

editorial  
editorial

entrevista  
interview

artigos submetidos  
submitted papers

tapete  
carpet

artigo nomads  
nomads paper

projeto  
project

expediente  
credits

próxima v!rus  
next v!rus

**V!16**

issn 2175-974x | ano 2018 year

semestre 01 semester



PT | EN

**Juliana Rocha Franco** is a Doctor in Communication and Semiotics and teaches at the Design School of the State University of Minas Gerais. She is a researcher in the areas of Communication, Semiotics and Design on processes of perception and production of meaning in the contemporary times.

How to quote this text: Franco, J. R. From the end of geographies to mobile media as urban interfaces: space, time and memory. V! RUS, São Carlos, n. 16, 2018. [e-journal] [online] [online] Available at: <[http://www.nomads.usp.br/virus/\\_virus16/?sec=4&item=2&lang=en](http://www.nomads.usp.br/virus/_virus16/?sec=4&item=2&lang=en)>. [Accessed: 16 July 2018].

### Abstract

The critique of the "end of geographies idea," seeks to understand the relations between urban space, mobile media, and memory. Drawing on the study of works and projects carried out with the use of mobile technologies, we will discuss the relationship between information flows and the spaces of the city. Finally, the relationship between the interconnection of informational layers with the construction of collective memory and non-linear narratives, which occur through the triad between space, time and memory, is addressed.

**Keywords:** Mobile media, Urban space, Memory

## 1 Introduction

Currently, several scholars (Harvey, 2001; Santaella, 2007; Lemos, 2010) have presented reflections on connections between technologies and social transformations. An aspect of such alterations is how information technology has modified our notions of space, as well as how we experience and represent that space. Mobile technologies linked to localization devices have had a significant impact on our culture (Santaella, 2008; Lemos, 2010). "Mobile media" has been the quintessential expression to refer to current portable devices of pervasive computing and new mobile telecommunications networks.

The ubiquitous connectivity, enabled by mobile media phones, has triggered new socio-spatial practices and patterns of interaction in urban environments that point to overcoming the real/virtual dichotomy, that have no opposition, but, increasingly, complement each other and update themselves in the actual space. We live in an era of connection that articulates virtual space, urban space, and mobility.

In spite of readings that advocated "dematerialization," the "dilution of the real by the virtual" (Meyrowitz, 1985; Baudrillard, 1994), the Internet has surpassed its virtual boundaries. A layer of digital elements has been covering our environment and enables forms of interaction between virtual spaces, telematics and the tangible world. The simultaneous ability to interact, both with a local context and with a separate physical location, has altered our perception of space.

In this text, we will seek to understand how these changes may be seized in the forms of representation of that space, in this case, from projects that use mobile media and its relationship with time and memory. A fundamental aspect of mobile is the possibility of (re) construction of narrative and non-linear structures and located on the city, allowing a rearrangement of the processes of social memory construction towards collaborative forms of collective memory construction from new perceptions of urban space.

We will direct our attention to works by artists, activists, researchers who develop proposals that relate mobile media and space. We are especially interested in those who connect art, radical geography and maps to the experience of urban space.

Creation processes that, using mobile technologies and localization devices to mapping, not only as a record of ways in which the city is materially present, but also as a creative intervention in urban space as a process of creation of space, emphasizing not only the tangible, physical city but also the city lived and experienced.

## 2 The multiplicity in layers

The emergence of the internet and the rise of virtual spaces and online interactions in the late 20th century, led several scholars to declare the end of physical places. A social setting in which, according to Graham (1998, p. 167, our translation):

*Media technologies, computing, and telecommunications would converge and integrate, making the distance virtually independent; integrated broadband networks began to mediate forms of entertainment, social interaction. In this context, to some scholars, human life would become free from the constraints of space and the effects of friction of distance.*

Other authors also proclaimed the "end of geography" (O'Brien, 1992), "death of distance" (Cairncross, 1997), among other perspectives in which virtual interactions would replace physical space. Such a view is based, according to Graham (1998, p. 167, our translation):

*[...] on the perspective of substitution and transcendence, that is, on the idea that human territoriality and the spatial dynamics of human life can somehow be replaced using new technologies.*

In a similar direction, Nicolas Negroponte, a founder and professor at the Media Lab of MIT, said that the digital life would create less dependence of being in a specific place at a specific time (Negroponte, 1995, p. 165).

