Enhancing Player Experience

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In this paper, I explore the ways in which gameplay within cityscapes changes the experience of that cityscape. With this, I mean to reframe De Souza's slightly dated statements, expand on Bunting et al's world-creation model, and implement Lynch's cityscaping to fully grasp how game designers can enhance player experience within a metropolis. I chose Tempeest's "Lost in Time," based on their nomination for the city marketing award 2012, and their intention to transform the experience of the city. In the first chapter, I look at the way people experience the city without using any form of mobile interface. Second, I explore the ways other LBMGs are experienced. In chapter 3 I discuss my empirical findings, while in chapter 4 interpreting my empirical facts. And at last, in chapter 5, I propose a new set of immersive mechanisms which designers of LBGMs could use to enhance player experience.

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INTRODUCTION:

"*It's at the moment you run back and forth to and from the canal, balancing your iPad to hold the water, that you understand just how shitty life must have been back in 1781. I would just have let that house burn.*" –Marijke Phoa, 23.

Up until recently, home video games and kinetic consoles dominated the game industry. But now the wind blows in a new direction. Location Based Mobile Games (LBMGs) are the newest, most interactive form of game-play as they insist the player to move around in his own physical space to complete tasks. These games are so fresh on the market that game designers are still in the process of discovering what rules exactly apply to them. Bunting et al, and De Souza have long tried to conceptualize this phenomenon. However, as technology keeps developing and mobile interfaces expire in popularity within almost one year, it is hard to create a solid framework through which to study LBMGs. Now, city-planners too are challenged with their creative architecture as they have mobile media technology to account for as well in order to create dynamic, highly imaginable living environments.

In this paper, I explore the ways in which gameplay within city spaces change the experience of that cityscape. With this, I mean to reframe De Souza's slightly dated statements, expand on Bunting et al's world-creation model, and implement Lynch's cityscaping to fully grasp how game designers can enhance player experience within a metropolis. I chose Tempeest's "Lost in Time," based on their nomination for the city marketing award 2012, and their intention to transform the experience of the city.

In the first chapter, I look at the way people experience the city without using any form of mobile interface. In chapter 2, I explore the ways other LBMGs are experienced. In chapter 3, I discuss my empirical findings of the conducted experiment, while in chapter 4 interpreting the facts. Finally, in chapter five, I propose a new set of immersive mechanisms which designers of LBGMs could use to enhance player experience.

CHAPTER 1: EXPERIENCING THE PHYSICAL WORLD

A constructivist theory of cognition develops an epistemology in which knowledge exclusively reflects an ordering and organisation of the world constructed by our experience of it. Within worldmaking, knowledge and experience are interrelated. Citizens can enhance their knowledge by increasing their experiences, while at the same time, experiences can be enriched or enhanced when knowledge expands or the ability to distinguish and make sense of experiences increases. In order to understand how we experience a space—how we make sense of the physical world—we have to understand what exactly an experience within a space is, and how we assign meaning to it.

According to Nelson Goodman, we "*create* [and experience] *worlds by creating*, [identifying], *refining, and manipulating symbols that represent the facts or happenings of daily life*" (p. 1). How we experience a place, depends upon our ability to distinguish between symbol systems (composition and decomposition), and actively select information (deletion) based on evaluation of those facts or happenings (weighting), after which we structure these happenings into a sequence of events (ordering), or manipulate the symbolic meaning (deformation) to construct a particular idea of the place[i]. Therefore, our experience depends upon the degree to which we understand the place around us.

Kevin Lynch deepens in on this place legibility—the degree of place comprehension—and argues that "*the legibility of a cityscape is the ease with which it's parts can be recognized and can mentally be organized into a coherent and understandable pattern*" (p. 2). The way we imagine and thus experience a place depends on communication between the observer and the physical city (on the role and clarity of form). A clear image enables one to move about easily and quickly, gives the observer an important sense of emotional security and sense of place, and heightens the potential depth and intensity of human experience. Thus Lynch argues that the degree to which people experience a place, parallels the degree of legibility or imageability of that place.

