

Número 15 · Noviembre de 2017

# Doctoral Thesis Research: Designing Mobile Narratives - discursive strategies and participation modes in Locative Media Art

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## *Tesis doctoral: Narrativas Móviles – estrategias discursivas y modos de participación en el Arte Locativo*

### ABSTRACT RESUMEN

*This thesis investigates the design process of mobile-based narratives to verify whether the affordances and constraints of the supporting medium have contributed to shaping specific discursive strategies and particular participation modes. Have properties such as connectivity, location-awareness, portability and multimodality enabled narrative formats that gained force by contesting traditional patterns and classic narrativity notions?*

*The unveiling of the research inquiry happens through a bricolage of methods in a dialogue between artistic and scientific domains. The study of the phenomenon comprises three correlated stages. The first is a theoretical literature review that investigates the artistic use of locative and mobile media, and their influence in the basic principles governing narratives. The second is a case study of Blast Theory artistic practice grounded in an ethnographic approach with site-visit, and resulting in a qualitative analysis of four of their projects. The third moment consists of applied-theory activities that lead to the collaborative development of a geolocated narrative which serves to evaluate participant's experience*

Esta tesis explora el diseño de las narrativas basadas en los dispositivos móviles, dedicándose a comprobar si los recursos expresivos y las limitaciones del medio contribuyen a la formación de estrategias discursivas y modos de participación particulares y específicos. Propiedades tales como la conectividad, la geolocalización, la portabilidad y la multimodalidad han permitido la aparición de nuevos formatos narrativos que ganan fuerza disputando los patrones tradicionales y las nociones clásicas de la narratividad?

La revelación de la pregunta se da fruto la combinación de diferentes métodos, mediante un diálogo entre los ámbitos artístico y científico. El estudio del fenómeno comprende tres etapas. La primera es la revisión de la literatura teórica que investiga el uso artístico de los locative media, así como su influencia en los principios básicos que rigen las narrativas. La segunda es un estudio de caso de la práctica artística del colectivo Británico Blast Theory, basada en el abordaje etnográfico de una visita de campo y posterior análisis cualitativo de cuatro de sus obras. El estudio se extiende en un tercer lugar con actividades de teoría aplicada, incluyendo el desarrollo colaborativo de una narrativa geolocalizada que sirve para evaluar la experiencia de los participantes.

### KEYWORDS PALABRAS CLAVE

*Narratives, Locative Media, Interactivity, Games, Urban Space*

Narrativas, Medios locativos, Interactividad, Juegos, Espacio urbano

Santos, V (2017). Doctoral Thesis Research: Designing Mobile Narratives - discursive strategies and participation modes in Locative Media Art. *Hipertext.net*, n. 15, p. 74-83. DOI: 10.2436/20.8050.01.48

<https://dx.doi.org/10.2436/20.8050.01.48>



## 1. Object of Study

The era of pervasive computing predicted still in the 1980's by engineers and scientists (Weiser, 1991; 1993) converted from a futuristic fantasy to a ubiquitous phenomenon in the networked cities. Some notable changes in the communication process took place with the global and significant penetration<sup>1</sup> of portable, networked and location-aware media enabled by computing capabilities. Mobile and pervasive devices, which became a broader consumer desire serving from convenience to comfort, potentially allowed new forms of presence and agency when mediating the human interaction with the world.

The mediated realities lived in the current days, enabled by mobile and locative media, mark a significant contrast when compared to classic screen-based experiences. While the latter happens mostly in enclosed spaces and in front of fixed displays (Huhtamo, 2011), the former takes place in the urban environment augmented with digital data, where active participants physically navigate. The system "feels" the context and reacts to the customization of content generated according to individual choices or site-specific circumstances. Pervasive, these media implicitly collect physical information of individuals, tracking and monitoring them through individualized forms of control and surveillance (Abowd et. al, 2002).

