Body, image and (urban) space. Illusions of the physical presence in out-of-home advertising observation experience through a computer screen

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Abstract: This article aims to discuss the individual's immersive experience when exploring advertising images through a virtual world that reconstructs the visual and structural logics of a real city. This means, that its focus is based on a discussion and reflection of factors that drives the person psychologic dive (outside the screen) into a digital simulation (inside the screen). The decision on studying this communication experience is justified by the visual, corporal and spatial intensity relation among observer, image and space, even when reproduced by three-dimensional technics specifics for the computer screen language. In this sense, when transposed to the virtual universe this interaction so linked to the physical world allows to think about a series of problems/questions, not only related to the advertising image (how does the individual recognizes the message?), but, also, how he/she understands this new notion of materiality, objects, space, body and even the own reality? To this end, through a digital model developed by the author, as research process in a doctoral thesis, concluded in 2013, is recreated with computer graphics and programming the way pedestrian experiences, when walking around a small zone of the city of Porto, Portugal, the aesthetic (scenario) and the semantic (communication) of an advertising billboard affixed to a giant architectural structure in the landscape. As this action is provided to the user through an avatar, as a methodology for the critical debate, more than bibliographical references on experiencing the virtual space (Milgram, 1994; Negroponte, 1995; Kerckhove, 1995; Levy, 1999; Castells, 1999; Virilio, 2000; Manovich, 2001; Thorburn and Jenkins, 2003; Ashbee, 2003; Thomas, 2003; Bolter and Gromala, 2003; Picon, 2004; Cairo, 2008; Zagalo, 2010; Mesquita *et al.*, 2011, and others), the author conducts an exploratory observation in the cyberurbanity, in order to collect data on what is calling his attention to the virtual stage and, more importantly, what are the visual factors (on the interactive screen) that creates the illusion feeling of physical presence (the organic body) in the technological simulation of a space that actually exists in real world (the synthetic landscape).

Keywords: visual culture, immersion, virtual worlds, digital simulation, advertising.

1. About immersive experiences with digital simulations

The digital simulation is no longer something new in our daily tasks. In fact, the representation of physical life through virtual worlds gained such proportions that sometimes even we don't realize acting at a point of intersection between the real and the virtual. Naturally we do perform activities that exist, in places that do not exist. So, we do interact with images of objects that are all and nothing are at the same time. In Picon (2004) words: almost-things.

Within this communicational landscape, some researchers as Milgram (1994), Negroponte (1995), Castells (1999), Manovich (2001), Bolter and Gromala (2003), Accioly (2006) and Coelho (2010), have been addressing a fundamental question: how do we interpret the simulations? Among them, unanimous is the view that handling a wide range of media objects is already common for people (television, movie, newspaper, cell phone, video game, tablet, etc.). And, in some how they agree with the Kerckhove idea – based in McLuhan's theory of media being extensions of Man – that we are false cyborgs, carrying technological devices together to our body. But, this multitude of media devices that accompanies us on a day life no longer appears only as a fruit salad of narratives. Rather, they are responsible to start the construction of “new textualities, new speeches, new representations and interactions thus making it... in a language” (Coelho, 2010, p.17) own of the digital world. However, due to its semiotic potential, a paradigmatic conflict is established for the way we conceive, produce and, more importantly, interpret the human communication, especially when mediated by the machine.

Returning to the starting point of our discussion – the duality in the interpretation of simulation in our lives – is relevant to note the statement of Accioly (2006), that images displayed on monitors assume a new status by distancing themselves from the tail of the fake inside the dichotomy between real-false, to be established in a hybrid point (the almost-things). According to this Brazilian author, for more graphic realism that an image appears on the computer screen, rationally we do know that it is an illusion. However, the semiotic conflict arises when our senses are deceived by the likelihood reproduced of objects (form, scale, perspectives, textures, colors, etc.). An easy example to mentally visualize is the flight simulator that deceives our senses, but never the reason. "Between reason and the senses is inevitably problematic trying to demarcate a stable border" (Accioly 2006, p.12).