Ansgar Nunning, on the other hand, states that it is through narratives that people 'world-make' and make sense of a place, rather than by observing visual form. He places the discourse of a walk through or experience of the cityscape central in the worldmaking process and argues that our image and idea of the city is shaped or influenced by the way the city is narrated to us, thereby indicating the important role point of view or perception plays within the whole.

However, when studying experience within a physical environment, it is necessary to use all of the three models above. We need Goodman to conceptualize the psychological procedure of meaning making, Lynch to understand *what* we exactly identify or distinguish between, and Nunning to elaborate on the narrative process of verbal reproduction of experiences.

I refer to a person experiencing a city a 21st century *phoneur*[ii], while at the same time, explain the concept of 'experience' within a metropolis through my own definition of De Souza's term "*Dérive*" (2009). I argue that a *Dérive* is a random, unplanned, sensory-based stroll through or experience of the cityscape—one that (contrary to what De Souza states) is visually, aurally, haptic, and emotionally as well as meaningfully embedded. I use this term to conceptualize experiences through a physical space, because unlike Goodman, Lynch, and Nunning present, a *Dérive* differs from the entire worldmaking process in that it limits itself to timely, momentary, and individual walks through, or experiences of, cityscapes, rather than be an event mediated on greater scale, for a large number of people, over a wide span of time. Distinguishing between

Dérive[iii] and *Worldmaking* is essential for my analysis, since I conduct my experiment on a small, individual, time restricted scale.

Dérives, like worldmaking, are subject to our sensory experiences of the cityscape. In turn, our senses are stimulated according to what we pay attention to or what attracts our attention within the city space. What then do we pay attention to or what attracts our interest exactly?

During a *Dérive*, *phoneurs* differentiate between Lynch's five city elements, namely: Paths, Nodes, Districts, Edges, and Landmarks. Participants of my experiment indicated that when walking through Utrecht, "Steenstraat," the "Oude Gracht," the "Dom Tower," and "Maria Plaza," were amongst the most memorable elements. The Oude Gracht in particular was noted as an unusual kind of canal, standing central in the city, and indicating a high degree of functionality as not only boats passed by, but people could also stroll alongside the water, or take the stairs down and visit a dungeon restaurant located *in* the canal itself. The diversity within the cityscape of the Oude Gracht—high/low, deep/wide, straight & crooked direction infused path, open-water/tunnel—made participants aware of the physically diverse activity they undertook when exploring the canal. Participants also seemed to be accurately aware of what other elements were situated alongside the canal, thus indicating that the singularity, clarity, unique use and functionality, and kinaesthetic quality of the Oude Gracht enhanced the imageability and physical experience of that entire area.

Maria Plaza seemed equally important. As Lynch argued, citizen attention is heightened at nodes, as they have to make a decision which route to take next. Even though participants navigated themselves from completely different locations, all of them crossed Maria Plaza one way or the other before reaching Central Station, which incites that most of the city centre paths led up to or departed from the plaza. At the node, participants were all accurately aware of their surroundings as well as the moment leading up to it, thus, indicating that the structure of city elements and moments of decision making are essential mechanisms for enhancement of experience and place legibility.

Lastly, phoneurs were intrigued by specific activities and aural occurrences[iv] during their *Dérive*. One participant witnessed a police drill and was immediately aware of the entire surroundings, while another was alerted by the sound of a bike bell, which made him look up in search of the origin of the sound. This instance resulted in him spotting a uniquely original medieval water pump located near the origin of the sound came from. Entertaining actions as well as aurally directional qualities not only heighten attention, but also actively stimulate the acuity of identification.

In short, we can say that the degree of our sensory immersiveness depends on the intensity of decision-making, the facilitation of visual identification and visual structure of city elements, aural and visual instances directing our attention toward elements, objects, symbols, or activities, and also, the degree of kinaesthetic quality of the cityscape. Since the degree of our experience depends on our acuity of distinctive ability, we can reinforce that educating people to identify and differentiate between stylistic features of sensory-inflamed symbols, enhances the legibility or comprehensiveness of that environment, and we can therefore state that methods to direct attention and increase awareness of city elements and events enhance people's experience of the city space.

