Post-virtual Geophilia

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Abstract: This paper examines the emergence of increased hybridity in our experience of spatiality, in physical and virtual space. I argue that locative media acts as a cognitive extension of our mind and this realm of the so-called "extended mind" purported by Andy Clarke affords an extension to our body into the virtual realm. This reciprocal function between the extended mind and extended body allows for self-correction and self-consciousness in space and can be understood as a kind of feedback loop. Our interaction with locative media is perpetuated by this feedback loop that allows the body to adjust its operation according the interconnectedness between the actual and virtual. This synchronous feedback loops between three spaces: (1) mind or the mental space, (2) reality or the physical space, and (3) virtual space. My aim in this paper is to provide a new context in which to interpret the notion of geophilia – the love of the earth, by examining the geographical proximity of locative media. We shall then see wider aesthetic implications of the hybridity in locative art.

Keywords: locative art, locative media, feedback loop, embodiment, post-virtual, geospatial

Received Jul. 14, 2016; revised manuscript received Aug.07; accepted for publication Aug. 09, 2016; published online Aug. 31, 2016. DOI: 10.15323/techart.2016.08.3.3.1 / ISSN: 2288-9248.

1. Introduction

Yoon *et al.* described the post-virtual as a metaphysical entity that resides in the computer for a material object in the post-virtual is non-existent in reality even though it manifests in physical form [1]. The metaphysicality in post-virtual reality is defined in an ontological sense: the "post-virtual is an entity in reality from the virtual, in which the output of media artworks follows the physical condition based on physical computing [1]". On the other hand, the metaphysicality of the post-virtual can also be clarified with a philosophical notion when we contemplate the cause and effect of this entity. This metaphysical entity's niche in post-virtuality is also evident in locative media artworks whose existence in the physical domain originated from the virtual domain. The sense of place that is elicited from this kind of creative endeavor is only a human perception of space, in both physical and virtual domains. For instance, when we are navigating or finding our way in physical reality with the assistance of locative media, we are encountering an interlocking of virtual position and physical position, with which we maneuver in space, by calibrating both of them. The result is a seamless experience that requires us to merge the virtual and physical as one. This exemplifies what Mark Hansen [2] called mixed reality, which is also referred to as hybrid reality, similarly connoting the merging of real and virtual worlds for real time interaction. This concept can be traced back to Steve Mann's concept of mediated reality [3] as implemented by various wearable systems he created as early as the 1970s. Today, mediated reality purported by Steve Mann can be experienced by using a smartphone, as the smartphone is becoming the singular, ubiquitous computer. Since the late 20th century just about every aspect of our real life experience has a virtual counterpart, yet, just as anything reaches its extremity it reverses its course. We notice what Yoon *et al.* called "a repatriation of the virtual" to the physical in his paper that introduced post-virtual as the second phase of media art [1]. Locative media aligns with this phenomenological development of media art when it repatriates to real life, providing an added metaphysical dimension to an ordinary embodied movement. Therefore, locative media artwork, which taps into this tendency may be regarded as geophillic, demonstrating its geographic proximity over virtual proximity.

2. Geophilia of Locative Media

Locative media articulates its specificity to geography through geographically contextual authoring and experience of media content. In their attempt to build a bibliography and taxonomy for locative media, Bleecker and Knowlton sketched out locative media with a connection to the earth. The purpose of locative media, writes Bleecker and Knowlton, is about "creating a kind of geospatial experience whose aesthetics can be said to rely upon a range of characteristics ranging from the quotidian to the weighty semantics of lived experience, all latent within the ground upon which we traverse [4]." Locative media harness the capacity of Geographic Information Systems (GIS), e.g., Global Positioning System (GPS) and Google Maps that is ubiquitous in mobile devices for "site-

specific capture, tagging and display of media content [5].” The technological framework of locative media is tied to the GIS. Tracing the development of GIS, Lo and Yeung explained the semantics of “geographic” in GIS: “The word ‘geographic’ carries two meanings: ‘Earth’ and ‘geographic space’ […] By ‘Earth,’ it implies that all data in the system are pertinent to Earth’s features and resources, including human activities based on or associated with these features and resources […] By ‘geographic space,’ it means that the commonality of both the data and the problems that the systems are developed to solve is geography, i.e., location, distribution, pattern, and relationship within a specific geographical reference framework [6].” The emerging locative media reinstates the importance of place and acts as a counterpoise for the “placelessness” advocated by the cyberneticians. By the same token, we purported that this new field of media art has precipitated media arts into geophilia – a love for the earth.

