



## **Towards the metaphorical transformation of urban space: Digital Art and the City after Web 2.0**

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To cite this article: Barranha, Helena; Pereira, Raquel; Ribeiro, António Pinto (2015) "Towards the metaphorical transformation of urban space: digital art and the city after the Web 2.0". Paper presented at the *1st International Symposium Global Cities and Cosmopolitan Dreams*, organised by the International Network for Alternative Academia, Barcelona, 18-20 May 2015.

### **Abstract**

The digital revolution has often been associated with the blurring of geographical boundaries, as it has led to new forms of territorial recognition and (un)differentiation. As physical distances have vanished, barriers have become more ambiguous and increasingly conditioned by the subjective experience of digital reconfigurations of actual and fictional places. At the same time, urban spaces have also been virtually transferred to the screen, creating a permanent tension between real and virtual, and challenging the traditional notions of place, movement and time.

In a world that is perceived and experienced through technology, the conceptualisation and experience of the city are definitely conditioned by digital mediation. Moreover, after the appearance of Web 2.0, geographical representations of cities were redefined by electronic connections, thus paving the way for new networked cartographies, parallel to, but not necessarily dependent on, their material reality. This metaphorical transformation of the physical space into images and information, permanently (ex)changed and updated on the Internet, eventually led to its

dematerialisation, promoting an unsteady dialectics between tangible and subjective dimensions. According to these new geographical and architectural paradigms, places tend to lose their former tangibility and are therefore re-codified within the immateriality of cyberspace.

However, quite surprisingly, while some frontiers are tending to disappear, new ones are also being created. In fact, the emergence of new digital (or digitised) territories with particular access protocols and specific cartographies has generated new forms of social and cultural exclusion, based on digital literacies, as well as on the availability of technological resources. Furthermore, the generalised and radical adoption of the English language as the “lingua franca” for these virtual urban spaces has introduced a new global mapping system, which globalises and standardises place naming, limiting the conceptualisation and the diversity of those promising digital places.

Several questions arise in relation to these processes: How is the individual perception and use of urban space being transformed? Who is experiencing this transformation? To what extent are digital technologies and social media changing the relationship between public and private spaces? How are individual and collective roles adapting to new models of urban experience and representation?

This article seeks not only to explore the city space (re)created through technological mapping, but also to discuss the boundaries of the uncertain. Focusing on Digital and Post-Digital Art, this paper discusses how contemporary artists have proposed alternative systems for the representation of urban spaces. While Bouchra Khalili explores the relevance of mapping and mapmaking, Charles Broskoski and Aram Bartholl seek to understand the real-virtual ubiquity into which we are increasingly immersed, and Mark Beasley investigates the “geopoetics” of this new urban geography. In this cosmopolitan context, the work of Hito Steyerl also appears as a fundamental reference for investigating how virtuality has changed the notions of privacy, public exhibition, surveillance and loneliness amongst the hyper-connected crowds.

**Key words:** contemporary city; network cultures; digital art; virtual urban spaces; dominance and rebellion.

## 1. Introduction

Contemporary culture is intrinsically associated with the conceptualisation of the city, in its multiple possibilities: from political materialisations to revolutionary outbreaks, from the ostentation of economic prosperity to massive poverty, from technological achievements to ground-breaking artistic experiments. As part of individual and collective imagery, the city reflects (as much as it projects) the way that people define themselves in relation to time and place. As Henri Lefebvre pointed out, urban space constitutes a “physical and social landscape which is imbued with meaning in everyday place-bound social practices and emerges through processes that operate over varying spatial and temporal scales” (Saar & Palang, 2009: 6). In fact, the urban space functions as a referential system, guiding us through its constant and defining presence: a political, social and cultural arena whose architectural and iconographic constructions have, over the centuries, been used alternately to affirm power and authority, or to express the goals of anti-regime movements.

