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The use of technologies in the urban landscape has undergone profound changes in the last two decades. International research and experiences in locative media show how urban games can be a crucial element in the relationship between cities and human beings; a game experience could modify the link between the city and its inhabitants, making it richer, more interesting and more involving. (Borries 2007)

Augmented games redefine the design of the urban experience by considering, more or less consciously, both the digital and anthropological aspects. In the negotiation of roles and intents, this article aims at looking deeper into these relationships, proposing a focus on the playful uses of the urban spaces and reading paths.

Considering the topic of applied playfulness in the context of the urban augmentation, this article aims to provoke further thinking around what the future of urban games may look like and how designers can embed game elements in the real geography.

To indicate new directions for the city augmentation, we start from the definition of the layered game reality. The first step on this ground is to briefly tracing the urban games reading identifying two main types. The second, taking the hypothesis of the city as big play platform, we present two methods and dynamics for a flexible exploration and reinterpretation of the city we play in, with the aim of improving the inter-connection between urban games and human culture. We will describe rhabdomancy and flânerie in two steps: briefly introducing them through a historical overview, and drawing what we see as main features we believe could be of interest to game designers' perspectives.

Passing through this multifaceted overview, the final part of the paper will compare both explorative methods discussing as conclusion some of the emerging common elements to construct a design framework that combines together two rapidly changing design fields: urban design and game design.

In particular, we will suggest some of the principles which we think could co-operate or work together in the design of the city augmentation through games.

In this paper rhabdomancy and flânerie are described as two behavioural methods in city exploration that designers can use as playful principles for various projects. They both are treated in different ways through the paper, because of their complex and multifaceted nature: they could be seen as methods or dynamics for environmental exploration, but also as behavioural patterns for information retrieval and as cultural recurring practice.

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Augmenting the city: pop-up and playground games

Urban games have shown to have the power of changing our perception of routine spaces and, at the same time, of adding new meanings to human interpretation of the physical environment.

The contemporary urban game phenomenon augmented with mobile technologies is more and more an ingredient that put new life into the city because it invites and induces people to come out of their rooms (both digital and virtual), encouraging unconventional interactions with unnoticed things, façades and strangers.

These kinds of games are strongly related to physical space; they often use a kind of map, a board, as well as a compass, and objects designed to connect realities with people's sensory perception.

Some urban games are clearly performed within a marked border, as it may be difficult for a human player to identify the boundaries in games that are spatially configured in such large areas that the eye cannot perceive them in their entirety.

Considering how the urban space is used in city games, we propose two macro-categories for the game-augmented city: ‘city as pop-up game’ and ‘city as big playground’.

- The city as *pop-up game* is a definition suited to games involving a limited space, i.e. one that can be clearly perceived in its entirety at a single glance. The city here is explicitly ready to play within a specific space that becomes the tool for the game action. In this case the game exists as a potential that is waiting for its player to come and awaken it to life. A well-known example of city as pop-up game is the urban chess-board: it is often simply there, unseen in a square, in a corner, ready to pop-up as a game space whenever someone chooses to play, just like a pop-up book, waiting on the shelf for someone to open it and bring its story into space.

Figure 1: City as pop-up game: an urban chess board placed in a square, waiting to pop-up into a gamespace.

- In the case of the *city as big playground* the city is involuntary involved in a game, thanks to the player's acceptance of the shared gamespace rules. We see examples of games shaped like the city; boards so big that some navigation tools and algorithms are necessary in order to allow players to be part of the game and meaningfully move in the city. This is the case of a great number of urban games, street games and hide-and-seek games, such as The Urban Iditarod (The Cacophony Society 1994) a popular public race event that covers 4 miles in a maze of streets.

- We consider this category as an important design principle because it leads to a reflection around the relationship between the ludic city and the players statements. Nowadays both game designers and urban designers have the chance of designing ludic events integrated into the urban fabric as well as into human activity of space exploration.

Figure 2: City as big playground: Portland Urban Iditarod Winner, Quest for Fire (2008).

Hypothesis

The ordering principle which distinguishes these two main types of city augmentation, is the player perception of the game space. While the city as pop-up is almost limited in the space, time and game contests, the city conceived as big playground is most fruitful for our discussion of the city augmentation.