CHAPTER 2: HYBRID GAME WORLD—FROM "DERIVE" TO "PARKOUR"

When playing a location based mobile game (LBMG), the city environment or city space, previously experienced as a "*Dérive*," now becomes a "*Parkour*," which is a space of social game play. A *Parkour* differs from a *Dérive* in that it is challenge-based, contrary to a random and goalless navigation through the metropolis. This changes the way we perceive local experiences in the cityscape. Accordingly, we should take a closer look at what LBMGs are in particular, how it tells stories, and exactly how the player experiences a hybrid game world, before we move on to discover how exactly in-game structures alter our experience of the city.

Location Based Mobile Games are games played on mobile (smart) phones and use the city space as a game board. Location Based Mobile Games, argues De Souza, "allow the linking of information to places, and players to each other via location awareness" (2009, p. 3). This mixing of physical space with digital information is what De Souza e Silva refers to as "Hybrid Reality" (2009, p. 3), envisioning that the player experiences the game world like a tourist, discovering new and unfamiliar places in, as well as information of the cityscape. The *Phoneur* accordingly changes into a *Traceur* (De Souza, 2009), which stands for "a player moving through the city space with the goal of traversing the spaces (creating new experiences and meanings as he experiences the city like this for the first time), rather than getting somewhere. His or her pleasure stands in challenging the space, creating new ways to move through it.

Where video games, like Half Life 2 or Black&White 2, make use of 3 dimensional digital spaces, LBMGs augment the real, physical environment with digital information, and thus require the player to physically move through the city space in order to complete tasks and achieve goals. They also differ from normal video games in that they alter Huizinga's components of play by blurring or challenging the boundaries of the gameworld—the boundaries between play and ordinary life, and limiting the avatar, the player, to real time, space, and physical ability (meaning a player cannot jump against or from walls, or perform any such unrealistic physical task). "Rules exist not as an ultimate goal but as clues for navigating spaces" (De Souza, 2009, p. 3) LBMGs like Bunting et al's *University of Death* and Tempeest's *Lost in Time*, mostly make use of Cartesian representation of the physical world to locate the player within the hybrid game space.

The players frequently navigate the city in unusual and unexpected ways as a consequence of the game narrative. De Souza e Silva argues that this movement through the city might be goal driven—that is, when a player goes out specifically to play the game—but it is generally spontaneous—by moving through the city in their usual routes to school or work, players are accessed by the game—a fact that turns their experience of the city into an unexpected playful adventure. However, when discussing LBMGs like University of Death or Lost in Time, we have to account for the fact that the game *does* possess a specific triact or area in which it is supposed to be played and that the game does *not* access the player, but rather that the players access the game on their own whenever they are at the game location and choose to actively participate in the play. Games like Lost in Time thus do not operate within the total physical city, but are rather bound to a location where players can have free access to wifi; are single player oriented; and most importantly, expect the player to interact with his physical surroundings.

LBMGs like University of Death and Lost in time should therefore be categorized as single-player strategy games, instead of having them linger between De Souza's terms of Hybrid Reality Games or Location Based Mobile Games. One other specific characteristic I assign to these single-player strategy LBMGs is the combination of a

linear story arc with non-linear ludic elements, as we see in University of Death. These type of LBMGs are different than games like De Souza's "Botfighters," because the ludic challenges serve the plot development within the game, rather than have the game consist solely on ludic challenges. Because of the linear element of these games, storytelling is also expanded.