This permanent tension between order and rebellion, stability and change, which is absolutely vital for configuring the city as a privileged setting for diversity and updating, has been reshaped over the

last decades through technological developments that have subverted our traditional notions of space and place. The evolution of computer-simulated environments (namely virtual and augmented reality) has altered behaviours by allowing people “[...] to feel they are within the system, rather than outside it [...]. Users find themselves among the images, moving things around, experiencing an immersive, all-round involvement; they are placed at the very centre of things” (Baker, 1993: 151). At the same time, with the advent of the Internet, and then with the appearance of Web 2.0, the social media, and the worldwide diffusion of mobile phones and mobile apps, a universal system of interconnected networks now links countless devices, promoting the abolition of physical distances and geographical boundaries, which has led to a certain territorial undifferentiation. As Saskia Sassen envisaged in the Internet’s early days, “one outcome of these transformations has been captured in images of geographic dispersal at the global scale and the neutralization of place and distance through telematics in a growing number of economic activities [...]” (Sassen, 1997: 230).

After the shift “[...] from the machine city of modernism to the informational city of postmodernism [...]” (Boyer, 1995: 230), the individual experience of urban space is now definitively conditioned by digital mediation. Nevertheless, the generalised virtual ubiquity that characterises 21st-century culture gives rise to a new set of problems, in terms of the complex network of territorial identities. As Manuel Castells put it, “What happens when time disintegrates and space is globalised?” (Castells, 2001).

## **2. Mapping and picturing the contemporary city**

The virtual mobility made possible by communications technologies established new social patterns and urban dynamics, which have transformed our pre-existing relationships with geographical spaces. Over the last two decades, hybridity has become the keynote in our experience of the city, now mediated through a parallel virtual and digital realm. Non-linear forms of mapping, picturing and perceiving the territory have altered not only the mapping process, but also our concept of the map itself, thus creating new cartographies and redefining territorial recognition. Baudrillard’s vision of map and territory was particularly insightful in problematising this question as early as the 1980s: “Today abstraction is no longer that of the map, the double, the mirror or the concept. Simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without origin or reality: a hyperreal. The territory no longer precedes the map, nor survives it. It is nevertheless the map that precedes the territory – *precession of simulacra* – it is the map that engenders the territory [...]. It is the real, and not the map, whose vestiges persist here and there, in the deserts which are no longer those of the Empire, but ours.” (Baudrillard, 1983: 1).

However, according to Eric Gordon, “Baudrillard’s contention that the ‘map precedes the territory’ is indicative of a view of cyberspace or virtual reality that was contained and separate from lived experience. But with the introduction of Web 2.0 technologies, this began to change” (Gordon, 2007: 885). In effect, the so-called post-Internet culture is marked by a gradual merging together of material and virtual dimensions that extends far beyond the debate about information and communications technologies; post-Internet “is a moment, a condition, a property, and a quality that encompasses and transcends new media” (Olson, 2011: 63).

In this context, maps have become increasingly mobile and interactive. Mapping resources and tools are nowadays all-pervasive and easily accessible. The whole world is being thoroughly mapped as Google depicts each place in greater and greater detail and, paradoxically, compresses these representations into the scale of a mobile phone. You can get anywhere without knowing exactly how (Zerbarini et al., 2015: 114), just by travelling through a parallel version of the streets in which you actually move. Moreover, the mechanisms that facilitate navigation across the city also suggest new paradigms regarding the appropriation of urban space, since, instead of a passive approach to maps, they invite users to interact and customise cartographies according to their motivations. In this respect, Abrams and Hall observe that “mapping has emerged in the information age as a means to make the complex accessible, the hidden visible, the unmappable mappable. As we struggle to steer through the torrent of data unleashed by the Internet, and to situate ourselves in a world in which commerce and community have been redefined in terms of networks, mapping has become a way of making sense of things” (Abrams and Hall, 2006: 12).

