

Between technological precision and artistic ambiguity in Locative Art.

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Abstract

This paper discusses how ambiguity can mean a virtue rather than a problem in Locative Art domain. Pervasive media, which has the clinical precision as one of its key features, can reduce the understanding of location to a pure residue of a Cartesian coordinate system. The author argues that ambiguity, when applied to good effect in artworks supported by such monitoring systems, can encourage new mapping metaphors, which gives less emphasis to the point-to-point correspondence of the digital tracking. To orient the discussion, this paper focuses on *Chronica Mobilis* example. The qualitative analysis of this experimental artwork describes how it generates a dialogue between the determinism of geospatial technologies and the freedom of participants' creative and performative actions.

Keywords

locative art, participatory cartography, neocartesianism, politics of mapmaking, situationism, mobile media, embodied interaction, navigation, urban space, ambiguity.

Introduction

In the turning of the millennium, the artistic domain celebrated the developments in digital and satellite mapping as “the next big thing” for delivering aesthetic and cultural experiences within urban spaces (Tuters & Varnelis, 2006). The technological innovation, claimed to have the ability to generate highly accurate representations of our physical surroundings, supported a diverse scope of projects anchored in the use of location and spatial positioning data. The urban space turns into an artistic territory for approaching location through different mapping practices. Artists explored the context-aware capabilities of the technology to associate personalized information to specific contexts, to interweave the physical and the virtual domains, the urban and the electronic flows¹.

The current integration of context-aware technologies in

¹ *Blast Theory* is one of the precursors in this field with with location-based projects such as *Can You See Me Now?* (2001) and *I Like Frank* (2004), both devoted to investigate the interface, the properties and the boundaries that separate an electronic and a physical space.

mobile devices amplified the possibilities of such artistic practices enabled by locative media. The widespread of mobile personal computers also contributed to the increase of monitoring practices. While pervasive media became part of a consumer desired technology of the 21st century, surveillance turned into a real threat to the individual privacy rights, with users' activities and personal information concentrated on the hands of few corporations. Addressing critic questions regarding the meaning of locating and be located in the current days became a crucial matter to artists working with locative media (Pinder, 2013). Rather than cartographic precision, one of the potential opportunities opened up by context-aware technologies is the possibility to express location outside of standardized forms, what includes to play with new forms of presence in contemporary digital cities.

This paper has a focus on the experiences inserted in the realm of public art, in which location appears as an aesthetic element. How can artworks approach the clinical accuracy of a tracking media traditionally created and employed for military goals? Can we take ambiguity and uncertainty in interpret location and its sociocultural aspects as a potent resource in the artistic practice supported by the determinism of positioning technologies?

The answer to these questions can support the critical thinking about the role artists play in proposing particular experiences in public space through creative approaches to locative media. This paper anchors on the case study analysis of an experimental performance geolocated in the public space to evaluate such possibilities. *Chronica Mobilis*² is an artwork that approaches location through a self-mapping participatory practice enabled by locative media to create subjective articulations to perform and represent space.

Beyond a Technology-enabled Situationism

Situationism regularly appeared as a precursor of the cartographic practices adopted by Locative Art. If not a precursor of a Neocartesianism or a Technology-enabled

² <http://chronicamobilis.net>

Situationism, it is at least an inspiration for artists working with geospatial data. The aesthetic form of the *dérive*, for instance, became prominent among the artistic use of context-aware technologies.

The experimental *dérive* method appeared to attend the lack of influential maps able to change architecture and urbanism (Debord, 1958). Situationism, as a social movement in the context of the 1960s, had a critical politics behind its discourse. Situationists claimed the necessity not to precisely delineate stable continents, as done by old maps and aerial photographs. To the movement, the geographical or economic factors could only determine an area when articulated with the representation that its inhabitants have from themselves and that the others have from them. "From a *dérive* point of view cities have psychogeographical contours, with constant currents, fixed points, and vortexes that strongly discourage entry into or exit from certain zones" (Debord 1958, p. 1). Situationists generated psychogeographical maps to analyze this totality of everyday life by the adoption of a passive movement through space. In a 'mapping- while-wandering' without all the usual motives for action, the drifting strategy let the terrain and the attractions encountered on the way guide the exploratory journeys taken in public space.