According to Bunting et al, mobile games, like video games before them, eschew storytelling via traditional linear narrative structures in favor of a nonlinear, cooperative storytelling process. Unlike video games, though, mobile games are uniquely able to extend this cooperative storytelling process into the physical world through the use of location-aware interfaces, enabling the achievement of a new level of player immersion. In mobile games like University of Death and Lost in Time, players are encouraged to implicate places in the physical world as part of their gameworld, while also overlaying elements of the gameworld onto the physical world. By extending the game beyond the screen and into the physical world, these games co-opt the player's sensory experiences of real-world places as potential storytelling tools, mixing the physical and virtual to create immersive hybrid game worlds. This interplay makes the process of storytelling reliant in part on the player's experience of place; at the same time, however, it also alters the experience of place, forcing the engagement into a kind of liminal space that is neither fully the "real" world nor fully the "game" world.

How LBMGs tell stories is thus dependent on the player's interaction with and experience of the cityscape. The focus of the narrative is to have the player journey through the space, and discover things, rather than have a story narrated to him. In film, says Bunting et al, the inevitability and success of struggle in drama is built on the powerlessness of the audience. "Comedy, tragedy, and other kinds of drama flow from the empathy of watching things unfold without agency" (2012, p. 8). In digital games, a player's agency is generally expressed through an avatar, and how that avatar can and cannot translate the player's decisions and actions into the space of the gameworld. However, Bunting et. al believe that the focus of storytelling in such games should not be the player's avatar–due to the impossibility of creating believable, character-driven drama in a storytelling format that prizes player agency—but should instead be the gameworld itself. "Forget the person", he says, "The art of game design is all about the place" (Bunting et al, p. 9).

As stated, when playing an LBMG, the experience of the city changes from a *Dérive* to a *Parkour*. The *Traceur's* or player's experience is now not only sensory based, but is also enhanced with physical and cognitive challenges, as well as fictional details and narrative plots. This brings urban mobile play into the concept of Nunning's narrative worldmaking. The player's attention and awareness are now either heightened or directed at more instances, like for example, during physical tasks, or through visual or aural symbols directing the players focus to particular city elements, narrative clues, or rule enforcements. The experience of the hybrid world, and of the city through an LBMG, thus depends, argue Bunting et al, on the degree of sensory, challenge-based, and imaginative immersion via enforcement of player agency, environmental interaction, directional quality of ludic elements, and discovery of story details.

However, even though Bunting sketches a clear idea of how LBGs operate and immerse players through experience, he does not deepen in on exactly *what* the game makes or should make the player focus on, neither does he elaborate on the functional role the physical world plays within a game. For this reason, I conducted an experiment through which we could better understand how and what kind of experience the player has within the city when using a mobile interface and when playing a game.

CHAPTER 3: GAMEPLAY

In order to understand what kind of experience we receive when playing an LBMG and how this game-experience is different from our "derive," we have to study the game-structure and identify what the game makes us focus on.

Methodology:
I have used two principle methods to conduct my experiment: Text Analysis of the LBMG "Lost in Time," and Reception Analysis of city experience by means of "Lost in Time." The value of these methods lies in the necessity to understand the in-game structure of "Lost in Time" and how it relates to the experience of the city. In the event of identifying in-game elements and narrative structures, I take Bunting et.al as my guidance to which specific elements I should be looking at. Second, I combine physical activity with investigative (in depth) interviews and memory exercises in order to accurately identify and analyse how participants experience the city before and after play. I have limited my experiment to the understanding of localised momentary experience. This means that I look at how the game directly influences the player's experience of the city, not looking at the long-term affects on the player's behaviour and evaluation of the city itself.

Lost in Time:
Lost in Time is about a young boy named Thijmen who stole a time machine in search of his lost Father. This game is a linear game with non-linear ludic challenges. According to the designers, it is the player's task to travel through time, search Thijmen, and bring him back. The game designers intended to create a game, with a general story arc, that could be played in any city in the Netherlands. They intended to motivate the player to walk around in for example Utrecht, discover time portals, and successfully complete puzzles or quizzes in order to linearly progress within the story. Lost in Time combines film fragments with ludic challenges presented on a 2D map of Utrecht. You start off at a wifi point near the city centre and randomly choose time portals indicated on the 2D map.