Geographical representations of cities are redefined by electronic connections, as spaces are virtually transferred to the screen, dematerialised and re-codified within the immateriality of cyberspace. The situation becomes even more complex when we realise that, along with the new networked cartographies of actual locations, there are alternative fictional maps, created in virtual environments and not necessarily dependent on material reality. In fact, current social media and mobile apps insistently seek to geo-reference their actors and subjects. This leads to the idea of locative media which stimulate a permanent dialectics between tangible and subjective dimensions, contributing to the production of ambivalent maps of reality. Aram Bartholl’s *Map* (2006-2013), a public installation which re-contextualises the Google Maps red marker, clearly addresses this contamination. The artist created a similar graphic icon, on a larger scale, and installed it in several locations, questioning how the Google Maps interface can actually interfere with our perception of urban spaces.



Aram Bartholl, *Map* (2006-2010), screenshot. Available from: <http://datenform.de/mapeng.html>.

In spite of the democratisation of contents, supposedly facilitated by these new systems of geo-referencing, new forms of political and economic control establish (confirming what history has repeatedly demonstrated) that those who own the map own the territory. At the same time, these challenges provide fertile ground for contemporary artists, who often explore digital cartography as a critical or poetic subject-matter and, in doing so, also question the powers behind the information systems.

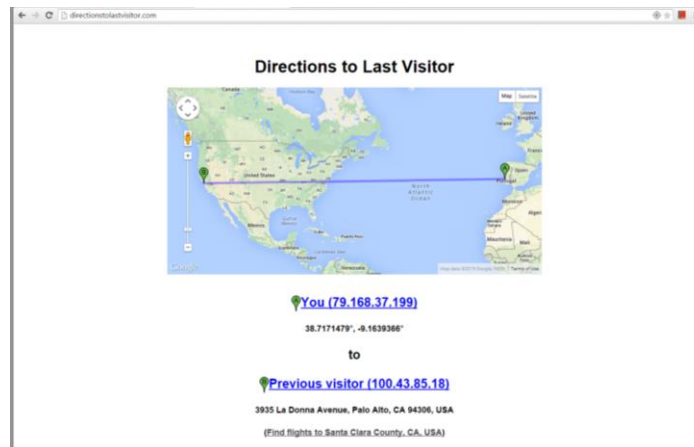
In his work *Text-Map (Map my Submissions)*<sup>2</sup> (2007), Mark Beasley cracked into the Google Maps API in order to manipulate the Google search algorithm. The artist picks the words with which each user searches through the Google Search Engine to create a text in a poem format. *Text-map* can also be an alternative way to navigate through the map based on the IP address, as it can focus the queries about your location, allowing you to textually explore the area you live in. Another example is *GEO GOO*<sup>3</sup> (2008), by the Dutch/Belgium artistic duo JODI, which bends the Google Maps and Google Earth interface, hacking the different views that are now shown in a chaotically altered fashion, playing with geography and territory by mixing references and icons.



JODI, *GEO GOO* (2008), screenshot.

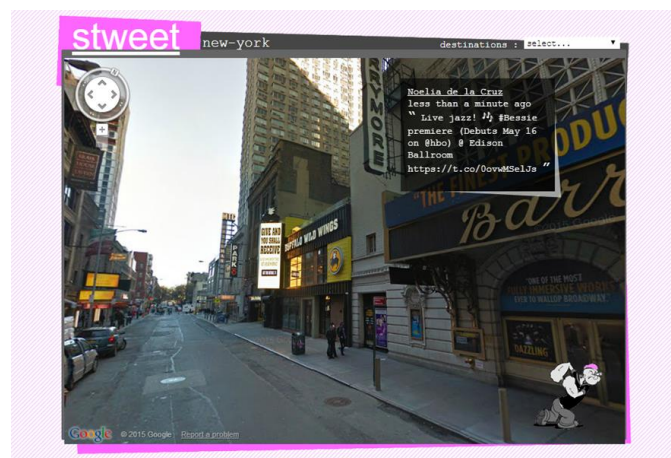
Available from: <http://www.wordsinspace.net/media-materiality/2012-spring/?p=1091>.