This study poses an inquiry that springs from the observation of storytelling practices enabled by the creative use of such mobile and locative media<sup>2</sup>. These narrative formats, inserted in the realm of public art, use location as an aesthetic element, adopting the physical navigation as an interaction model. They convert the cities into a diegetic space<sup>3</sup>, to propose situated and embodied forms of experience. This thesis investigates the authoring process of mobile-based narratives to verify whether the affordances and constraints of the supporting medium have contributed to shaping specific discursive strategies and particular modes of engagement. What are the effects of mobile and locative media in the narrative realm? Have properties such as connectivity, location-awareness, portability, and multimodality enabled narrative formats that gained force by contesting traditional patterns and classic narrativity notions? What happens to the art of telling stories when it incorporates the principle of mobility? What are the differences regarding participants' experience, when comparing screen-based and these embodied forms of interaction?

Instead of centering on the technology, this research gives attention to the artistic purpose and the content. It examines the content and the supporting medium accepting the premise that one is not disengaged from the other. The general goal is to give a step in recognizing, or even codifying, the methods, the challenges and the requirements in the authoring process of this particular kind of cultural production. The other specific objectives are: I) understand the context in which these narrative forms arise; II) identify the discursive formations

and the types of engagement proposed; III) recognize issues in the design and implementation process of these artworks; IV) evaluate the impact some participation modes has on the experience.

## 2. Theoretical Framework

Mobility and embodied interaction, mapping of the diegetic space onto geographic location, participant audience and meta-author are some of the intrinsically related aspects crucial to the understanding of these communicative and discursive practices situated among a range of other digital post-narratives forms. The phenomenon studied relates to these core discussions posed by different fields, what required from this thesis the consolidation of an interdisciplinary theoretical framework.

From the Narratology domain comes references to approach the phenomenon from a cross-disciplinary perspective. This thesis assumes a media-aware position to discuss the possibility of a medium, taken as a semiotic channel with particular semantic values on its language, influence narratives on a syntax and paradigmatic levels (Ryan, 2004). The study accepts the structuralist and formalist binary distinction between story and discourse<sup>4</sup>, between the cognitive construct and its encoding in material signs (Barthes, & Duisit, 1975; Chatman, 1980; Brémond, 1973), but does not discuss representation in abstract terms. The definition of the phenomenon situates it in the middle ground position between the blindness of a medium-free theory and the radical relativism of the medium-dependency approach (Herman, 2004), considering that some aspects of narratives are either medium-specific or applicable to several media (Jannidis, 2003).

In an attempt to unveil the media attributes that could dictate fundamental features of mobile-based narratives, this research starts by evaluating the range of properties introduced by computers in the realm of digital textuality (Manovich, 2001; Ryan 2004; Aarseth, 1997; Murray, 1997), to advance towards the understanding of narrative practices that emerge enabled by portable and pervasive communication systems (Rieser, 2011; Raley, 2010; Farman, 2013; Dovey, & Fleuriot 2011). This thesis takes important references from Media Studies to discuss the mobile paradigm (Townsend, 2002; Lemos, 2009; Huhtamo, 2011), the ideas behind the Ubiquitous Computing Project (Weiser, 1991; 1993; Abowd et. al, 2002, Weiser, & Brown, 1996; Galloway, 2004), and the surveillance and other aspects implied in the artistic use of Locative Media (Tuters, & Varnelis, 2006; Holmes, 2004; Hemment, 2006).

Though focused on the media role, this thesis avoids a technicist approach that could direct to an analysis only able to see the technological innovation as a motif of change (Almiron, & Jarque, 2008). Part of the theoretical framework devotes to identify possible influences and continuities coming from

other cultural and artistic practices that do not necessarily relate to media attributes. The discussion about the ludic aspect of the experience anchors on Games Studies to recognize how mobile narratives incorporates a formal gameplay organization, inviting participants to perform ontological and internal modes of involvement in the storyworld (Ryan, 2006), which gives an emergent quality to these storytelling forms (Jenkins, 2002). The Cultural Studies approach and the Situationism writings are other core references bringing pivotal aspects to the discussion about the relations between body, space, and content. While the first claim for an understanding of cities as a symbolic space collectively constructed through