Tuters & Varnelis (2006) correlates the mapping practices carried out by artists working with locative media to the twin techniques inaugurated by the French movement in the 1960s. Some annotative projects, in a *détournement*, annotate social, cultural, historical or political data in the landscape of the city. Other projects, moved by psychogeography or *dérive* tactics, take the technology to stimulate people to walk or occupy public spaces. Artists working with locative media share some of the spatial concerns that founded the Situationism ideas, as the re-appropriation of the city for active inhabitants (McGarrigle, 2010). Though operating in an exploratory form with the adoption of experimental methods of navigation in the cities, a significant period separates from now the context of the sixties in which Situationism gained prestige. At that time, the French movement represented a program of unitary urbanism devoted to subverting the functionalist grids of modernist city planning. This supposed neo-Situationism enabled by context-aware technologies also demand: "social subversion, psychic deconditioning, an aesthetics of dissident experience" (Holmes, 2004, p. 2).

The revolt against the bureaucratic rationalism translates today into the artistic adoption of satellite positioning technology to add a personalized sense of place to location. The first artists to creatively employ locative media wanted to combat the sense that our experience of place was disappearing in late capitalist society (Hemment, 2006).

They took art to the streets and suggested a re-embodiment of ourselves. As Southern (2016) analyses, "locative awareness" in the current mobilities paradigm of Social Science also includes the production of social connections in proximate and distant locations; the articulation of networks and databases in a flow of information; the creation of hybrid and multiple perspectives through experimental and social encounters.

Ambiguity as a response to a Neocartesianism

In *Ambiguity as a Resource for Design*, Gaver et al. (2003, p. 233) remember that "the everyday world itself is inherently ambiguous: most things in it have multiple possible meanings". Impelling people to interpret situations for themselves can be so an aesthetic opportunity. As the authors argue, in Human Computer Interaction research and development, usability and usefulness are twin goals, but ambiguity on the other hand is also a rich aesthetic and conceptual potential. It can support deeper and more personal relations with the meanings offered in an interactive system. Ambiguity can generate an experience that is "intriguing, mysterious, and delightful" (Gaver et al., 2003, p. 233). Moreover, it can provide the grounds for people of different sociocultural backgrounds to find their own interpretations from the interaction and information conveyed by the system (idem, p.233).

This paper discusses how the relevance of such possibilities present in the adoption of ambiguity as a resource can gain particular nuances when extended to the design of artworks supported by context-aware technologies. The mapping perspective of artistic projects with pervasive media received several criticisms precisely because they brought a Cartesian determinism revival after many decades of postmodern critique to it (Tuters & Varnelis 2006; Holmes, 2004). The mapping practices can turn into a pure residue of the coordinate system with a reductive understanding of spatiality, which risks to generate distance from physical and contextual embodiment (Hemment, 2004). It happens, for instance, when surveillance put an excessive and abstract emphasis on location instead of real engagement with people in the mapped area.

Deviate a communication technology designed to impose a rigid cartographic grid upon the world would involve an effort to make people engage not only in location but also in context. "Place-making practices", as defined by Cornelio & Ardevol (2011), contest urban cartographies and demonstrate particular relations with space by including meaningful and personal content to geographical maps. The creation of these "subjective cartographies"

emphasizes the contrast between abstract and lived space. To Southern (2016), “location awareness” in these days embraces:

the way that the world is experienced through the senses and in situated action; mobile awareness, experienced through movement; a relational awareness of place brought about by social and participatory interactions that are performed and through which location is enacted; an awareness of networks that are connected to presence in space and that extend that presence; an experimental awareness, the process through which actions test, explore, observe and critique in location; and an awareness of the multiplicity of perspectives that we inhabit. (Southern, 2016, p. 181)

Engaging on a political aesthetics in the current days would demand a perspective that also evidences the intrusive and totalitarian character of pervasive media. A “metaphoric critique of advancing ubiquity” to a technology that can mutually represent personal freedom and institutional control, as described by Rieser (2011), should include the possibility of creating a de-centered and subtle mapping. Extrapolating static descriptions is, to McCullough (2006), an imperative to include in the agenda of projects working with global positioning systems and a situated semantics. Though the street grid geographic representations provide the top-level orientation, the context of the monitored places is dynamic.

