location-Based Services*. In Communication of ACM, december 2003/vol.46, 12, 61-65

RHEINGOLD, H. (2003). *Smart mobs: the next social revolution.*, Cambridge, Perseus Publishing.

ROUSH, W. (2006). *Social Machines: Computing means connecting*. *Technology Review*: [http://www.technologyreview.com/articles/05/08/issue/feature\\_social.asp](http://www.technologyreview.com/articles/05/08/issue/feature_social.asp)

SHIELDS, R. (1999). *Lefebvre: love and struggle: spatial dialectics*. London: Routledge.

SMITH, I., CONSOLVO, S., LAMARCA, A., HIGHTOWER, J., SCOTT, J., SOHN, T., HUGHES, J. IACHELLO, G. AND ABOWD, G.D. (2005). *Social Disclosure Of Place: From Location Technology to Communication Practices*. In: Proceedings of Pervasive 2005. Munich, Germany.

SIMMEL, G. (1950). The Metropolis and the Mental Life, in Kurt Wolff. The Sociology of Georg Simmel. New York: Free Press, 1950, p. 409-424

SACK, R. (1986). *Human territoriality: its theory and history*. Cambridge: Cambridge University Press.

SOROKIN, P. A. (1964). *Social and Cultural Mobility.*, Collier-Macmillan Limited, London.

TARDE, G. de (2005). *A opinião e as massas*. São Paulo: Martins Fontes.

THRIFT, N. (1999). Steps to an ecology of place. In: MASSEY, Doreen; ALLEN, John; SARRE, Philip (eds.) (1999). *Human geography today*. Cambridge: Polity Press. p. 295-322.

- TONKISS, F. (2005). *Space, the city and social theory*. Cambridge: Polity Press.
- TÖNNIES, F. (1971). On Gemeinschaft and Gesellschaft. In: TRUZZI, Marcello. *Sociology: the classic statements*. New York: Oxford University Press. p. 145-154.
- TUAN, Yi-Fu (1974). *Topophilia: a study of environmental perception, attitudes and values*, Jersey: Prentice Hall.
- \_\_\_\_\_ (2003). *Space and Place: the perspective of experience*. Minneapolis/London: University of Minnesota Press,.
- URRY, J. (2000). *Sociology beyond societies: mobilities for the twenty-first century*. London: Routledge.
- VIRILIO, P. (1984). *L'horizon négatif*. Paris: Galiée.
- WILFORD, J. N. (2000). *The mapmakers*. New York: Alfred A. Knopf.
- WEISER, M. (1991). *The computer for the 21st century*. In: Scientific American. 265(3):66-75, January.
- WEISER, M (1993). *Some Computer Science Issues*. In Ubiquitous Computing. Communications of the ACM. Vol. 36. No7. pp. 75 – 84.

ANDRÉ LEMOS is PhD in Sociology (Paris V, Sorbonne, 1995), associate professor, Faculty of Communication, Federal University of Bahia.

[alemos@ufba.br](mailto:alemos@ufba.br)

<http://andrelemos.info>