Concerning the development of the word "City," Engel (2012, p. 6) shows that, historically, the term appears positioned against some binary oppositions of some space or practice. For example, urban/rural or center/periphery, in which the definition of the city was subject to their opposite and not by their possibilities and multiplicities. According to the author, until relatively recently (late 20th century), these binary distinctions mainly persisted not only in popular culture but also in the academic and professional sectors.

Especially relevant for the present work is the conceptual separation of the city from "bits" and the city of "atoms" (Graham, 2004, p. 5). For Engel (2012, p. 6, our translation) the oppositional construction is due to the perception of the city as a container. A position that was initially presented by Mumford (1961).

For Mumford (1961 apud Wilson, 1995, p. 147, our translation) the city was a container:

*[...] that is to say it was and had to be a finite space. He believed that the 'sprawling giantism' of the twentieth-century city was leading inexorably to megalopolis and thence to necropolis, the death of the city.*

In fact, the idea of the city as a container made it possible to think that city space would become obsolete. Especially after the emergence of new forms of communication enabled by information technology. Since the container, where social relations would unfold, would be shifted to which Castells called the space of flows: "the space of flows refers to the technological and organizational possibility of organizing the simultaneity of social practices without geographic contiguity" (Castells, 2000, p. 14, our translation).

The problem of such a reading of the informational city lies in its approach as a "double city" fragmented and polarized. However, despite the readings that advocate the dematerialization of physical space to the detriment of virtual space, physical spaces and urban places persist and proliferate. With the rise of the information economy, technologies have become increasingly intertwined with the life of the city

Mobile media makes the computer desktop screen obsolete: the referent is the physical space. These technologies enable the binding of information to the physical space and reposition the digital data space as something that is no longer separate from the physical space. For this phenomenon, some authors use the terms embodied virtualization (Weiser, 1991, p. 98) or embodied interaction (Dourish, 1999, p. 1). Such a way of thinking would defy the very definition of what the city is. For Tuters (2004, p. 2) we are witnessing a transformation of the historical notion of the "city."

Within this context in which the city became an amalgam of physical and digital space, urban space should not be considered as a purely physical construction as opposed to a virtual dematerialized instance. In fact, as Beiguelman (2013, p. 147) states, the real/virtual opposition is a mere anachronism of the twentieth century. Santaella (2009, p. 205, our translation) explains why: once perception occurs on a sensorial continuum, there is no reason to postulate a separation between so-called virtual spaces.

In this sense, the project "Can You See Me Now?" held in partnership between the group Blast Theory and Mixed Reality Lab is emblematic of how such spaces intertwine in a multiplicity of layers. The work is a kind of "performance game". The interface allows them to interact with the street players, represented as moving points on the map. Runners can see the relative position (on the map) of online players represented as white dots on a map of the same area on their mobile device screens. The goal of online players is to get away from the street players. If a runner approaches at least five meters from an online player, he is "caught" and forced to leave the game (Video1).

**Video 1.** Can you see me now? Tokyo. Source: Vimeo. Available in <https://vimeo.com/5489402>. [Accessed in 01 Dez. 2017].

"Can You See Me Now?" creates a coherent and rich world for the player. Both types of players occupy physical and online spaces, inhabiting a space layer that interweaves different dimensions of the city. Games, operating at the confluence of spaces, are called by Silva (2009, p. 404 - 424) of hybrid reality games. The "spaces" in this project are all superimposed, mixed and cloudy. The Map is a network of complex-layers of interaction networks.

For Bambozzi (2011, p. 104, our translation):

*The "entrenchment" of information flows in the physical forms of the world has allowed us to imagine possible geographies, in experimental and subjective processes - in cartographies that are enhanced by new measurement, localization, and positioning.*

In this way, what we have been suggesting throughout the present work, apart from oppositions, is a juxtaposition of spaces, in layers as existing in several spheres simultaneously. Our next argument is that such a configuration could function as an interface for the construction of collective memory.