Ambiguity with contextual and aesthetic meaning can so work as a response to the urge to determine correspondence in Neocartesian artistic practice. A possible “locative dystopia”, as described by Hemment (2004), would respond by playing of distortion rather than reducing space to a set of geographic coordinates. Artists can use ambiguity in metaphors of mapping that put less emphasis on the point-to-point correspondence and more prominence to the disruption of a norm. An artistic experience that critically approaches the clinical precision of digital tracking “results not in a singular totalising view, but in multiplicity and the heterogeneity of the local, not in giving everything its proper place but in mobility, opening up rather than pinning down” (Hemment, 2004, p.2).

The error present in an unambiguously designation or assignment of location may introduce disturbance in the dominant logic of representation. It works in a contrary direction of the objectifying gaze of Cartography and a constrained understanding of spatiality. “Such forms of cultural production can create distortions or moments of ambiguity by which mechanisms of domination become both apparent and less certain” (Hemment, 2004, p.2). The creation of interpretative ambiguity is an aesthetic and conceptual potential. As Gaver et al. (2003) observe, “ambiguity is not a virtue in itself, nor should it be used as an excuse for poor design. Many ambiguous systems are merely confusing, frustrating, or meaningless” (Gaver et al.

2003). To them, however, the ambiguity of information can be applied to a good effect to encourage interpretative engagement and open up space for diverse possible interpretations.

Chronica Mobilis

Chronica Mobilis frames the shifts and consequences that an urban “renew” has been causing in the district of Poblenou, in the city of Barcelona. The project 22@Barcelona claims that it will transform “two hundred hectares of industrial land of Poblenou into an innovative district offering modern spaces for the strategic concentration of intensive knowledge-based activities. This initiative is also a project of urban refurbishment and a new model of city”³. Gentrification is the central conflict of a fictional narrative embedded in *Chronica Mobilis*, which is responsible for triggering a series of events in the performance. The narrative follows a network structure, like a spatialized database composed of twelve geolocated video scenes. Places in Poblenou neighbourhood function as locative nodes with this virtual fictional layer added to it. The videos simulate memories of that place through the eyes of a resident.

Those joining the artwork are invited to both: to explore that urban area to find such embedded story and to surveil an exploratory experience in that neighbourhood. The performance happens simultaneously inside an exhibition space and in the city streets⁴. On computers connected to the Internet, online participants monitor and guide the performance of other participants navigating in the cityscape labyrinth with mobile phones. The artistic practice generates multiple layers of meaning to represent the chosen territory, what contrasts the abstract but clinical mapping of locative media to the agency participants have to explore and report their experience of that place.

Psychogeographic practices to define Location

Chronica Mobilis explores the convergence of digital data and physical location using the geographical space as an extension of the performance. The project reinforces the relations between site, story, and participants by creating an embodied experience rooted in particular, lived and shared places and moments. Immersive and compelling experiences can result from such dialogue, making participants engage with the space mapped for the diegesis,

³ <http://www.22barcelona.com/>

⁴ *Chronica Mobilis* takes as reference works of the British group *Blast Theory*, in which they experiment with the possibilities of integration between physical and virtual spaces, as done in *Can You See Me Now* (2001) and *I Like Frank* (2004).

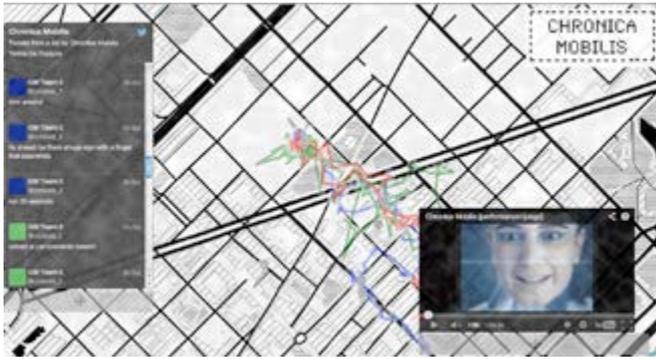


Figure 2: The layers of content in reference to location.