Interestingly, even purely web-based artworks very often have connections with physical contexts. Charles Broskoski's *Directions to Last Visitor*<sup>4</sup> (2011-) is an ongoing project that reveals the ease with which websites can, and do, geographically locate users through their IP address. The website incorporates this information and the Google Maps API to provide users with driving directions to locate the last person who has visited the website, exposing not only the privacy problems we face when using the Internet, but also showing that there is always a physical place behind all the users.



Charles Broskoski, *Directions to Last Visitor* (2011 – Ongoing), screenshot.  
Available from: <http://directionstolastvisitor.com/>

Albertine Meunier's *Stweet*<sup>5</sup> (2010) is a website that gathers the "tweets" that are sent daily from forty cities all over the world. Assuming the dichotomy of physical/virtual, the project displays the exact location of each "tweet" on Google Maps, including several views of the street from which the message was sent.



Albertine Meunier, *Stweet* (2010) screenshot. Available from: <http://www.we-love-the.net/Stweet/>

These experiences around territorial representation lead us to another question: are the new online cosmopolitan spaces based on the image of actual urban places, or are they preferably built upon virtual reconfigurations of urban fictions?

### **3. New forms of urban segregation – the digital divide**

Surprisingly, while some frontiers are tending to disappear, new ones are also being created in this globalised world. In fact, the emergence of new digital (or digitised) territories with particular access protocols and specific cartographies has generated new forms of social and cultural exclusion, based on digital literacies, as well as on the availability of technological resources. International circuits reinforce inequalities, creating a violent and contradictory interaction between centre/periphery and local/global, which dramatically contributes to the phenomenon of illegal immigration. At the same time, the apparent fluidity in the circulation of products and ideas does not obliterate relations of power, but rather establishes a new geography of economic domination that overlaps national territories (Bulhões, 2011). Furthermore, and as part of the agenda of the global economy, the generalised and radical adoption of the English language as the “lingua franca” also emphasises the hegemony of western standards and references. Therefore, the conceptualisation of contemporary cities is transformed by a new mapping framework that globalises and standardises place naming, limiting the diversity in digital representations of urban spaces and, more importantly, restricting cosmopolitan dreams. If, on the hand, these changes in the representation of cities have appeared as a result of digital production, on the other hand, the digital media also modify social and artistic behaviours, thus introducing new cultural patterns.

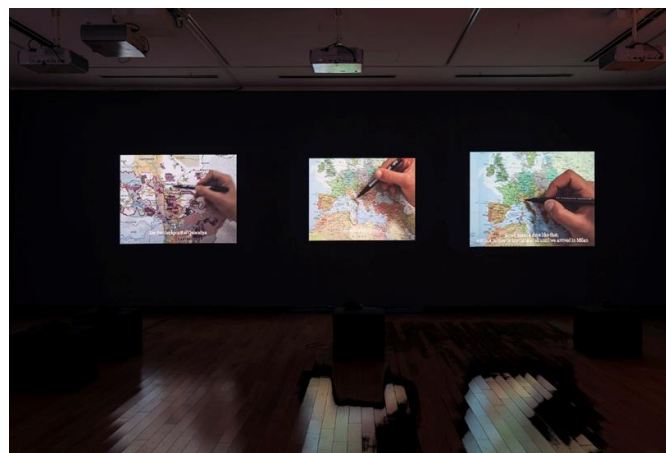
The mutation of paradigms in both artistic production and reception, at first activated online and then later involving the creation of Internet Art, should also be analysed through the assumptions of surveillance and control devices. Therefore, we adopt Michel Foucault’s conception of the device, in his book *Histoire de la sexualité I - La Volonté de savoir* (1976), in which he exposes this instrument of power to explain how a varied and heterogeneous set of discourses, institutions, regulations, urban plans, administrative structures and scientific statements or philanthropic intentions can condition and determine the said and the (underlying) unsaid; all of this constitutes the device (Foucault, 1994: 88-89). Complex in its structure and functioning, the device, in this particular case, is a colonising device, which exercises some form of power that conditions perception and representation and simultaneously exercises power by denying an externality.