### 3. Methodology

Mobile and locative narratives remain an emergent field for both, practice and associated theory. This doctoral study conjugates these two dimensions, in a combination of art-based research and traditional scientific methods. The theoretical discussions about the topic have two distinct references: one results from the close observation of four artworks developed by *Blast Theory*<sup>5</sup> artistic group, the other from the experimental development of *Chronica Mobilis*<sup>6</sup> project. The unveiling of the research inquiry happens through a bricolage of methods

Interaction	Participants behavior	Categories	explorative/ manipulative/ contributive
		Types	individual/colelctive collaborative/competitive
	Organization of content	Genre	mystery/drama/documental
		Mode	telling/enactment exploratory/ontological
		Data	text/audio/video/multimedia
		Structure	linear/non-linear (branch/maze/braided/network)
		Involvement	internal/external
Prominence	central/instrumental/intermitent		
Interface	System logic	Sensing	implicit/explicit
		Mapping	arbitrary/meaningful (situated)
		Output	text/audio/video
Experience	Manner people feel the system	Satisfaction	emotions/(dis)comfort/ pleasure
		Usability	clear/unclear rules/interface
		Agency	sense of control
		Cognition	immersion/attention

**Figure 1:** Model with categories regarding the interaction, the interface and the experience.

a performative walking (De Certeau, 1984), the latter signalizes to how art has historically worked in the construction and reconstruction of the urban experience through the exploration of space (Debord, 1958).

These interdisciplinary perspectives informed the formulation of a model with formal, contextual and relational categories to a qualitative analysis of selected case studies. Following Parés & Parés (2002) approach, this thesis grouped such categories on a triad of levels, regarding interaction, interface and experience; or the system, the HCI dimension and the cognitive aspects. The analysis observed all these parameters but concentrated mainly on the content of the system, evaluating the narratives on a syntax and pragmatic level. The categories regarding the organization of the discourse and particular modes of engagement with the content derived from a scheme proposed by Marie-Laure Ryan, in *Will New Media Produce New Narratives*, as well as in *Avatars of Story*. The technical and aesthetic categories of the analytical model consolidated by this thesis came from a descriptive framework proposed by Dovey & Fleuriot, in *Towards a Language of Mobile Media*.

in a dialogue between artistic and scientific domains. The result is a methodology that has an interdisciplinary character, crossing the boundaries of art, science, and technology.

The study of the phenomenon comprises three correlated stages. The first is a theoretical literature review that investigates the artistic use of locative and mobile media, and its influence in the basic principles governing the art of telling stories. This initial stage has the goal of identifying the transformations in narrative theory and also defining parameters and categories to guide the qualitative analysis happening in the subsequent moment of the research.

The second phase is a case study of *Blast Theory*<sup>7</sup> artistic practice. Grounded on an ethnographic approach, such embodied and situated research outside the lab comprised a three-months site-visit to the artists' studios in Brighton - England. The objective behind the act of going into "the field" for a participant observation was to meet and understand how mobile and locative media have been employed in the artistic domain. The qualitative ethnographic case study approach



**Figure 2:** The three stages comprised on this Ph.D. Research.

centered on four selected projects developed by the British group to generate a formal, conceptual, contextual and relational comprehension of the phenomenon studied. This second stage with the initial theoretical review had a significant role to inform and contribute to the third phase, grounded in a practice-based research method.

Empirical and practical, the third moment of the study conducted a direct examination of an artistic process with applied-theory activities that lead to the collaborative development of *Chronica Mobilis*<sup>8</sup>. As it happens in the domain of interactive art, the practice-based research method had a significant role: to investigate the technologies involved in the design and implementation of mobile narratives, as well as to

the understanding of participant's experience in response to different discursive strategies and participation modes. The actual making became a primary mode of inquiry, with the practice representing not just data for investigation but also playing a significant role in the analysis of the phenomenon studied (McNiff, 2008; Candy, 2011).