The performance dynamics requires participants to combine all the available layers of content to interpret location and to guide those in the streets in their search for the target places they have to visit. This guidance happens through text messages, in a one-side communication that must be precise because the system restricts the content to 140 characters. Whether the messages are short, they come in a high volume and refer to the exploration of Poblenu district.

Experimenting Uncertainty and Ambiguous Space

Chronica Mobilis adopts different tactics that emphasize uncertainty. Gaver et al. (2003) mention some these modes that artists can adopt to create ambiguity. They can use imprecise representations by exposing inconsistency between sources of information, can display information that is physically or conceptually blurred, or can even juxtapose incompatible elements requiring viewers to build their own meanings from what is displayed.

Chronica Mobilis integrate various and somehow ambiguous layers of data that describes and represents the physical space participants experience. Moreover, it emphasizes ambiguity by putting into question an expected geographical precision of locative media. The imprecision of GPS data creates uncertainty about whether the cartographic representation corresponds to the complexity present in the physical world. "From this point of view, ambiguity provides a frame of reference that allows the use of inaccurate sensors, inexact mappings, and low-resolution displays because it encourages users to supplement them with their own interpretations and beliefs" (Gaver et al. 2003, p. 240).

In *Chronica Mobilis*, the abstract image drawn on the map becomes figurative with the videos recorded by participants in the streets. As Gaver et al. (2003) analyses, practices that explore such possibilities can go beyond the limits of the technology supporting it to create an engaging and thought-provoking experience of location. Those engaged on these practices will see themselves questioning

the truth of an accurate system, even though the general view in Human-Computer Interaction is to consider it as an anathema (Gaver et al., 2003). Ambiguity can let a room for personal interpretations, which can vary according to different sociocultural backgrounds.



Figure 3: Online participants monitoring the others in the streets.

Immediately after the presentation of *Chronica Mobilis*, participants completed a questionnaire with open-ended questions that served as an essential mechanism to the understanding of their experience. Qualitative data gathered from the self-reporting answers give an idea about their interaction with the system, the content, and space.

Online participants evaluated their tracking activity as enjoyable, mainly because the performance dynamics demanded collaborative strategies in teamwork. On the system level, they described positively the infrastructure, the presentation based on the combination of multiple sources, and the use of geolocation data. They also mentioned the accessible nature of the media employed, or the "easy technology" as one of them described. As a negative aspect, the main complaint concerned the system level. Online participants complained about the delay and inconsistency of the tracking system, what also occurred because of the low bandwidth connection of the 3G networks. As they could not only trust on the tracking made by locative media to define position, they have to trust on the representation and self-report information sent by participants in the streets. They complained about the technology evidence how they judge and rely on the clinical precision of pervasive systems. Even though they did not mention a possible richness in the ambiguity created by the diverse layers of content, they evaluated their online experience of Poblenu as "motivating", "exciting", "intriguing".

Another relevant aspect identified on the questionnaires

is the manner participants in the streets evaluated their experience. They rated as positive the feeling of agency, what they understood as an opportunity to freely create their own story based on the exploration of Poblenu. Wrote one participant: "It felt like being a documentary, reporter creator [sic]". This participatory cartographic practice proposed by *Chronica Mobilis* comes as an empowering aspect of the mapping strategy, whose potential resides in participants agency to self-positioning themselves in location. What they share are spatial biographical narratives based on their exploration of Poblenu, a participatory process that enables participants to position and map the self (Sotelo-Castro, 2010, p. 593).

Among *Chronica Mobilis* participants, the sense of adventure in discovering the sites within the real city appeared as one of the recurrently referred aspects. Some mentioned how they felt responsible for the performance; others pointed to the amusing ludic dimension of exploring that place. In *Chronica Mobilis*, the gentrification signs in Poblenu neighbourhood appear on the representation made by participants, rather than on the abstract mapping made by locative media.