### **3 The city as an interface for the construction of memory**

Over the last decade, ubiquitous computing, social networks, and mobile technologies have become an integral part of our social lives and work practices, as well as shaping our way of making sense of our cultures and participating as citizens. It is possible to affirm that this process allowed emphasizing the character of cities as a place of social encounter in which multiple experiences of time and space coexist, resulting from their relational webs overlapping of different rhythms of time and geographic reach.

Within this context, it is important to emphasize that while we "shape" our cities, we are shaped by it. The way we move and memorize our spatial experience promotes modifications in the way our brains configuration. For example, Maguire et al. (2000) show that people dealing with large amounts of spatial information in navigational processes ( taxi drivers, for example), can record a volume increase in the posterior hippocampus. That stores a spatial representation of the environment and can expand regionally to accommodate elaboration of this representation in people with a high need for navigation skills.

Thus, if according to what we cited above, the way we experience space modifies our brain structure, the city, insofar as it mediates our relation to the world and gives us access to information, can be understood as an interface that "connects an objective reality and a cognitive system, also real, but which, in order to remain, had to encode this reality "(Vieira, 2007, p. 101). What we are calling the interface is, according to Drucker (2011, p. 8, our translation):

*[...] interface as a thing, an entity, a fixed or determined structure that supports certain activities, it tends to reify in the same way a book does in traditional description. But we know that a codex book is not a thing but a structured set of codes that support or provoke an interpretation that is itself performative.*

This process occurs in a network of mediations, which also function as interfaces: we access the city through other interfaces, in a continuous "sets of mirrors." Within this context emerges the question of the importance that space and specifically the urban space and its experience plays in the formation and preservation of collective memories. Rossi (1982) presents the city as the place of collective memory.

In accordance to Rossi, one can say the city itself is the collective memory of its people, and like memory, associated with objects and places. Regarding collective memory, it is essential to make some considerations about Halbwachs' work on the social frameworks of memory and the presence of physical and spatial places of collective memory. According to Santos (1998, p. 154), Halbwachs' central claim to memory is that whatever memories of the past we may have, however much they seem to be the result of exclusively personal feelings, thoughts, and experiences, it came from the social frameworks of memory. Halbwachs (apud Santos, 1998, p. 155), considering the social frameworks of memory, is raising the question of the presence of the "other generic" in our perception of reality and shows the importance of information as a mediator of identity construction.

By emphasizing the social character of memory and explaining that not even the most intimate memories can be thought in exclusively individual terms, Halbwachs emphasizes both the social and interactive nature of memory that is the result of the individual living with other individuals (Santos, 1998, p. 155). This network of relationships and interactions is present in the memory that each one keeps as "exclusively" intimate and personal. Memory is acquired as the individual takes as his or her the memories of the group with which it relates: there is a process of appropriation of collective representations by the individual in interaction with other individuals in an integrated process of language. The claims and the stories about memory can change people's understanding of the world and, of course, change how they act in or on that world.

A series of projects makes it possible to highlight the importance of collective memory to seize and understand the urban space of the city, as well as the importance of urban space in the creation and transmission of such memories.

A good example is Urban Tapestries project (2002, p. 4) <sup>1</sup> conceived by Proboscis group <sup>2</sup>. The project was set up as a digital platform that allowed people to attach their virtual city notes (Video 2) and Enabled ordinary citizens to incorporate lived knowledge into the city's informational landscape. Thus, a collective memory was created materialized in a "collective mnemonic map".

However, technology alone does not enable such a process. In this way, a possible criticism of such procedures would be the possibility of them being stuck to their indicial character and ending up working only as a database of geolocated photos, movies, and sounds, as we can observe in certain commercial applications.

According to Silveira (1991, p. 43, our translation):

*The mere accumulation of past events, all of which are necessarily particular, would be incapable of generating genuinely general ideas about phenomena, and give real guarantees that future conduct will reach, even within the limits of probability, the purposes sought.*

**Video 2.** Urban Tapestries Contexts. Source: Vimeo. Available at: <https://vimeo.com/1065977>. [Accessed 01 Dez. 2017].