Urban games can also be seen as a sort of mixed games, meaning games able to integrate the physical and the virtual environments “within a comprehensibly experienced perceptual game world” (Walther 2005); such as, they have a huge potential to transform how we live cities and places, and how we experience the urban contexts. City becomes a big board to catch markers, physical amenities and sharable interesting places. Portable technologies and navigational tools emerge as instruments that are naturally evolving with games, as can be observed in several applications such as Waze (Waze 2011), Geocatching (Groundspeak 2000), Parallel Kingdom (PerBlue 2011) and similar systems.

This merging of maps and games is probably the result of the growing need to map out and experience the world, two essential activities to convey to the player the feeling of “master the world” (Lammes 2007, p.84). This contagious mobile lifestyle

can be observed from an anthropological and historical point of view in the urban evolution.

On the basis of this outline it is possible to formulate questions about design solutions for the connection between people and urban landscapes by consider two perspectives, physical and cognitive. In fact ways of applying augmented reality to everyday lifestyles and games is emerging as a tendency in situations where everybody "follows the rules of thumb" (Alexander 1979, p.204). Our proposal is to properly adapt technical instruments and hybrid game cartography to human activities. The union of different elements including navigational strategies associated with the *rhabdomant* and *flâneur* conceptual methods could be a useful approach, not necessarily for what has been happening so far, but for what the future of the augmented city and the ludic practices is suggesting.

Paths through Space

As a liaison between the city seen in a game space perspective and the ways people act in it, we believe in the importance to read the dynamics of people's movements through the city paths. This movement of transition defines and structures the important relationship place-person that in game design terms is so strictly related to the mechanics of player interaction in and with the game space.

It is for this reason that the movement through the city may be considered as human spatial progression from one point to another, and as such can be analysed as way of living and playing the city. Human beings tend to move in space, to explore, to discover, and in this context it is possible to consider historical human methods of connecting places and people. Focusing on the dynamics in which city paths can be followed by people, we look at contemporary human behaviour to explore the layered reality.

This investigation includes the kinds of historical decoding instruments that are maps, individual recurrent trajectories or magnetic compass, and the skill of using the spatial elements for organizing the direction of a walk. Physical indicators are furnished by the communication city signals: arrows, codes, experiential paths and a number of maps mediated by personal as well as human displays. While the physical city have acquired ways of using their communication systems, the layered digital city - more often seen on portable screens - in many cases shows practical limitations on gestures and visibility range. This fact, from a design point of view is entirely unsuccessful, because interdicts the connection between people and physical space.

This issue calls the designer attention to the human attitude towards navigation and exploration instruments for the game space extension, and to take into consideration the kind of information the landscape and the space offer to the inhabitants. Moreover an indicator of the relationship between places and people is the tool they have (or do not have) for reading, creating or recognizing their individual paths.

The methodology we use to approach this broad discussion is an extensive research that encompasses old divination practice and literary accounts: we invite the designer

community to remember rhabomancy and flânerie, to consider them also as a sort of recognizable patterns, useful for the urban game design.

Both have a long history documented in written and literature indicating them to be useful methods for city survey and reading, and offering ways of exploration surrounding space. Our analysis, which considers these approaches, not only as exploratory paradigms but also as human behavioural patterns which show an interesting evolution in time, offer a better understanding of them. In addition it suggests integrating their past and present progression in our culture with possible future uses as helpful patterns in play experience design, remembering also Avedon's and Sutton-Smith's (1979, p. 161) references to: “[…] the study of game origins remains important, not for the purpose of reconstructing history, but for the purpose of illustrating the continuity of human nature”. In this perspective our goal is to inspire their application in different levels of design.

Rhabdomancy

Rhabdomancy is an old and mysterious practice. A brief analysis of its history and main traits is important to discover how it is a well known behavioural pattern, and, as such, how it may be useful in designing future interactions between spaces and human beings.

Its name is a composite word, deriving from two Greek terms: ράβδος (*rhábdos*, the rod) and μαντεία (*mantéia*, the act of divining): the rhabdomant focuses his attention on a tool, usually a rod, in order to look for something through a divining process.

Figure 3: A contemporary rhabdomant, surfing the signal in an urban context through a traditional in rod apricot wood.