A more recent approach to the concept of the device, adopted by Agamben (2009), updates it in the light of the newest technology and its relationship with politics. In brief, for this Italian philosopher,

the device that conditions, represses and also watches is now made of both physical and virtual engines, immediately confirming that the very creation of the device “appears at the intersection of power relations and relations of knowledge” (Agamben, 2009: 29). The traditional devices, quoted by Foucault, are some examples of this intersection, and so are all writing control mechanisms, such as the various software programmes and the hardware on which they run, from laptops to Web 2.0.

In this summary, we could adopt a catastrophic vision, in which all human activity would be subject to domination by the devices, and where these would be nothing more than the assumption of a teleology of short-term human finiteness. However, recent examples of rebellion and resistance to this form of control and surveillance allow us to think that, within a network that combines technology and politics, it is possible, in successive episodes but with some continuity, to escape the aforementioned teleological condemnation. Here are three brief examples. The first one refers to the continued production of short documentary films during the demonstrations of the Arab Spring. These films, made with simple hardware but sophisticated software, built up a network of political documentarism that had the ability to document events in real time. They were produced using a “cinéma vérité” process, with events being captured live, and with live streaming online<sup>6</sup>.

Bouchra Khalili is a French-Moroccan artist, who began as a photographer, but soon moved into video and animation. In her politically committed works, she explores the importance of mapping performed by the protagonists of the south-north migration. The series *Mapping Journey Project* comprises a set of maps of Africa and Europe upon which the artist develops a work of animation, using drawing to create a narrative on the intricate and complex routes that immigrants from North Africa have to follow in order to reach European countries.



Bouchra Khalili, *The Mapping Journey Project* (2008-2011), Video Installation - 8 single channels. Screenshot. Available from: <http://journal.ica.org.uk/journal-artists/bouchra-khalili/mapping-journey-project-others>.



The short films include the voices of the protagonists of these journeys and are shown in digital format, as installations, or in webcast networks of political activism. In conclusion, the realm of possibilities for escaping from the control devices has two requirements: mastery of the device technology, and a denial of a teleology in which the primacy of the relationship between technology and politics is replaced by the primacy of radical subjectivity, namely the one produced by the artists themselves (Khalili, 2015)<sup>7</sup>.

#### 4. Conclusion: Internet Art and the metaphorical transformation of urban space

In the metaphorical transformation of urban territories, digital technologies and social media are also changing the notions of public and private spaces as networks, being potentially disruptive of existing social hierarchies, and providing alternative systems for the organisation of people, places and things (Gordon, 2007). Although the Internet is an intangible place, it might as well be understood as a real space where life is lived according to the rhythm and the desire of its actors. To a certain extent, it is actually a public space in which human interaction does not rely on physical presence and yet, like reality itself, the Internet also makes it possible for individuals to meet and exchange ideas, goods or information. Moreover, with the mass use of social media like Twitter or Facebook, personal information is quickly and globally disseminated, with inevitable consequences in terms of privacy and anonymity.

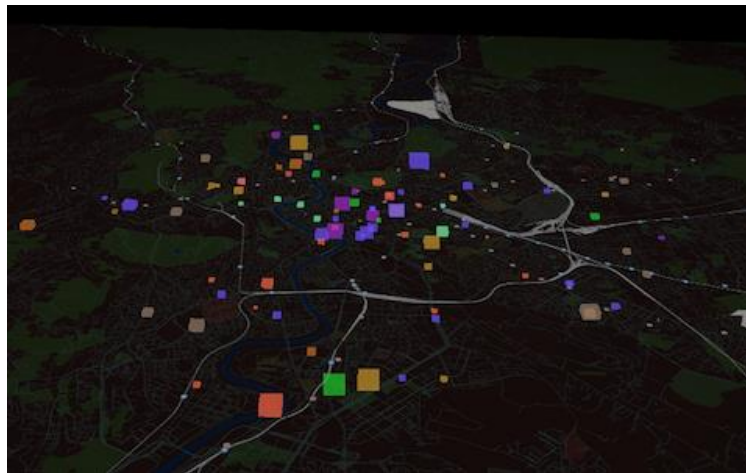
In *How not to be seen: A Fucking Didactic Educational.MOV File* (2013), Hito Steyerl addresses the problem of individual exposure to global information mechanisms, evoking the spectre of mass political dominance.



