Towards an understanding of Augmented Reality's implications in the mediation of human inhabitation of contemporary public space: A critical approach

Abstract

Augmented Reality is a technology that enhances a user's world by creating new layers of information on top of the real world: both sonic, visual and spatial. Even though this technology has been around for at least 30 years, it became massively accessible only since mobile devices are able to accurately understand the space around them through the use of gyroscopes, accelerometers and compasses, and process the data extracted from these sensors in real time.

Through AR's technological capabilities, new realities can be displayed on top of the real world, as the game Pokémon Go brought the show's monsters to real life taking an unexpected amount of players to the streets in 2016. Similarly, Instagram and Facebook's AR filters have allowed users to create new narratives using human faces as canvas. These novel ways of experiencing reality have definitely affected our routines by approaching new patterns in which we use physical and virtual space, as the case of Shayla Wiggins who discover a human corpse while attempting to catch a Pokémon in 2016 in Riverton, Wyoming[1].

Physical space is where AR makes sense, and it's also where technologies mediate how humans move within it, since the mobile phone has become an essential device in our everyday life. Thus, it is fair to ask: *can Augmented Reality reconfigure the interaction between humans and urban public space?* Particularly, it is of great interest to this investigation understand *how is technology modulating human understanding of urban public space?* And, *what are the implications of the use of Augmented Reality as mediation agent in the interactions between humans and the urban public space?*

[1] Greenfield, A. (2017). Radical technologies: The design of everyday life. Verso Books. *p: 63*.

Introduction

We have the space, we have the city. The city has been planned and designed to accomplish human necessities, to provide basic resources and to protect us from natural threats. We inhabit the city, we interact with its structure, we commute through its planned avenues and we meet in its designed squares. We live in the city and become witnesses to its functioning, in which exchanges of decisions and commodities dominate over social relations and uses.[2]

The city's public space consists of a complex entangled of relationships, transactions, structures of domination and fluxes of information. It has been designed with the purpose of accomplishing specific goals in human organization: it is a social and political product[3] more than just an urban design, while at the same time it is the immediate reality, the practico-material of the urban[4]. According to Lefebvre, in the post industrial revolution era we passed from the production of things in space to the production of space itself[5], which means economic transactions were optimized among space. This production of space has reached an unforeseen level in the contemporary globalized world, with more and more dense networks –both wired and wireless– that improve human communication and economic transactions, but also shape the city.[6]

Technology has mediated the planning of human settlements by prioritizing certain places at the expense of other ones. When water pipes replaced aqueducts the fountains lose the social relevance they had, becoming the square a new social gathering point. Similarly happened during the construction of U.S. interstate highways that connected small towns with bigger commercial nodes –and thus pushed the first's economical development– whilst isolated the non-connected ones.[7] Nowadays, public space usage is affected by information accessibility, which means access to wifi connection, high speed cellular signal, or a stronger presence in Google Maps: the more interconnected a space is, the more visited it may be.

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[2] Borden, I., Rendell, J., Kerr, J., & Pivaro, A. (2001). Another pavement, another beach: skateboarding and the performative critique of architecture. MIT Press. *p: 185.*
[3] Elden, S. (2007). There is a politics of space because space is political: Henri Lefebvre and the production of space. Radical philosophy review, 10(2), 101-116.
[4] Borden, I., Rendell, J., Kerr, J., & Pivaro, A. (2001).
[5] Ibid
[6] Mitchell, W. J. (1999). e-topia:" Urban life, Jim—but not as we know it". MIT press, 1999. *p: 11-29*.
[7] Íbid.

Since the appearance of the smartphone in 2005, this device has affected all aspects of our lives, from the payment methods we use, the assistive technology we use to move in the space, the music streaming service we pay for, to a high resolution camera that immediately convert us into mediatized photographers of our own.[8] Then, the smartphone has become a prostheses for our everyday life actions, not only as an extension of our hands but of our minds: it has become the GPS, an entaintaner and the bridge with our loved ones. The smartphone is the element we rely on to access the network to accomplish ordinary goals, and because of that it has dematerialized not only the space we live in, but the actions we make on it.[9]

In this regard, the development of high speed internet protocols and smart portable devices, as well as the development of high speed computation capacity, has created a complex network of smart places[10] –dual spaces mapped both by physical and IP addresses– and human/cyborg that can interact with them, exchange personal data, and receive advice on how to move in the physical space. This, considering the cyborg as the representation of a mixed being, the transition between two states: is a mixture of an animal and a machine. In this regard, a cyborg can be the ultimate representation of post-humanism and post-naturalism, is in between human and nature, is both at the same time.[11]

Thus, we are now beings who inhabit a space now perceived through a new layer of interpretation delivered by mobile technology.[12] We perform spatial trajectories among different neighborhoods by which we execute a linguistic exercise of re-assigning meaning[13] to this mental map of the city that lack of meaning[14]. We commute from one space to another, getting connected and disconnected from different network access points and exchanging different types of data by checking-in on apps like Facebook, Instagram and Google Maps –among others– and posting personal content.

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[8] Greenfield, A. (2017). *p: 9-22*.
[9] Íbid.
[10] Mitchell, W. J. (1999), *p: 31-32*.
[11] Haraway, D. (2006). A cyborg manifesto: Science, technology, and socialist-feminism in the late 20th century. In The international handbook of virtual learning environments (pp. 117-158). Springer, Dordrecht.
[12] According to Elden's interpretation of Lefevre: *"Our mode of reaction to space is not geometric, only our mode of abstraction is. There is an opposition established between our conception of space — abstract, mental and geometric — and our perception of space — concrete, material and physical. The latter takes as its initial point of departure the body, which Lefebvre saw as the site of resistance within the discourse of Power in space."* Elden, S. (2007)
[13]De Certeau, M. (1984). The Practice of Everyday Life: Michel de Certeau. *pp: 91-114*
[14] Borden, I., Rendell, J., Kerr, J., & Pivaro, A. (2001). *p: 183*