Also, is important to understand that, currently, the monitor appears as the main mediator of digital

simulations. And, despite the augmented reality and augmented virtuality are available for application; its existence in the day-to-day is still not really so popular. Still living the moment of screens. Screens are able to mediate a variety of images, but they also act as frames generating a semiotic tension between the feeling of being inside and outside the simulation at the same time (Zagalo, 2010). To overcome this constraint and make the experience with more immersive images generated by computers, communication mechanisms are applied in order to make transparent this gap. Thinking of virtual reality, for example, much of the effort to transport the user into the image's world is associated with the visual illusion: three-dimensional shapes, textures, photo-realism or proportions and scales of objects in the scene. The application of stereoscopy with the use of 3D glasses is another mechanism of transparency that makes the experience of the individual most realistic with the synthetic space. It helps to annul the real space around the user and attaches aesthetics quality to the drawings designed in the virtual space.

At a more advanced context, the body immersion is also responsible to generate immersion in the synthetic scene. Since the movements of the user's body are tracked in physical space and transported to the virtual world, actions within the simulation technology become more interactive, realistic and immersive, completing a fundamental triangulation to the illusion of physical presence in virtual reality (Zuffo, 2006) (Figure 1).

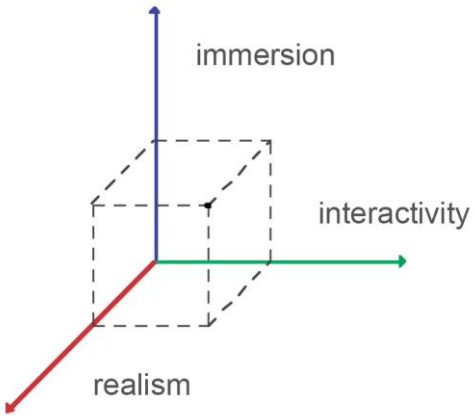

Figure 1: three vectors of virtual reality (Zuffo, 2006)

Nintendo Wii was a company who bet on the paradigm of bodily immersion when launched the console Nintendo Wii. Besides the unification of movement between bodies, virtual reality can includes other important perceptual senses together the vision and hearing, as proprioception or kinesthetic (Figure 2). Both refer to our ability to perceive the own body, including it position in

space, coordination or gravity (Ferreira, 2010).

Figure 2: the organic body gestures integrated with the synthetic one

2. Exploring advertising messages in virtual worlds

The insertion of advertising messages in synthetic scenarios that mimic the structural logic and imagery of cities have been attended with greater intensity in video game platforms and metaverses. Those are cases where the ad format itself remains as in its version of the physical world, once they are inserted into (urban) spaces similar to those of large cities (billboards, posters, etc.) (Figure 3)

This transposition model of advertising format involves the space of the plot and, of course, the movements of a character through space. “Its not doubtful suggest that in hyper-reality the advertising image is consumed by the avatar's eyes, because it is an advanced aesthetic and narrative model, base on modeling, texturing and animating techniques of 3D tools”, (Zilles Borba, 2011). Ramonet (1999 *cit. in* Piccinin, 2009) considers that 3D design is able to re-create a synthesis of images so similar to the real ones that sometimes it's seen more real than the real ones. So, its clear that placing advertising in virtual environments is not only a marketing maneuver that brings attention to brands, but in-game advertising also provides realism on the experience, after all these kind of media images are part of a contemporary city (Ashbee, 2003; Thomas, 2003).

In fact, the general presence of advertising in virtual worlds representing the real urban space structures looks more as an aesthetic-spatial element than a semantic-functional element of the game. It means, it helps to generate immersion because a cognitive order of the physical laws (textures, colors, shapes, perspectives, atmosphere, gravity). Also, the prospect of viewing the

content through first-person (the myself-avatar) creates a fusion idea of the user's vision (outside the screen) with the character (inside the screen). In third-person perspective (the it-avatar) there's a gap in the ludic relationship between the organic and the artificial body. However, this second one provides a better sense of the all around visual scene being explored.

> "In a Formula 1 racing video game simulation, for example, the boards of sponsors displayed around the track would have the same importance for the game plot composition as the user interaction with the object (the pilot with the car). Of course, drive the car is a key to the success of the game, but the noticed details make all difference when talking about the construction of user's involvement with the virtual reality. In short, the audio and visual elements could work as mechanisms of transparency (sound of car engine, stands with an audience, advertising on billboards around the track, pits and equipment with detailed mechanical, etc.)", (Zilles Borba, 2011, p.7).