The rhabdomant is nowadays known by different names, such as dowser, water diviner or water searcher; the recurring presence of the term *water* is due to one of its traditional goals, where searching for water is not the only activity of a rhabdomant. Looking at rhabdomancy as a general divination practice by means of a rod, it is possible to include the search for signals of god's favour, such as the ancient roman

forecasting by way of *virgula divina*. References to a divining rod can also be found in the Bible, as also in Herodotus' writings and Marco Polo's reports on his Asian travels (Ellis 2004, p. 9). The first appearance of contemporary rhabdomancy in literature is commonly attributed to Georg Bauer. Known also as Agricola, Georg Bauer in 1556 wrote an imposing essay concerning mineralogy: *De re metallica*; in which rhabdomancy is described as a practice commonly spread among miners who used it in order to look both for metal veins and hidden treasures, as it was normal in those days to safeguard money by burying it. Bauer treats rhabdomancy in detail, describing the rods and – more interesting in this context – the behaviour of people using them. It is also interesting to notice how, then and today, rhabdomancy was not viewed as a reliable scientific activity: Bauer, as well as following scientists, is critical toward miners practicing it. Michael Faraday and Dimitrij Mendeleev, among others, analysed it, with negative results (Garlaschelli and Albini 2005, p. 32), as did a number of modern organizations for scientific testing.

Despite the negative opinions of scientists, rhabdomancy persisted in remaining a common practice throughout the centuries. Not even the condemnation by Martin Luther nor the ecclesiastic statement of its being related to devil's work was sufficient to eradicate rhabdomancy from human culture. Linked to water and mineral seeking, in addition to divination and forecasting, the rhabdomant's activities increased in time, such as to searching for murderers and lost objects in the XVIIth century. Moving from the countryside to the city he has evolved to become our contemporary professional whom we call to find a broken pipe in a wall.

In the past as in the present, rhabdomancy appears as a familiar behavioural pattern which persists in our collective imagination, no matter whether it is really effective or not.

Analysing the behaviour of a person practicing rhabdomancy it is possible to identify a few main physical traits that could be defined as the *rhabdomant attitude*:

- the attention is intensely focused on the tool;
- the person is unaware of surrounding space;
- the body is tense, somehow curling toward the tool.

Observing someone who is busy searching for a mobile device sounding a signal we discover the digital rhabdomant. Instead of manipulating the rod or the pendulum, we use the electronic device with the same physical attitude. The growing presence and importance of digital signals in our lives and spaces raises rhabdomancy to a new level of interest.

The magical feeling perceived by rhabdomants in the past turns into a technological feeling perceived today through digital devices.

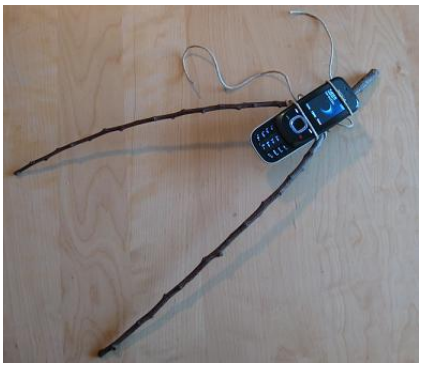

Figure 4: The idea of a contemporary rod, useful to perceive invisible signals.

Its survival through time and cultures and its easy identification make rhabdomancy a potentially powerful tool for contemporary urban game designer.

The rhabdomant follows a sort of divine indication, an invisible clue coming from a mysterious source; his rod leads him along a path across the invisible field produced by the source, whatever it may be.

Our cities are full of sources of invisible signals in fields that can be surfed in different ways. In order to allow a better analysis, we propose to look at urban field sources as:

- *natural*; example: a fountain emits an invisible acoustic field which can be surfed by hearing and searching for its source;
- *planned*; example: a relay station is designed to emit an invisible signal field which can be surfed by observing the signal marker on a mobile device.

Although neither of them is created with a thought to rhabdomantical function, it is nevertheless possible to design urban games which use these sources along with players' skills in interacting with them.

Likewise, we could perceive the urban signal fields as:

- *natural*; pertaining to the five senses;
- *artificial*; making use of a device of some kind.

An interesting suggestion in this direction could come from Electrical Walks (Kubish 2009), an artwork leading people to surf the city following electro-magnetic fields in urban spaces, thanks to special headphones designed to convert electro-magnetic signal into noise. Urban games and interactions could take advantage of the idea of a contemporary and ludic rhabdomant, able to use digital devices to surf inside signal fields specifically designed.