Thus, according to Maia, (2000, p. 55, our translation) "appropriating oneself productively from a mediatic material presupposes a reflexive attitude," an ability to trigger experiences, life stories, elements present in the collective memory, rituals or available narratives of a given community to produce new meanings and symbolic orientations, that the actors themselves can recognize.

In Greek mythology, when Ariadne, enamored of Theseus, condemned to die in the labyrinth, home of the fearsome minotaur, asked Daedalus, builder of the labyrinth, for help, he did not give him a common map drawn on paper with the indicated exit. He gave him a ball of thread. The line would materialize the hero's trail on his journey through the labyrinth running as a method to note space and allowed Theseus to retrace his movements through space and find his way through the labyrinth.

The trail, not only in the case of Theseus but also in the case of mobile media can be understood as an interface to access space and time, as we can observe in the project Amsterdam Real Time (2002)<sup>3</sup>. In October and November 2002, the artist Esther Polak, in collaboration with Jeroen Kee and Waag Society<sup>4</sup>, carried out the Amsterdam RealTime project (Fig. 1) in the context of a cartographic exhibition in the Amsterdam Municipal Archive in which a presentation of a selection of Amsterdam's city maps<sup>5</sup>.



**Fig. 1:** . Amsterdam Real Time. Source: Wikimedia. Available at: [https://commons.wikimedia.org/wiki/File:Esther\\_Polak\\_RealTime\\_Amsterdam\\_Museum\\_04.jpg](https://commons.wikimedia.org/wiki/File:Esther_Polak_RealTime_Amsterdam_Museum_04.jpg). [Accessed in 01 Dez. 2017].

The project consisted of installation and mapping of the city of Amsterdam made by the participants who were invited through flyers and website, for two months (in 2002) to carry equipment portable with GPS, and tracing their daily routines through the streets of Amsterdam.

The application form for the project requested a considerable amount of biographical (and geographical) information. Presumably, the intention was to ensure a range of participants with different patterns of movement in the city. The portable device was developed by the Waag Society<sup>6</sup>.

According to Polak (2011, s.p. our translation), every inhabitant of Amsterdam has a map of the city in his head. This mental map<sup>7</sup> (Franco, 2012). determines the way each one moves around the city and the choices made in this process. Through this premise, Amsterdam Realtime sought to visualize these mental maps by mapping the trajectory of the inhabitants of the city.

Gordon and Silva (2011, p. 45) argue that the maps in these pieces did not precede the work. Instead, they were built through input from participants and their experiences of physical space. As a result, they could be transformers of user experiences of urban space. By eliminating the urban road network or base map, Amsterdam Realtime shows the routes (previous and in real time) suggesting an organic system to represent the patterns of use that change in real time. When viewing this data against a black background, dots, dashes, and lines appear. From these lines, a map of Amsterdam emerges.

The daily routines of these citizens revealed a new map. All of the individual entries, when put together, gave a realistic map of mobility within Amsterdam. Around the notion of navigation is concentrated the process of walking a route, emphasizing memory and experience. Each participant constructed a personal version of the city with his trait: as a birthday present, a mother wrote her son's name in giant letters on the streets of the city around places that were significant to him. Someone used the pattern of the streets of Amsterdam to draw on foot, bicycle and boat, a pigeon (Hopman, 2005, p. 54).

Amsterdam RealTime (conducted in 2002) anticipated a characteristic, now familiar to users, of mobile media: the convergence of time and space. Location-aware mapping technologies allow you to view the user's position on the map surface (usually in the form of a colored dot). As the user moves, the marking runs with it. This seemingly trivial moment brings something extraordinary: as far as we look, it is the first time that the representation of space occurs "at the same time" as that of time.

#### 4 Final Considerations

The practices of mapping in mobile media allow mapping entities, collectives, places and make visible relationships and expose the logistics and relations hitherto hidden or ignored. Tuters (2012, p. 11) proposes to rethink the locative media less like technology and more like a metaphor in which the locality couple with objects, entities, and actors network. Thus, we suggest that mobile media offers a conceptual framework by which technological assemblages and their potential social impacts can be examined.