The same could be applied to a football, tennis or any other sports practice simulation when transposed to a virtual environment. The arenas, pitches, grids or tracks would pass by the same process. It means, them all could receive advertising images, posters and billboards to reinforce the spatial configuration and, also, the idea of physical presence inside simulation, the synthetic space, the illusion. And, of course, to give brands a window to do marketing communication with a specific audience.

Figure 3: in-game advertising samples

3. A digital model to explore the out-of-home advertising

Based on theory exposed, and in order to format a tool that makes professionals and researchers actions more agile, performative, complete and connected, we developed a digital model to explore the communication variables in the experience among individual x advertising x city (Figure 4).

This prototype was developed as part of the author's PhD thesis in Information Sciences, at University Fernando Pessoa, with a Doctoral Grant supported by the Foundation for Sciences and Technology (FCT) of the Portuguese Government.

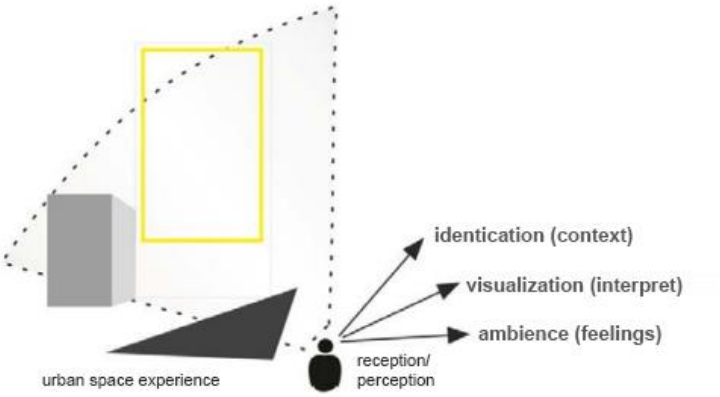

Figure 4: relationship among individual x advertising x city (Zilles Borba *et al.*, 2012)

In this instrument we followed some assumptions: graphic realism (city and urban space design), informative potential (advertising data), perspective and camera movements (the way individual visualizes, the body position). Rather than generating data for the study of the poster, there was a concern in generating immersion feelings. It means, the feeling of being present in the cyberurbanity, being properly the synthetic body, the avatar. Thus, we do present how the digital model was developed: a) aesthetic-spatial construction, through the creation of a graphic scene, reconstructing the interaction sphere with the out-of-home media (individual x advertising x city); and b) semantic-functional construction, through the representation of digital contents about the media reception experience, in order to enhance the approach/research/consult to the advertising message (metadata) (Zilles Borba, 2013).

The aesthetic-spatial construction was guided by a “mix of methodologies related to the creation of 3D worlds, such as: video games, cybercities and metaverses (Zilles Borba *et al.*, 2012, p.206). Each one indicated characteristics to meet the needs of representing the various components that make up the advertising space. The following steps for modeling the experience were followed:

- **Ground limitation:** to limit the geographical area of the city to a small space encompassed within the sight of the billboard's receiver, thereby limiting the city virtual simulation to a specific area of the metropolis (Bertol, 1997);

- **Buildings and textures:** based on the simulated terrain, to lift architectural urbanizations and natural elements that influence the field of vision (Ishida, 2001; Thorburn and Jenkins, 2003; Cabral *et al.*, 2007).

The semantic-functional construction was conducted by the selection of narratives that help to explore the advertising communication details (location, color, scale, audience flow, etc.). In short, we use interactive and multimedia infographics, web animations and database resource (Cairo, 2008). Developing the model also involved the environment interface organization. So, the following tasks were pointed to optimize the experience (Zilles Borba *et al.*, 2012):

- **Exploration of virtual image:** create digital narratives responsible to complement the users experience with the advertising space, proposing extensions that enhance and summarize particular aspects of each communication element (metadata) (Mesquita *et al.*, 2011);

- **Organization of the virtual environment:** define the system architecture, the hierarchical sense of the organization of its content, navigability and usability (Lévy, 1999; Castells, 1999; Virilio, 2000; Mitchell, 2000).