Flânerie

This French word is not suited to be translated in any other term, because it frames a particular behaviour, widely developed in the XIXth century as a literary device. The flâneur could be seen as a person able to grasp the modernity of the metropolis. Flânerie was depicted as the strolling and idling art of enjoying the crowd, performed by a particular figure who wanders around in the city streets randomly and alone, catching details unnoticed by the others (Walser 1919; Tester 1994). While the flâneur was brought to fame by Charles Baudelaire as the Parisian *boulevardier* who experiences urban life by observing and having a passion for travels rather than for domestic life (Baudelaire 1869), Edgar Allan Poe was the precursor of this existential exploration issue. “This old man, is the type and the genius of deep crime. He refuses to be alone. He is the man of the crowd” (Poe 1840) his personage breathes the traffic and as a ghost is part of the crowd flow and follows its paths in the street. Defined as intellectual parasite, a creature of the past as well as an analytical urban observer (Benjamin 1927-1940; Crickenberger 2007), the flâneur has evolved along with the psychogeography that essentially takes pedestrians off their predictable paths (Debord 1955) into a new awareness of the urban landscape. Rather than attempting to be exhaustive in describing the profound flânerie art, we focus our investigation on the important relationship between the figure of the flâneur and the space for a design perspective. These relationships between the collective and the city are continuous negotiations and navigations and are timeless patterns of behaviour, described by Christopher Alexander as cultural connections between events and space in which they happen (Alexander 1979, p.62). The Flâneur represents the skill to detect signals and messages of urban landscape changes such as a detective seeking short stories in the streets.

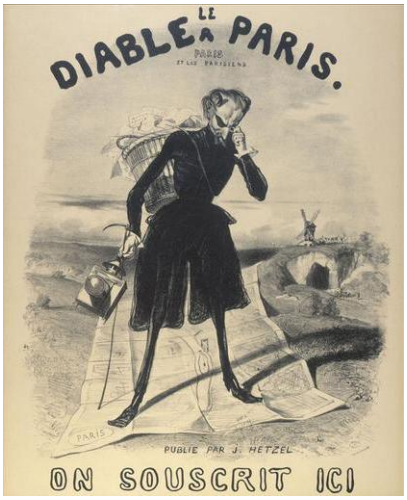

Figure 5: J.J. Grandville's illustration for Le Diable à Paris, Hetzler (1846).

Until 1900 the flâneur was moving on foot, walking on the night, today there is no time for a contemplative view on the world, but fugitive and instantaneous. An example of the contemporary method of catching urban clues is the *parkour* movement, curiously originated in France just like Flânerie. Moving from one place to

another, *parkour* trains the ability to clear city hurdles differently from ordinary travellers, utilising alternate paths. Without any map tool, the *traceur* makes his own map connecting one platform with another. If until the XIXth century the flâneur was moving slowly on foot, walking in the night, today there is no time for contemplative viewing of the world, on the contrary, it is fugitive and instantaneous. Also the environment gives people hints on multiple ways of reading and building individual paths towards buildings. The playscape enrichment can be considered as a meaningful contribution by the modern flâneur.

A brilliant project that can clearly show these interesting possibilities of clues embedded in the streets is *Dead Drops* (Bartholl 2010). USB flash drives sprouting from city walls are probably very attractive for urban flâneurs and configure the reality as a collaborative and mysterious arcade game. Along the ways participants can learn, and this can be a highly motivational play-factor.

The main processes involved in the flânerie activity can be summarized as:

- the use of the eyes and optical perception as privileged lens to find new ways for reading the urban landscape;
- the use of the alienation as a strategy to divert from the routines (modern flâneurs glace up behind their personal screens);
- finding new ways of reading the urban landscape, paying attention to details, traces of other realities and reading paths unnoticed by the crowd.

In addition, the contemporary flâneur is not merely an observer, but is a producer of contents, able to augment himself the urban environment. Examples of this kind of *gardening* are Geocatching or Walking Papers (Migurski 2009) where people contribute to adding new paths to the already known city configuration. The flâneur profile identified by these cases is in the final analysis also that of a mapper.

The suggestion to adopt this model for designing urban games is obviously a provocation to shift the attention from the user considered as producer of contents, to the environment as an evocative and appealing interface to interact with.

Rhabdomant and Flâneur Comparison

In the previous sections we described rhabdomancy and flânerie, proposing a brief historical view of their evolution and analysis of their main traits, looking also at the relationships they establish with their performers, as well as among performers, space and tools.

It is interesting to build a comparison between these two patterns, to outline common traits and main differences. The following table of comparison proposes a reading of basic elements focusing on body posture and movement, relationship with the devices or/and tools used for information detection, and relationship with the surrounding space.