The game starts from any Wi-Fi embedded point near the game location, where you are introduced to the linear story through a film fragment. Soon after, another film slightly interactive film fragment pops up of a professor (actor) who addresses you as a random *Phoneur* on the street, asking you to help him with an important task, thus inviting you to transform from a *Phoneur* into a *Traceur* or player. The professor, the game, then sends you off into Utrecht city centre, and informs you to walk around in search of red time portals. The time portals are represented as red dots on a 2D 'historical' map of Utrecht. The player can randomly select whichever portal to address first. The game progresses by successfully completing a threefold cluster of time-portal ludic challenges, through which the player is rewarded with linear story progression. Each time a player successfully completes 3 puzzles or physical tasks, he/she gets to see how the story of Thijmen develops.

However, these challenges incited by mini localised stories, have nothing to do with the linear narrative arc. The player has agency in that he can decide for himself which portal to address first, but the specific tasks he has to complete have no other function than to collect portals to progress in the linear story. His actions do not have any consequence on the occurrences, events, and behaviour of the characters in the linear story. The intentions of the game designers were very clear, but the way their information was decoded and experienced was quite different.

Navigation Through the City Space: Empirical Findings

The game doesn't give us any indication to which specific place we should walk, or how we should get there (route). It emphasises GPS locations on a 2D map using red dots, and the player can himself choose which location he's going to address first. On the map, no visual indication is given which of the dots or time portals is more important than the other. When crossing the Dijk in Spakenburg, a player is presented with a log-balancing challenge. All participants memorized this particular challenge, as it was the only task where the game made use of the camera on the backside of the iPad. When performing the task, participants could see their own feet and could see that right alongside two walls were two thin elongated rectangular holes, where exactly a pile of logs would fit, to withhold water from crossing. This made participants understand that placing logs alongside "dijcks" or canals in the way they were performing at the moment, was the method back in history to prevent floods from ruining other city elements or endanger lives.

The same task was performed in Utrecht; however, the camera function was not used. Because participants do not look up from the iPad when balancing the log, they did not get to see the holes where the logs were actually placed to prevent floods in 1781. The participants in Utrecht were not aware of the specific historical implication and use of the buildings; rather, they performed a task to progress in the linear story.

The game has a lot of visual and aural directional elements on a GPS location, such as sounds of a donkey kart crossing or a sign saying "LET OP!" After walking around in search of the GPS location, these particular sounds and signs that popped up whenever a player his a target or time portal seemed to direct the player's attention to the iPad. Players were then notified on a particular task they needed to perform, a puzzle or physical challenge, or were suddenly rewarded with another part of the story of Thijmen.

In one particular challenge, participants had to follow (run after) a trail of cheese left behind by a donkey car, competing against a time-deadline that was even suitable for a 60 year old to stroll towards the goal (GPS coordinate) and still make the deadline. When running, participants continuously looked at the trail on the iPad, only so often looking up to see whether or not they were going to hit something or someone.

Most of the emphasis in the game design is placed on the development of the characters and the story plots. A player only performs tasks, or "chores" as all participants referred to it, to figure out what happened at a certain location (mini story) or to progress within the general story arc and figure out what happened to Thijmen and his father.

An alerting matter during this experiment was that even though Utrecht's city centre was displayed on a digital map, participants were most of the time still confused about their location and could not navigate their way back to the starting point directly after play on their own. They had no sense or idea of where they were and it took a while before they located themselves again, using "Winkel van Sinkel" and the "Dom Tower" as reference points. What is interesting, however, is that after the interview was conducted and all participants were relaxed and drinking, all of them seemed to discuss the events of the mini-stories, wondering if the events that occurred in the game, were actually events that happened in the past. They even talked about how awful it must have been to carry around wooden logs to prevent floods or buckets of water to prevent a fire. Even though the participants didn't like the type of chores or physical challenges they had to complete, they did seem to be intrigued by and imagine how it must have felt like in that period of time. They were actively distinguishing between time periods (then and now) and evaluating the unpleasant physical task as something relevant.