But now, after finished the digital model (Figure 5), what really takes us to format the illusion of living in the virtual worlds? Lets develop this question in the next chapter.

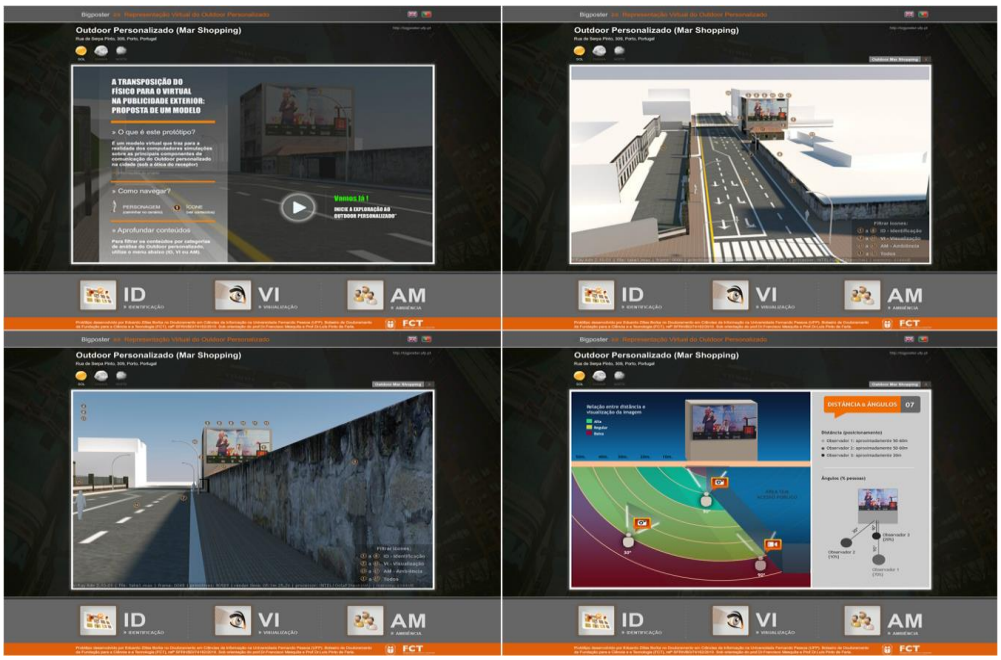

Figure 5: the digital model to explore the out-of-home advertising (Zilles Borba, 2013)
(see the full prototype in www.ezb.com.br/prototipo)

4. Formulating a research question

The main objective of this essay is to develops a discussion based on the immersive experience when exploring advertising images through a virtual world that reconstructs the visual and the structural logics of the real urban space (the city space). So, it seems important to understand which are (if they exists) the factors driving the person's psychological dive (outside the screen) into a digital simulation (inside the screen).

It is important to understand that the simulation experience selected is rich in three aspects: visual, corporal and spatial relation among observer (the user), advertising message (the image) and urban space (the scene). So, a few questions related to the advertising and the immersion feeling with the simulation are launched: how does the user understands this new notion of materiality, objects, space, body and even the own reality? And, also, how does he/she recognizes and receives the advertising message in the technological experience?

5. Methodology

To develop a reflection about the illusions of the physical presence in out-of-home advertising observation experience through a digital model based on computer screen images an exploratory observation was conducted by the author. It means, using the digital model developed specifically to explore the advertising (the prototype exposed in chapter 3) the researcher himself assume the common user place, guiding an avatar through the cyberurbanity.

The main objective of these sessions are to collect qualitative data on what is calling attention inside the virtual stage and, more importantly, what are the visual factors (on the interactive screen) that creates the illusion feeling of being inside the synthetic landscape with the organic body.

6. Analyses and reflections

As described in the methodology, the author applied exploratory observations to collect qualitative data about the experience with a digital model constructed specifically to explore the advertising images affixed in the architecture of urban spaces. The focus was to understand which are the mechanisms responsible to create the feelings of immersion with the virtual images.