Hito Steyerl, *How not to be seen: A Fucking Didactic Educational.MOV File* (2013), screenshot. Available from: <http://rhizome.org/editorial/2013/may/31/hito-steyerl-how-not-to-be-seen/>.

As Michael Connor notes: “Steyerl's video makes explicit reference to this dark side of disappearance, suggesting that those who are disappeared in the digital age end up as 3D ghosts in the background of architectural renderings. Such renderings are often generated by those who wield political power; it seems apt that they would be haunted by such ghosts”(Connor, 2013).

According to the Brazilian artist Giselle Beiguelman, we are living in a post-virtual context<sup>8</sup>, as networks have become definitively omnipresent in contemporary society. The artistic network Art is Open Source has also been exploring the virtual/material dichotomy in projects such as *Human Ecosystems*<sup>9</sup>, which aim to investigate the ubiquitous urban spaces that emerge from social media, creating an interactive experience which questions what being part of the city means, and how the enormous amount of public information that people generate during their daily lives can be transposed onto a city map.



Art is Open Source, *Human Ecosystems*, screenshot. Available from: <http://www.artisopensource.net/projects/human-ecosystems.html>

In fact, physical places seem to be redesigned through multiple virtual layers of images and information, supported by overwhelming communications systems. As Lefebvre anticipated, “We are confronted not by one social space but by many – indeed, by an unlimited multiplicity or uncountable set of social spaces [...]. No space disappears in the course of growth and development: the worldwide does not abolish the local” (Lefebvre, 1991: 86).

As we tend to simultaneously occupy material and virtual sites, our experience of urban spaces becomes increasingly hybrid and ambivalent. While, on the one hand, this scenario opens up entirely new possibilities for the projection of individual aspirations and fictions, on the other hand, it can also produce a sense of undifferentiation, alienation and loss. Furthermore, the promise of a more democratic access to cosmopolitan dreams, through Web 3.0, soon proved to be confined by global

economic and political organisations that control the maps of these virtual territories. As a result, the true transformation of the contemporary urban space is mainly to be found in the subjective territory that lies between the real city and its virtual reconfigurations; in this “everyone’s land”, where, despite all the control devices, individual or collective metaphors can still find some opportunity to freely express and interconnect.

## Notes

1. The unplace project is promoted by Instituto Superior Técnico, Universidade de Lisboa, in cooperation with Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa, and the Gulbenkian Next Future Programme. It is funded by Fundação para a Ciência e a Tecnologia, through the State Budget. Ref. EXPL/CPC-EAT/1175/2013.
2. Available from: <http://mark-beasley.com/text-map-map-my-submissions/> [Accessed on 27 April 2015].
3. Available from: <http://www.wordsinspace.net/media-materiality/2012-spring/?p=1091> [Accessed on 27 April 2015].
4. Available from: <http://directionstolastvisitor.com/> [Accessed on 25 April 2015].
5. Available from: <http://www.we-love-the.net/Stweet/> [Accessed on 27 April 2015].
6. See <https://www.youtube.com/watch?v=dBtYLBQPRGQ>. [Accessed on 27 April 2015].
7. For more information, see <http://www.galeriepolaris.com/artistes.php?id=60>. [Accessed on 29 April 2015].
8. Interview with Giselle Beiguelman under the framework of the unplace project, 2015.
9. See <http://www.artisopensource.net/projects/human-ecosystems.html>. [Accessed on 29 April 2015].

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