CHAPTER 4: TRANSFORMATION IN EXPERIENCE

After interpreting the data, it can be stated that single-player LBMGs like Lost in Time have a 'cocooning' effect, envelop a paradoxical relation to the concept of 'sense of place,' and actively fight over the players attention with the same physical world that they incorporate and advocate.

According to Chris Speed, our sense of place is constituted through a complex mix of perceiving our body's relationship with architectures, horizons, artifacts, and people. Place is not something that we can just point at nor that we can describe only by drawing or taking a photograph. For this reason he argues that GPS systems and Cartesian models representing spaces (such as digital maps) have people relate themselves to a position on screen instead of the real world, therefore having them 'loose' a sense of place.

When playing an LBMG like Lost in Time, participants, on the one hand, gained a feeling of a "sense of place" through the mini local stories. The combination of challenges with a narrative gave them a feeling of being connected with that area as they learned how that area or those city elements could be used. These mini stories enriched their idea of how the city elements in the challenges functioned within the cityscape by giving them a different perspective on it and having them act on this function as well. Challenges where participants actively 'feel' the function of an element or use a city element in a different way, enhances their imageability as well as the legibility of that specific GPS location. The in-game structure thus created a physical as well as an emotional relationship between the human body and the physical location. The mini stories in Lost in Time made players take a good look around them, and through also using the city elements in a certain way, did they feel connected and informed on a sense of place.

Paradoxically, the continuous Cartesian representation of Utrecht at the same time evaporated the participant's relation to the rest of the environment, creating a "lost" feeling. Participants didn't feel "lost" in time, as the game intended, but lost at their contemporary geometrical position. Interesting is that when participants felt 'lost' during their "derive," their attention and location awareness was heightened in order to correctly navigate themselves towards their goal. However, in this particular instance, participants disregarded looking around at their environment as the motion of their avatar on the iPad screen captivated their attention. The game thus advocated a loss of a sense of place.

What obscured this place sensitivity even more was the lack of elements indicating the degree of importance of certain city elements or events. None of the challenges, in-game events, or used areas of play showed dominance over one another. The player could not feel a relation with his environment depending on the importance of the represented areas and could thus not construct an evaluation about the places he had visited, nor understand at which event or at which location he scored more points or progressed faster within the game.

LBMGs, such as, Lost in Time, that continuously use Cartesian maps as spatial representation, thus foster what Vera Mizoku calls a "cocooning" (2007) effect. Cocooning means 'shutting out' thyself from the physical world by using a mobile interface. Instead of stimulating sensory experience or interaction with city elements, the game 'cocoons' the player, shutting him out from his environment, by directing his attention toward the haptic interface. Lost in Time does not invite an active relationship between the player and the city and limits sensory ability.

Finally, the low degree of player agency, the minimal interaction with the metropolis and the endlessness of the *Parkour* render city elements, and in-game occurrences as nothing more than a specific GPS coordinate. The physical characteristics and other sensory experiences of the city become irrelevant to a certain degree. As Bunting et al shows in chapter two, the degree of player agency consist of the amount and type of choices the player has to make, and how influential his choices are on the behaviour of characters, the development of the game world, and the development of himself in that world. Lost in Time presents but one instance where players have a choice (deciding which time portal to hit next). The lack of relevance or eventfulness of the physical world within the game thwarts an immersive experience and facilitates the battle between the game world and reality over the player's attention.

To summarize, LBMGs inflamed with Cartesian representations, and the game "Lost in Time" in particular, transform the city space from a sensory immerseful "Derive," into a questionable, sensory depriving hybrid *Parkour*, where participants gain an ambiguous feeling of "sense of place."

CHAPTER 5: ENHANCING PLAYER EXPERIENCE—ADVICE TO GAME-DESIGNERS

Methods that heighten attention and raise awareness of city elements and events thus enhance the legibility of a place, as well as people's experience of it. I propose five fundamental mechanisms for the enhancement of player experience within single-player strategy-based LBMGs.