At first, the visual perception was identified as the most important mechanism to create any idea of the individual presence inside the cyberurbanity. The three-dimensional representation of the urban space – a slice of Porto's city in Portugal – was responsible to develop realism sense. So, it also means, the shapes, forms, shades, colors, lights, textures and scales helped the user to fell like in the real world. Maybe it was to most realistic element of the digital model proposed here. Even the advertising billboard affixed in the urban architectural was kept as its original version. And, this choice was fundamental to develop a better illusion of the real in the virtual, because even some failures of the marketing communication on the advertising piece were in the simulation (*eg.* low contrast between text and background) (Figure 6). Somehow, it is important to underline that recreating the sphere of interaction between individual x advertising x city was much a aesthetic-spatial work than a semantic-functional one. We mean that, to visualize a space configuration with similar characteristic to the physical urban space was a very important maneuver to brings any immersion feeling and to create a cognitive experience of exploring the space (rather than learn the machine *modus operandi*).

Figure 6: 3D realism on the visual exploration

The experience of consuming the advertising message was identical to the visual experience we do have when walk through the streets and look to a giant billboard. Anyway, as we're talking about a digital model, more than 3D representations were developed. It means, in the three-dimensional scenario to watch the billboard image was nothing more than a mimic reproduction of the visual contact people do have when passing by the communication vehicle. And, of course, it was

imperative to user feels likes a passer-by. But, we're talking about digital technologies, characterized by hypermediality, multimediality, interactivity, ubiquity, memory capacity, information speed, personalization, so more than the aesthetic and design could be developed to explore the advertising message. Moving away from the aesthetical-spatial elements, and approaching to the semantic-functional elements, the digital model to explore the out-of-home media worked as well as an information tool able to provide details of the real experience inside the virtual one. For example, using 2D animation and infographics the prototype shows to the user which, where and how the predominant colors in the advertising poster are. Same about the scale, when more than a technical illustration explaining the height, width and length, the visual experience goes for a data comparison (Figure 7). We do believe this kind of visual data are not responsible to create an immersion feeling, especially because they're graphics, schemes, and infographics. But, on the other hand, they create a hyper-realistic experience, 'cause reveal patterns and data maybe couldn't be seen in the most sophisticated 3D representation. It is possible to envision these resources as a metadata experience with the advertising message, which actually is more useful content for professionals and researchers of advertising than to the common user.

Figure 7: infographics to explore the advertising details

Also, the representation of the body's user was an imperative communication technic to create illusions of the physical presence in out-of-home advertising observation experience through a computer screen. Indeed, to explore all we have talking about (the space and the advertising) we needed to borrow a prosthetic body inside the synthetic world. So, exploring the virtual space

through a third person perspective could not give the user the real feeling of participating in it. In somehow, the decision on taking the avatar's eyes as the own user eyes was a wise idea. To visualize streets, bus stop, walls, buildings, signs and, of course, the giant billboard by the avatar perspective was one of the most important communication solutions on this model. Together with the 3D space realism, we could say this camera perspective creates a narrative responsible to urge the conflict of simulation is real or virtual, reinforcing the semiotic notion that sometimes digital simulations can be seen in a point of duality between true and false, assuming a kind of hybrid materiality (the almost-thing).

7. Conclusions

Remembering the first figure in this article, we can concluded that in the out-of-home advertising observation case, the realism and the interactivity are imperative elements to creates an illusion of physical presence in the virtual world. More, both together are responsible to optimize the user immersion feeling (outside the screen) into the simulation (inside the screen). Anyway, when we talk about screen, it's clear that only the psychological dive commands the experience. It means, even if there's the attention to represent the individual body through an avatar and the cameras representing its eyes perspective (first person vision), the full body doesn't really feels inside the synthetic space. So, was concluded the visual perception is the key element to produce moments of illusion in penetrating the virtual world. This is possible because the three-dimensional design techniques. They bring realism to the image (perspectives, forms, scales, colors, textures, etc.).

Also, was concluded that the semiotic feeling of living in a hybrid simulation (it's false and it's true at the same time) is possible only when the user navigates through the 3D spaces. So, only when he/she experiences the aesthetic-spatial elements. And, more the user search for data about the experience, more unrealistic the scenario gets. So, also, less immersion he/she gets. As final conclusion, is possible to underline the out-of-home advertising experience through a digital model is an great instrument to study, understand and problematize the advertising message reception in the city. Anyway, it has moments of immersion, not all the time, but always leading by visual experiences.

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