#### 4. Conclusions

When it comes to technology, a reasoning that derives from a modernist ideology commonly puts progress and other glamorous connotations as inherent conditions of technical innovations (Dovey, 2008). The enthusiasm with "the



**Figure 3:** Blast Theory projects - *A Machine To See With*, *Fixing Point*, *Rider Spoke*, *I Like Frank*.

new" then comes as the first reaction of people supposedly forward-thinking. Attempting to skip from this usual stir around what is cutting edge and avant-garde, this thesis avoided an innocent excitement when answering whether a technological context is stimulating a structural change in the narrative realm. The conclusions taken by this study do not glorify a digitalist dominant discourse (Almiron, & Jarque, 2008), what could mean affirm that the technology operates a complete rupture with the previous narrative structuring models and paradigm.

This thesis ratifies a media-aware approach (Ryan, 2004; Herman, 2005; Jennings, 1996), but also recognizes the existence of some core logic-semantic principles that go beyond media and remain governing the emergent storytelling forms. Avoiding a digitalist dominant discourse, in this sense, does not mean neglect the effects of locative and mobile media in the narrative realm. As semiotic channels with particularities in their language, these communication systems do print marks on the content they mediate. The conclusions taken by this thesis signalize to how the implementation of the foundational and classic parameters of narratives – such as time, space, events, characters, storylogic – can vary according to the expressive resources of the media giving support. These semiotic resources can influence the generation of some distinctive modes to present stories as well as some specific mechanisms for participants interact, get involved, and co-create the narrative content. Rather than merely recognize these particular discursive forms and engagement modes, this study gives a step in identifying their possible effects on participants experience of mobile-based narratives.

#### 4.1 System Level – Affordances and Constraints

Location-awareness, connectivity and portability are the major attributes of mobile and locative media that showed to affect narratives in a syntax and pragmatic level. Many of the distinctive features of the emergent narrative forms become feasible with a media that is wearable, that stays permanently connected and gathering geospatial data. These are the properties that enable artists to take the storytelling practices out of confined environments and to transpose them into the public space. They turn possible the presentation of stories in a very peculiar diegetic space resulted from the merging of physical and virtual domains, with meaningful links established between digital content and the built environment. These are also the capabilities that support participants engagement with the material world, what happens through embodied, navigational and performative experiences based on personal improvisation. In such situated experiences with portable, networked and context-aware media, participants can access and generate the narrative content while on the move.

This research recognizes the affordances of these functionalities and also observed that a media that is portable, that stays

permanently connected and gathering geospatial data presents some constraints to the narratives it gives form. Artists employ navigational technologies to determine with clinical precision participant's placing and displacement. Whether it is a primary source to the proposal of more embodied interactions, crucial concerns raise from such surveillance. One of the critical aspects refers to who stores and controls the spatial metadata retrieved (Holmes, 2004). Indeed, the monitoring made by military technologies represents a constraint when it serves to reduce the Locative Art discourse to a Neo-cartesianism. This can succeed when the relations established between physical movements and its virtual screen-based representation only takes as a reference the rigid cartographic grid and its coordinate system. When it happens, the context-awareness of locative media ended up creating distance rather than proximity with local context (Hement, 2004). Even connectivity can become an obstacle to the consistent engagement of people and place, considering that an "abstract global connectedness" discourse tends to justify the replacement of social to virtual interactions (Tuters, & Varnelis, 2006).

#### 4.2 HCI Level – Physical Navigation in an Ambiguous Space

The interaction proposed by narratives supported by locative and mobile media dialogues with a ubiquitous and post-desktop philosophy (Weiser, 1991; 1993), gathering data that the system can infer without who is using the media necessarily states. They monitor individuals by their mere presence in location, tracking and correlating, for instance, physical location and user identity in a comprehensive surveillance (Abowd et al., 2002). Nevertheless, the qualitative analysis of *Blast Theory* projects showed that the artists adopt such mechanisms not guided by a mere surveillance goal, they employ implicit methods as a manner to explore embodied modes of interaction that can challenge established modalities of experience. Implicitly sense participants constitute to *Blast Theory* artists, for instance, a mechanism to suggest a more organic integration between those interacting and the surrounding environment. In the artistic domain, such pervasive methods allow the establishment of various correlations between participants' identity, physical location, and the triggering or generation of the narrative content. Implicit mechanisms, in this sense, confers an interaction that is less demanding in cognitive terms, as the body works as an interface.