	Rhabdomant	**Flâneur**
Body	tense, curled, focused on the device, unaware of space	dynamic, moving, mimicrying the crowd, probe for details and hidden paths
Tools	digital, placed on the person, moving with him/her	optical perception, moving with the multitude
Space	minor importance; attention focused on a goal instead of the path	temporary relationship with places, embedded clues and hints; alone in the community

Table 1: A comparison between rhabdomant and flâneur, focused on body language, tools usage and relationship with space.

While the rhabdomant is totally focused on his perceiving tool, walking around as in a sort of trance, following the invisible, the flâneur tends to wander around with a relaxed body posture, open and prone to discovering secret paths, visible to his eyes only.

The rhadbomant is disinterested in others, unaware of their presence, while the flâneur mingles with the crowd, follows its fluxes and surfs it in search for boundaries to cross.

Space communicates with the flâneur in a language of subtle hints and clues, leaving it up to him to perceive and choose to follow them, while the rhabdomant, due to an external device, is able to feel something completely invisible to anybody else.

Both methods build an individual relationship between the subject and the urban space, pointing to an immersive experience in space where players move according to arbitrary rules and creative mapping systems. There are no boundaries, people explore the real world by creating their own paths, catching and reading city signals as if they were an explorer challenged by secret doors.

Conclusions

While comparing rhabdomancy and flânerie, it is possible to note remarkable traits strongly related to the issue of *being lost* that is a privileged state used to read in a different way the spatial system of the reality. Indeed, the rhadomant is deeply focused on the perceiving device, and could be unaware of his being in a new or unusual path; the flâneur is so unfocused that his wandering around could also be read as a sort of unawareness of the physical location. All the modalities to control this system change from step to step according to the walker and the path. Walking and perceiving, optically or physically, stand out as a privileged acts (and rules) of the modern city players but the pathway is a line traced in real time on the map. The rhabdomant focuses his attention on his signalling device, forgetting to pay attention to the surrounding space and the streets he is walking on, while the flâneur wanders around, seeking details and following the flow of his reading of urban hints, disinterested in the streets he is walking on.

However, indulging in the possibilities of being lost we open spaces in our lives to the unexpected, beyond the perception of the magic circle. In urban games the city boundaries are defined by architecture, buildings that hide objects and disturb signals. In this era of growing awareness of time, space and information and with the increasing presence of digital devices and prosthesis, the possibility of easing up a little, of yielding control for a while, seems almost a luxury.

Getting lost is a risk, is a childhood adventure and at the same time it is a great potential and a huge seduction, for example as shown in the You Are Not Here project (Zer-Aviv 2007) and modern applied psychogeography-oriented practices where players are challenged in finding something looking for something else. The idea of a serendipitous way of space exploration and discovery is nowadays widely known; through urban game design, as well as through rhabdomancy and flânerie, it is possible to open further discussions to a serendipitous reading.

In this sense, the spatial dislocation can be defined as an important design element to consider for the city augmentation because a design cue for a road deviation could lead players to discover unknown urban corners, streets or unfamiliar places; it could divert people from their habits, leading them toward a new knowledge of their cities, and could become an interesting paradigm for urban exploration.

From the designer’s point of view, considering urban mapping and game principles together could allow to approach a culture not merely anchored in objects and technologies but transmitted by playful practices.

In addition to the spatial dislocation element, the human body tension is of special interest in the urban game design. Hands or eyes involvement as well as body coordination can work together in the definition of the game dynamics.

While technical objects and map configurations evolve over time, transferring different realities with each other, the urban landscape taken as a shared gameboard with which to interact is a timeless concept that permeates the design culture of buildings and interfaces.

Other elements to consider in city augmentation are the set of materials detected in the above mentioned game cases typically well noticed in the game design fields of study (Adams 2002). These are: play time, rhythm of progression, checkpoints embedded in physical environments, player point of view, maps and the functions of architectures in games.

All design elements emerged from this discussion, related as they are suggest a urban development in which games are integrated in the city tissue as reading possibilities always available.

Spatial dislocation, human posture, cues embedded in the architectures, people methods of realms explorations instead of being abstract principles, are elements to face the layered reality for the citizen's skills development as a player in the city.

Moreover, we chose to present rhabdomancy and flânerie methods as invitation for those that want to seek out and analyse other patterns of activity in their surrounding culture.

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