Mobile media allow us to create bridges that interweave materiality and immateriality, simultaneously being experiences of the cyberspace and the tangible world operating in our construction of reality. In this way, contemporary spatialities allow the creation of collective memory from the notion of a system of relations, processes, connections, and multiplicities in a process that occurs at the confluence of flows in the process of interaction and connectivity between virtual spaces, telematic spaces and the tangible world of the city.

Navigational maps as a mapping of relations and configurations which, in this case, are not a priori context, but a performativity effect. These maps do not function only as an orientation tool, but also as an inhabited map that is composed of the interrelationships between actants, associations, objects, people. Maps of moving in time.

#### References

Bambozzi, L. *et al.* Mediações, tecnologia, espaço público: panorama crítico da arte em mídias móveis. São Paulo: Conrad, 2010.

Baudrillard, J. *Simulacra and simulation*. Ann Arbor: University of Michigan Press, 1994.

Beiguelman, G. Arte pós-virtual: Criação e agenciamento na era da internet das Coisas e da próxima natureza. In: PESSOA, F. (Ed.). *Cyber-Arte-Cultura*. Vitória/Rio de Janeiro: Museu Vale ES/ Suzy Muniz Produções, v.8, p.146 -175, 2013.

Cairncross, F. *The Death of distance: how the communications revolution will change our lives*. Boston: Harvard Business School Press, 1997.

Dourish, P. *Embodied interaction: Exploring the foundations of a new approach to HCI*. 1999. Available at: <http://www.dourish.com/embodied/embodied99.pdf>. [Accessed: 01 fev. 2017].

Castells, M. *A sociedade em rede*. São Paulo: Paz e Terra, 1999.

Drucker, J. Humanities approaches to interface theory. *Culture Machine*, v. 12, n. 0, 2011. Available at: <http://www.culturemachine.net/index.php/cm/article/viewArticle/434>. [Accessed: 01 fev. 2017].

Engel, A. Flickering cities multimedia city fabrics and the changing nature of citizenship. 2012. Available at: [http://digitalcommons.wayne.edu/cgi/viewcontent.cgi?article=1537&context=oa\\_dissertations](http://digitalcommons.wayne.edu/cgi/viewcontent.cgi?article=1537&context=oa_dissertations). [Accessed: 01 dez. 2017].

Franco, J. R. Cartografías subversivas e geopoéticas. *Geografares*, n. 12, p. 114 - 137, 2012.

Franco, J. R. A "virada espacial" e a semiótica: uma proposta alternativa ao pensamento binário. *LÍBERO*. n. 36, p. 65 - 76, 2016.

Garcia, E. D. El Mito de Teseo en la literatura. *Archivum Ovetensis*, XXXIII. Revista de la Facultad de Filología de la Universidad de Oviedo; 1983. Available at: [http://dialnet.unirioja.es/servlet/fichero\\_articulo?codigo=144016](http://dialnet.unirioja.es/servlet/fichero_articulo?codigo=144016). [Accessed: 01 abr. 2018].

Gordon, E.; Silva, A. S. *Net Locality: why location matters in a networked world*. Malden: Wiley-Blackwell, 2011.

Graham, S. The end of geography or the explosion of place? conceptualizing space, place and information technology. *Progress in Human Geography*, v. 22, n. 2, p. 165-185, 1998.

Harvey, D. *Condição pós-moderna*. São Paulo: Edições Loyola, 2001.

Hopman, A. Amsterdam Real Time. In: Brouwer, J.; Mulder, A., *et al* (Ed.). *Art & D: Research and development in art*. Rotterdam: V2\_Publishing/NAI Publishers, 2005. p. 48 - 58.

Lemos, A. Post—mass media functions, locative media, and informational territories: New ways of thinking about territory, place, and mobility in contemporary society. *Space and Culture*, v. 13, n. 4, p. 403 - 420, 2010.

Maia, R. Identidades coletivas: negociando novos sentidos, politizando as diferenças". In: *Contracampo: revista do Mestrado em Comunicação, Imagem e Informação*. Niterói: Instituto de Arte e Comunicação Social, 2000.