This thesis indicates such performative and embodied navigation in an ambiguous and augmented public space as the interaction model characterizing narratives based on the tracking procedures of mobile and locative media. In the four projects analyzed, participants walk as wandering nomads (Scott, 2002) having cognitive and physical demands that require from them all a "non-trivial effort" (Farman, 2013). They actively participate in a liminal state between absorption in the diegesis and attention in the dynamic built environment

(Rieser, 2011). The spatial exploration operates as a storytelling engine, with the physical navigation correlated to the development of the story or the discourse formation. In such interactive model, participants face the necessity to plan, perform and enact improvised acts. They interact through movement to: explore, manipulate or contribute to the spatialized content (Parés, & Parés, 2001); to affect the discourse formation, to alter the course of the story, or even to collaborate in the creation of the content on the flow of their interactive session (Ryan, 2011).

### 4.3 Narrative Level – Discursive Strategies

The narrative formation in such mobile-based projects correlates to different types of involvement and levels of control. The conclusions taken from the case studies is that, when participants have an external position in reference to the storyworld, as it happens in *Fixing Point*, their performance affects narratives on the discourse level, conducting the unfolding of the events through the activities and decisions taken in an embodied interaction. Whether they assume an internal form of engagement as a protagonist or character of the story, what happens in *A Machine To See With* and *Rider Spoke*, they live ontological forms of involvement performing unscripted actions to answer the necessity of generating and moving the storytelling forwards. The qualitative analysis ratified that internal and ontological modes of engagement (Ryan, 2006) confer an emergent quality to some mobile-based stories that take form on the flow of participant's experience and depend on their actions and decisions. Such interaction modes are what most approximate these narratives to game experiences (Sales, & Zimmerman, 2003), especially to the ones of role-playing games, in which participants encounter themselves in a fictional setting and have to take responsibility for the role assigned to them. They are responsible for a structured process of decision-making and for the development of the character they enact in the storyworld.

*Blast Theory* turns the fluid urban space into a storyworld loaded with elements and content to motivate the action in stories that involve adventure, mystery, and discovery. The artists turn the city into a "free roam" (Harris, 2007), in which participants can explore moving with a certain freedom to reach an objective assigned to them. The configured narrative space can serve for a nonlinear navigation and also to a more structured, guided or restricted exploration. Whether *A Machine To See With* illustrates the latter, *Rider Spoke* exemplifies the former. This thesis concludes that playfulness becomes a strategy that allows artists to act as choreographers, who concedes to those joining the artwork some degree of freedom to make and perform their decisions awaiting for the outcomes they will get from that. In a combination of *top-down* and *bottom-up* design planning strategies (Ryan, 2006), artists let participants perform several operations on the system exerting some degree of control in the creative pro-

ceedings; but they are the ones who determine the borders of the narrative experience as an artistic strategy and attempt to ensure meaningful experiences.

Rather than propose new labels to classify possible specificities present in the design of these narratives, this thesis identifies that artists working with mobile and locative media keep following the digital cult of non-linearity. Such interactive architectures of choice inaugurated by participative digital textuality generate fragmented, fluid and variable stories, programmable and customized according to individual preferences (Manovich, 2001). Whether artists seek these particular logics of temporality and causality to organize narratives, they did not operate a complete rupture with some traditional schemes that follow causal relations and chronological patterns to create stories with a controlled rise and fall of tension. The qualitative analysis found the classical linear organization of content (Aristoteles, 1932; Todorov, 1971; Freytag, 1896) coexisting with the multilinearity of branching structuring models (Ryan, 2006). *Fixing Point* and *A Machine To See With* remark such possibility of open-closed narrative architectures.