Augmented Reality Function:
The use of the double camera enables game designers to have players visualize the physical world off and on screen. It also facilitates the directing of players attention to elements and events in the game world. The double camera and augmented reality implication (supplying reality with digital information) is essential to supply function and meaning to city elements and events, and this is thus essential to the degree of journey ability through the game-world.

As experiment has shown, city elements, like events in stories, need to have a function, or need to be relevant to a player. In games, it is important to have the player search for the important elements or places in an area by using certain symbols (like in Half Life 2) or visual directional elements that help the player distinguish between functional and non-functional places/elements.

Aural information and the use of music and sound can also be used to direct attention toward a specific physical location. In Black&White 2 for example, the narrator often supplies the player with environmental information, when he came at a new location that helps the player identify and distinguish between elements, symbols, etc, within the new area.

Player Agency:
Player agency has another implication. As lynch and my experiment have shown, attention of participants is heightened at moments of decision-making (during nodes, etc). Thus, if we are to enhance player experience in a game, we need to make sure that we increase the moments of decision-making. It is at these moments that the player is most aware of his environment and of his role and position in it (sense of place). Second, game-designers need to make the player's decisions 'eventful.' Meaning, the decisions the player makes, need to have consequences in the gameworld.

Route Structure:
Game designers should centre their game around a series of high and low imaginable areas. This means that they reconcile which ludic challenges are most relevant, important, difficult, etc, and structure the narrative considering the effects of high or low degree of motion awareness, clarity of dominance of city elements, point of decision making, and the like. For example, structuring the game Lost in Time around the canals has been done to facilitate the story development and use of pre-existing ludic challenges. However, the challenges should be shaped *after* the play area has been measured and chosen, making for better structure of the game narrative and type of ludic challenges.

Secondly, designers should distinguish between one main route option and several minor, less relevant ones. Within this, we have to account for Lynh's "corner philosophy." Structuring the city whole by placing a highly imaginable element around the corner of a minor visible route, results in an 'aaah' moment, a moment of ablaze when citizens walk around the corner and suddenly see this formal spectacle. Therefore, the main route in the game should guide the player 'around the corner' toward a highly imaginable city element or area, where players can also enjoy his moment of ablaze.

Thirdly, a playful area or a moment leading up to completion of a task, should always contain more than one route option (diversity in paths and nodes) as to give the player more agency and heighten his attention more often during his journey through the cityscape.

Narration facilitating goal achievement
The process of weighting and placing emphasis is of great importance when structuring in-game events. Lynch argued that when structuring or ordering city elements into a whole, the city planner need not place emphasis on all city elements, because that is the same as placing emphasis on none at all. Making one element dominant above others within its range enhances the ease of structural visibility. So too must a game-designer create and structure happenings or events. There needs to be a clear variation between highly important events, leading up to greater achievements and epic wins, and less important events that generate necessary small wins. These events need to also be structured around city elements of same degree of importance or dominance, meaning, that an event of high importance needs to be located at a dominant city element or dominant area in order to increase its imageability, memorability, and world-making importance. The highly important events need to have other symbols representing them on a map, or via visual or aural directive methods, to facilitate their visibility, identification, and selection. Placing emphasis on events enhances player attention, helps the player structure his route towards these "epic wins," and eventually enhance the experience of the player. Making in game happenings "eventful" increases importance or that location for players and thus enhances the player's experience of that particular area. Varying between highly eventful and low eventful in-game occurrences is needed to enrich the players overall experience of the game world while playing.

Second, any narrative information, whether a fact or detail hidden within or around a city element, or a plot development narrated through audio visual material (film fragments), should support or function as information that facilitates the completetion of challenges or achievement of goals. It should not function as a reward within single-player strategy-based LBMGs, because it is the journey of the player that is central to world-making and city experience, not the character development of fictional characters. According to Bunting, players want to experience events for themselves, not

see how fictional characters experience or are influenced by events. Interactive media give a player agency, and should thus focus on making the player the central focus, not fictional characters.