Meyrowitz, J. *No sense of place: The impact of electronic media on social behavior*. New York: Oxford University Press New York, 1985.

Mumford, L. *The City in History. Its Origins, Its Transformations, and Its Prospects*, New York, Harcourt, Brace & World, 1961.

Negropont, N. *Being digital*. New York: Knopf, 1995.

O'Brien, R. *Global financial integration: the end of geography*. New York: Council on Foreign Relations Press, 1992.

Polak, E. Reflexões sobre o processo criativo de Amsterdam realtime. Correspondência via e-mail Amsterdam, 12 de novembro de 2002. Available at: <http://www.beelddiktee.nl/tekst/>. [Accessed: 01 dez. 2017].

Rossi, A. *The architecture of the city*. Cambridge: MIT Press, 1982.

Russell, B. *Headmap manifesto*. 1999.

Santaella, L. *Linguagens líquidas na era da modernidade*. São Paulo: Paulus, 2007.

\_\_\_\_\_. A Estética política das mídias locativas. *Nômadias*, v. 28, p. 128-137, 2008.

Santos, M. S. Sobre a autonomia das novas identidades coletivas: Alguns problemas teóricos. *Revista Brasileira de Ciências Sociais*, v. 13, n. 38, 1998. Available at: <http://dx.doi.org/10.1590/S0102-69091998000300010>. [Accessed: 01 mar. 2015].

Silveira, L. F. B. Na origem está o signo. *Trans/Form/Ação*, v. 14, p. 45 - 52, 1991.

Silva, A. S. Hybrid reality and location-based gaming: redefining mobility and game spaces in urban environments. *Simulation & Gaming*, v. 40, n. 3, p. 404 - 424, 2009.

Tuters, M. The locative commons: situating location-based media in urban public space. *Electronic Proceedings of the 2004 Futuresonic Conference*, 2004. Available at: [http://www.itu.dk/people/amie/Digital\\_%E6stetik/Befri\\_kunsten/Litteratur/The\\_locative\\_commons.pdf](http://www.itu.dk/people/amie/Digital_%E6stetik/Befri_kunsten/Litteratur/The_locative_commons.pdf). [Accessed: 01 fev. 2017].

\_\_\_\_\_. From Control Society to Parliament of Things: designing Object Relations with an Internet of Things, 2009. Available at: <http://escholarship.org/uc/item/3zj2t89z>. [Accessed: 01 fev. 2017].

Vieira, J. Semiosfera e o conceito de Umwelt. In MACHADO, I. (Ed.). *Semiótica da cultura e semiosfera*. São Paulo: Annablume/Fapesp, 2007. p. 99 -112.

Wilson, S. *Information arts: intersections of art, science, and technology*. Cambridge: MIT Press, 2002.

Weiser, M. The computer for the 21st century. *Scientific american*, v. 265, n. 3, p. 94 - 104, 1991.

---

**1** Available at: <http://research.urbantapestries.net>. [Accessed in 01 dez. 2017].

**2** In partnership with the institutions London School of Economics, Birkbeck College, Orange, HP Research labs, France Telecom R & D UK, Ordnance Survey.

**3** Available at: <http://realtime.waag.org>. [Accessed in 01 fev. 2017].

**4** The Waag Society is a media culture and technology lab. Several members of the Waag Society, in particular Marleen Stikker, Tom Demeyer and Aske Hopman, were involved in the development of the project. Their combined backgrounds and experience are illustrative of the laboratory's general orientation, which covers sociology, political science, theater and computer science, and audiovisual and multimedia technology.

**5** Exhibition *Maps of Amsterdam 1866-2000*, Amsterdam City Archives, 03 October to 01 December 2002.

**6** For more technical details, see Hopman (2005, p. 54).

**7** Polak's reflections on the creative process of Amsterdam Realtime were recorded in an email sent to friends by Polak in early 2002. An English translation of the text of this e-mail. Available in: <http://www.beelddiktee.nl/tekst/> [Accessed 01 dez. 2013].