Though locative and mobile media do not narrow distinctive syntax structures, they do contribute to diversifying the existing models of digital textuality. The personalization of content happens, for instance, through navigational activities in an augmented space that can resemble and evoke certain moods represented in the story universe. *Fixing Point* exemplifies it, with the physical engagement of participants recalling the real story of collecting and putting together information to discover the destiny of the protagonist. *Blast Theory* artists employ different approaches to create meaningful mappings when placing stories onto the geographic spaces. Regarding the Locative Art interrelations of site and content (Tuters, & Varnelis, 2006), some of the projects are phenomenological, *A Machine To See With* and *I Like Frank* trace the action of participants in space, and others are annotative *Fixing Point* and *Rider Spoke* virtually tag content to locations. These site-specific or just context-aware navigational experiences resemble older cultural practices, in especial the religious and secular pilgrimage (Heyward, 2011). The particularity refers to a rethinking of space and a potential to extrapolates an objectifying Cartography (Hemment, 2004, 2006; Holmes, 2004; McCullough, 2006; Tuters, & Varnelis, 2006). *Blast Theory*, for instance, proposes critical or reflexive incursions in the city that resemble the processes Situationists engendered with techniques such as the *dérive* and the *psychogeography* (Debord, 1958). Despite the similarities, rather than processes, such as these Situationism methods, the mobile-based narratives are structured artworks.

Location has a great impact in the formulation of these narratives and in the experience it evokes. Artists need to establish a dialogue with a fluid and ambiguous urban environment, what





**Figure 4:** Exhibition space of *Chronica Mobilis* performance.

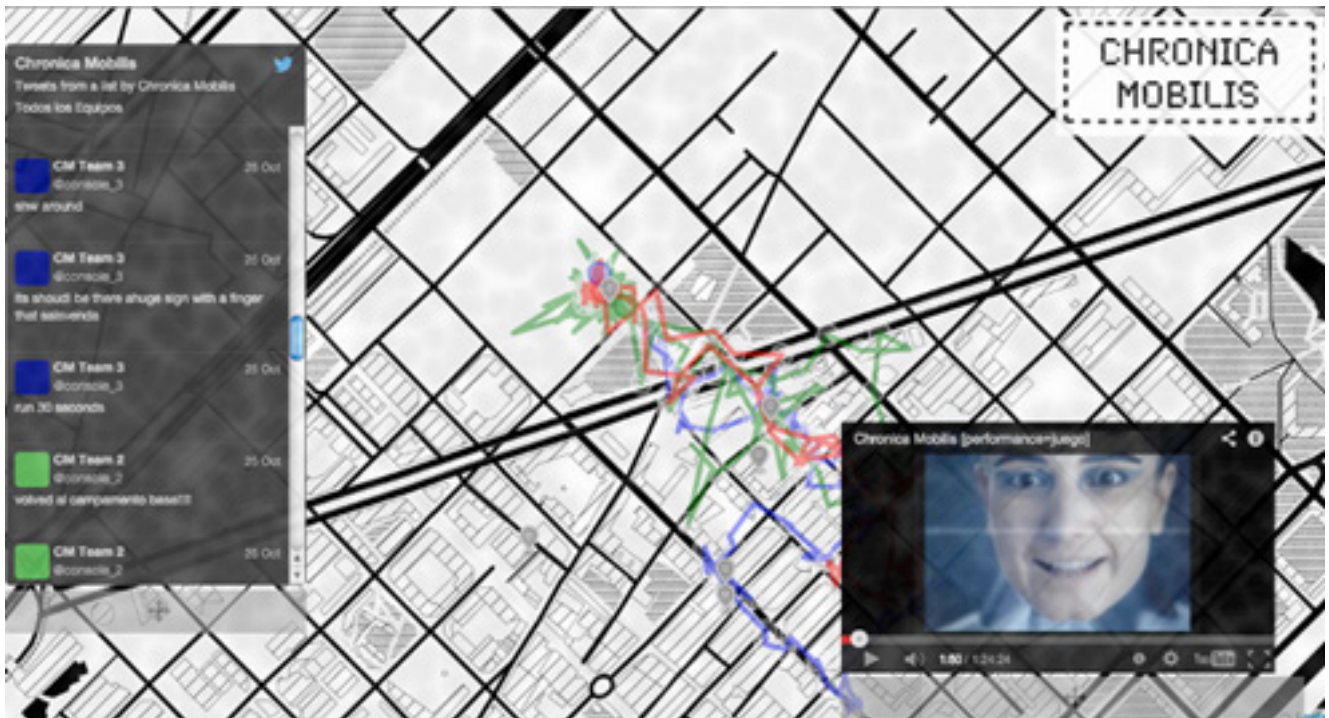
includes the necessity of encountering purposeful locations to geolocate the content. As one of the most relevant parts in the formulation of these projects, this demand extrapolates standard procedures in the design process of some artistic pieces. Artists edit the environment to dialogue with what participants can detect on an immediate, or on a deeper and inferred level (Hight, 2005). The plot can be written or rewritten according to the chosen places. *Blast Theory* also tries to deal with risks and technical implications that are intrinsic to the urban setting. The inconstancy of this fluid public environment is even an imperative to the adoption of iterative design processes (Sales, & Zimmerman, 2003; Zimmerman, 2013). The iterations serve to check whether some of the creative ideas are technologically available, as well as try to predict the variables that could interfere in the final experience of participants.