Bordering off Game World.
Contrary to what De Souza states, I argue that game designers of strategy based LBMGs need to return to Huizinga's 'components of play' and help the player distinguish between the real world and the area of play. For these single player strategy-based LBGMs a distinct separation of playful and non-playful area is needed in order to educate the player on where he may and may not journey. If a player is to seek and discover the world, having him search endlessly within the physical world not only subtracts him from immersion, like Bunting et al stated; it also confuses him and obscures his sense of place. Bordering of the game world thus enhances a player's sense of place, and so also his experience of the cityscape and gameworld.

CONCLUSION:

Location Based Mobile Games transform the experience of a metropolis from a random, goalless, sensory experience into a flat and platonic, sensory limiting, hybrid *Parkour*. However, the points where the game obstructs immersiveness can be easily traversed by implementing the five LBMG immersion mechanisms: Augmented Reality creation through the camera on the back of the mobile interface, structuring the route to achieve maximum visibility and imageability, increasing player agency, as well as eventfulness of city elements, symbols, and happenings, and lastly, bordering off the gameworld using clear, distinct, visual and aural directional instances.

In this paper, I have tried to display the way our perspective changes when using a mobile interface to play a game and how that experience can be enhanced. A vivid and interactive environment can give people a sense of place that they would normally not be aware of on their own.

However, my research was time and financially restricted, and I have conducted my experiment based on fleeting, momentary evaluations and judgements. Further research is needed on a wider scale to better understand how an LBMG like Lost in Time influences people's behaviour, embedded with critical discourse analysis or political economic starting points to identify in what way the game's ideology influences player's perspective or evaluation of historical happenings. LBMGs are a relatively new concept, however, with the right research, this new genre could have a whole lot more meaning and usefulness for players, designers, as well as random businesses, governments, and city planners.

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[i] Goodman distinguishes between 5 different ways one can world-make or make sense of the world around him: *Composition and Decomposition*—citizens identify and distinguish between symbols, elements, objects, people, and happenings as they walk through a space, making sense of things they've identified and distinguished by either separating wholes into parts (entities and kinds), or by combining entities and kinds into wholes, and reasoning accordingly. *Weighting*, or placing emphasis on symbols, elements or happenings, is also an important method of worldmaking. Rather than being absent from a world, some relevant symbols, entities, or kinds in one world are represented as irrelevant in another. Ratings of relevance, importance, utility, and value often yield hierarchies rather than dichotomies, indicating that it is important to discover why certain entities and kinds are hierarchical higher (more important/relevant/valued) than others. Thirdly, Goodman talks about *ordering*, arguing that orderings include "periodicity as well as proximity, and alter with circumstances and objectives" (p. 9). Modes of organization are constructivist and are thus "*not found in* the world, but *build into* the world" (Goodman, p. 12). *Deletion and supplementation* on the other hand indicates that people often "weed out" some old information and supply their world with new ones, as they tend to overlook certain things often to see the big picture and construct a meaning of an element or thing that needs massive supplementation. We often 'weed out' information we do not think we need to construct a meaning of something. Lastly, Goodman argues that the way people make sense of a world is through *Deformation*, in which certain changes, or changes of state, are reshapings or deformations "that may according to point of view be considered either corrections or distortions" (p. 14).

[ii] A Phoneur is a person actively experiencing visual, aural, and haptic information of a Metropolis (De Souza e Silva, 2009)

[iii] Meanings within a derive are constructed mostly on ones own evaluation, rather than having someone educate the phoneur about the meaning of his experience. Meaning in this sense is also limited to emotional feelings such as likes and dislikes, instead of having city elements or occurrences actually play an active role in or influence the participant's behaviour on long term. My analysis limits itself to fleeting, momentary experiences instead of more solid or influential experiences over a wide range of time.

[iv] An aural occurrence can be verbal information recited by someone or something to the phoneur. It can also be an on-location sound or musical melody, or a specific attention attracting noise.