Conclusion

This paper discussed artistic practices that employ navigational technologies claimed to determine with clinical precision people's placing and dislocations. Though it represents a primary source to the proposal of more embodied interactions, a significant concern also arises from such surveillance. This paper identified that the monitoring process made by military technologies could represent an impasse when artists reduce the practice to a Neocartesianism discourse.

Chronica Mobilis goes beyond the relations between physical movements and its virtual screen-based representation on a rigid cartographic grid and its coordinate system. Instead of creating distance, the performance employs pervasive media to generate proximity with the local context. Connectivity and virtual interactions, in this case study, collaborate to a consistent engagement of people and place. The artwork invites participants to take a critical or reflexive incursion in the city. Converted into storytellers, they enunciate their experience of Poblenu neighbourhood. Ambiguity and inconsistencies between a technological and a self-mapping appear in *Chronica Mobilis* as a proposal to critically approach pervasive technologies' idea of clinical precision and greater power to reach and control location.

References

- Cornelio, G. S., & Ardévol, E. (2011). Practices of place-making through locative media artworks. *Communications*, 36(3), 313-333.
- Debord, G. (1958). Theory of the Derive', Internationale Situationist# 2. Knabb, Ken. *Situationist International Anthology*.
- Gaver, W. W., Beaver, J., & Benford, S. (2003, April). Ambiguity as a resource for design. *Proceedings of the SIGCHI conference on Human factors in computing systems*, 233-240.
- Hemment, D. (2006). Locative arts. *Leonardo*, 39(4), 348-355.
- Hemment, D. (2004). The locative dystopia. Retrieved from http://eprints.lancs.ac.uk/30831/1/Locative_Dystopia_2.pdf
- Holmes, B. (2004). Drifting through the grid: psychogeography and imperial infrastructure. Retrieved from http://www.springerlin.at/dyn/heft_text.php?textid=1523&lang=en
- Jenkins, H. (2004). Game design as narrative. *Computer*, 44, 53.
- McCullough, M. (2006). On Urban Markup: Frames Of Reference In Location Models For Participatory Urbanism. *Leonardo Electronic Almanac*, 14(3), 4.
- McGarrigle, C. (2010). The construction of locative situations: locative media and the Situationist International, recuperation or redux?. *Digital Creativity*, 21(1), 55-62.
- Murray, J. H. (1997). Hamlet of the Holodeck- The future of narrative in cyberspace.
- Pinder, D. (2013). Dis-locative arts: Mobile media and the politics of global positioning. *Continuum*, 27(4), 523-541.
- Southern, J. (2015). Locative awareness: a mobilities approach to locative art. *Leonardo Electronic Almanac*, 21(1), 178-191.
- Rieser, M. (2011). Beyond Mapping: New Strategies for Meaning in Locative Artworks. In Rieser, M. (Ed.), *The mobile audience: media art and mobile technologies*. Amsterdam-New York: Rodopi, pp.127-140.
- Sotelo-Castro, L. C. (2010). Participation cartography: blurring the boundaries of space, autobiography, and memory by means of performance. *Research in Drama Education: The Journal of Applied Theatre and Performance*, 15(4), 593-609.
- Tuters, M., & Varnelis, K. (2006). Beyond locative media: Giving shape to the internet of things. *Leonardo*, 39(4), 357-363.

Authors Biographies

Vanessa Santos is a digital media artist and researcher. She holds a Ph.D. in Social Communication (2017), from Pompeu Fabra University. Her expertise is in audiovisual production, digital storytelling, interactive systems, locative and mobile media. She has collaborated with research groups involved in the study of the following topics: technology inclusion, socio-tech networks, open source software for multimedia production, virtual and augmented reality based systems to experience complex data sets. The artist is interested in the creative use of technology and in the stimulus that it entails in the formulation of new narrative genres. In 2014, she integrated the research line on Locative Media of *Hangar Center for Visual Arts*. Her last work is "Chronica Mobilis", an interactive and geolocated performance with gameplay, which happens in a public space. Currently, she investigates the audience experience in response to different modes of engagement.