#### **4.4 Cognitive Level – Playfulness in a Collective Experience**

Who takes part in interactive environments behave in an active engagement moved by the necessity of making decisions and by the desire of recognizing their agency in the effects it generates (Murray, 1997). Even this active interaction with a computer-based system can have variations potentially correlated with the type of involvement. The design of *Chronica Mobilis* investigated the existence of differences between a virtual and a physical, a screen-based and an embodied interaction. These two modalities came represented on a per-

formance with gameplay, respectively by online and street players. The former sit in front of a computer following many layers of information to take decisions. They acted as God in the guidance of the latter, which lived the play experience in the urban, converted into diegetic, space. *Chronica Mobilis* also discusses the possibility of a classic audience takes part in playful mobile experiences. The artwork attended to this idea integrating active and contemplative modes of participation in a collective narrative experience.

The result was a celebratory ambient generated by putting different categories of participants to engage and share the same narrative "mission". The playfulness character contributed to this celebratory ambient and represented a motivator for the "nontrivial effort" required from players (Farman, 2013). As reported by participants, the gameplay had the potential to evoke sensations and memories of childhood. Such possibility came strongly to who actively engaged in the interaction, but did not discard those who stayed in a contemplative reception mode. With *Chronica Mobilis*, this thesis concludes that the game mechanics represented a decisive strategy to keep the attention and the engagement of participants in a collective mobile-based narrative experience. The analysis of the feedback given by participants drives also to the conclusion that the contemplative involvement compromised the comprehension process of this dynamic storytelling. The members of the audience reported difficulty to follow the intricate combina-



**Figure 5:** Diverse data sources composing *Chronica Mobilis* narrative experience.

tion of multiple layers, having to connect all the data sources generated in real time by the three groups of players. The complexity of the multimodal experience created an intense cognitive demand that created interpretative confusion.

Another conclusion taken from the feedback forms is that the innovative character of these narrative experiences motivates the engagement. Whether the interest increased with the technical possibility of watch, surveil and guide people, the avant-garde character of the project and the media supporting it generated technical and usability issues. The constraints came especially related to the connectivity of 3G networks. The delay in the communication between those on computers and those on mobile phones affected the tracking procedures employed by the project. The inconstancies of connection and the low bandwidth was also a problem for the live streaming of audiovisual content, which in a low frame rate constantly dropped. These technical and usability problems affected the experience generating frustration, mainly on players.

Regarding the navigational experience, the conclusion is that even when guided, participants can feel a sense of agency that comes motivating the engagement. The comments of street players exalted the role they played and how it made them feel as reporters. Their participation was the most demanding in physical terms when compared to the other modes of involvement proposed by the artwork, what came expressed and qualified in the questionnaires by adjectives such as "exhausting". On the cognitive level, their mental activity was in terms of orientation through the ambiguous space, instead of a comprehensive exercise resulted from the combination of multiple data sources. Players reported positively the sense of compe-

tion between groups and the necessity of collaboration in a teamwork, factor perceived on their desire to share and retell the playing experience at the end of the performance.

### End Notes

- 1 In 2015, the ITU World Telecommunication/ICT Indicators database estimated the existence of 7.085 millions of mobile-cellular telephone subscriptions. Currently, the number of smartphone users worldwide is 1.859 million. See: [http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2015/ITU\\_Key\\_2005-2015\\_ICT\\_data.xls](http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2015/ITU_Key_2005-2015_ICT_data.xls) By 2017, according to *eMarketer/AP*, it will be over a third of the population. The statistics projected an estimated total of almost 2.29 millions of smartphone users in the world. See: <http://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>
- 2 The term "locative media" was initially coined by Tuters & Varneilis (2006), as a title for a workshop hosted by RIXC, in Latvia, 2002. The term derives from the "locative" noun case in the Latvian language, which indicate location and vaguely corresponds to the English prepositions "in", "on", "at", and, "by". Lemos & Josgrilberg (2009) defines locative media as the technological interfaces based on digital tracking systems that allow interaction between the physical, social and digital networks. Locative Media permit to identify the positioning of people and objects in physical space, generating data that inform where we are, what we are doing and how we can interact with our surroundings. Mobile phones with GPS receivers - Global Positioning System, 3G, and Bluetooth technologies are some of the devices enable by locative technologies.
- 3 The narrative/game world that is represented and implied; the space where the events of the story occur.
- 4 Russian Formalist literary theory first proposes such distinction between the events of the story and the manner it is told, what referred to the couplet as *fabula* and *sjuzhet*. See: Propp, Vladimir. (2010). *Morphology of the Folktale*. University of Texas Press. And



- also: Shklovsky, Viktor. *Theory of prose*. Dalkey Archive Press, 1991.
- 5 *I Like Frank* (2004), *Rider Spoke* (2007), *A Machine To See With* (2010), *Fixing Point* (2011). See: <http://www.blasttheory.co.uk/our-work/>
- 6 [Http://chronicamobilis.net](http://chronicamobilis.net)
- 7 *Blast Theory* is a group based in Brighton – England, and led by Matt Adams, Ju Row Farr and Nick Tandavanitj. The artists are renowned internationally for using interactive media to propose new forms of performance drawn from popular culture and games. See: <http://www.blasttheory.co.uk/our-history-approach/>
- 8 The development of *Chronica Mobilis* project had the support of *Hangar* and the collaboration of other artists, technologists and researchers interested on the creative use of mobile and locative technologies.


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## CV

Vanessa Santos is a digital media artists and researcher. She is Ph.D. in Communication with the thesis "Designing Mobile Narratives: discursive strategies and participation modes in Locative Media Art". She holds a Master degree in Cognitive Systems and Interactive Media (2011) and a Master degree in Communication/ Image and Sound (2006). Her expertise and interests are in audiovisual narratives, interactive systems, locative media and mobile applications. Vanessa worked with research groups devoted to the development of augmented reality projects (SPECS) and technological inclusion based on open source software (IPTI). She collaborated with artistic


groups in the development of interactive art experiences and documentary films. She has been teaching for young people and minorities groups, experimenting new educational models for audiovisual and digital media production in the context of social projects. In 2014, Vanessa integrated Hangar research line on Locative Media, developing a geolocated performance with gameplay called Chronica Mobilis. At the same year, she spent three months collaborating with the British group Blast Theory. In 2016, Vanessa has been teaching Webdocumentary and Transmedia Narratives in a Postgraduate Course in Documentary, at UNA.



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