A. “Geo” Hyphenation

The geographical reference framework in locative media makes locative media artwork unique among media arts. In their survey on the chronological history of locative media, Bleecker and Knowlton pointed out an early approach in producing locative media is what they called a “hyphenation” approach in which an existing (media) practice is augmented with location awareness or location-enabling-technology, thereby earning them the *geo-* prefix and resulting in a hybridity in the media expression [4]. Given the already proliferating media landscape, geo-type media hit the domain of everyday users amid a storm of Google Maps hype [7]. According to Bleecker and Knowlton’s taxonomy of locative media [4], we can outline at least six geo-types of locative media:

1. Geo-Storytelling
2. GPS-Drawing
3. Geo-Graffiti
4. Geo-Caches
5. Geo-Note Taking

As a matter of fact, the hyphenation approach involves a breadth of practices and techniques of geo-referencing existing and established media. Hence, it is hard to capture the prolific geo-types of locative media within one list.

3. Between Cognition and Reality

Most locative media rely on maps as graphical interfaces to present databases of geographical data, such as longitude and latitude. In human culture, maps have a very long history as a symbolic representation of the spatial environment. Maps follow the law of both reality and imagination just as the post-virtual is an entity in reality from the virtual. Hassan calls maps our supreme fictions of the world, the surveyed side of our dreams [8]. Extending from Hassan’s view of maps, maps are not only tools of the eye and extensions of the foot [8], but also imagination in cognition. In tracing the origin of mental maps, Huth laid out much evidence that demonstrates our mind’s capability to assimilate, store, and recall what are effectively mental maps [9]. Shido refers to the mind as noetic space, which simulates our reality space wherein movement can be planned, tried out, revised, recorded, and erased. The notion of transvergence allows our mind to hybridize, to extend, and to actualize blueprints in dynamic interactions [10]. Herein, cognitive mapping denotes a process that takes place when a mental map is created in our mind. This appears to be an intrinsic ability. The well-known experiments of mapping the brain of rats by neuroscientists John O’Keefe and Edvard Moser, which led them to the discovery of place cells and grid cells in our nervous system, respectively, suggest a fundamental linkage between our brain’s memory function and perception of space. Speculating on Clarke’s notion of extended mind, the spatial consciousness elicited from cognitive maps loops out into the world and gets recorded in a medium, such as a map. Today maps appear as digital code, available on any digital interface, which can be considered a simulation of their creators’ mental map.

These days, digital maps have benefited from, and work in tandem with, GPS technology to extend our conditions of perception. They are instrumental in shaping a new space-time consciousness or, perhaps, unconsciousness. In this “No man’s land,” [1] the body loses all references: inside/outside, giant/miniature, spectator/object, part/whole [11], echoing Richards’s description of her project titled Virtual Body. Descartes’s Cartesian view of man is simultaneously the subject and object of thought. Observation is useful to elucidate this duality, but the problem of the mind and body has progressed in the neuroscientific understanding of the brain: the discovery of place cells and grid cells in our hippocampus accentuates the qualities of embodiment and it has the merit of being able to account for the view that locative media is an embodied media. The corporeal user is the active instigator in this technology, instigating the dispersion of events.

4. Between Reality and Virtuality

Technology affords us the ability to confront a world that is formed at a point where physical reality intertwines with virtual layers. In his revelation of Russell’s Headmap Manifesto, the alleged precursor to locative media, Zeffiro disclosed Russell’s vision on the social and cultural implications of location-aware devices, “these ‘location-aware’ devices would interact within the physical world such that computational relationships would no longer be confined to the computer screen [12].” As Zeffiro details, this shift in computing would simultaneously mark a shift

[1] This term commonly connotes a land that is under dispute between parties who leave it unoccupied due to uncertainty, especially in war zones. In this context, I refer to a digital map in locative media as *No man’s land* to suggest that (1) it is uninhabitable, and (2) it presents the representational politics of the demarcation of lands in cartography.

from an inside view towards an outside view, what Russell unapologetically describes as "a recolonization of the real world [12]." Bolter offered the transparency and immediacy concept for this effect, widely adopted by augmented reality or mixed reality technology. The underlying technology, such as GPS tracking, ubiquitous computing, and the enhancement of display technology, ultimately pushed locative media towards transparency and immediacy. Transparent digital applications seek to get to the real world by bravely denying the fact of mediation [13]. The development of media is motivated by an increasing appetite for an unmediated relationship between the user and the represented object. It justifies how we can easily anthropomorphize the "blinking blue dot" on any map interface that represents our current location and project ourselves onto it. Writing about virtuality, reality, and digitality, Munster claimed that virtuality does not exist in the realm beyond or transcend corporeal experience [14]. Rather to draw an analogy from Jean-Jacques Rousseau's "alert reverie" as O'Rourke did, locative media experience in a psychogeographical sense, is a kind of double presence that is both in the here and now and in the imagination [15]. With locative media, we witness actual movement through real space translated into corresponding movement in the virtual world. Our habituation to corporeality and embodied movement is responsible for this reification. Munster claimed this form of duplication does not resemble reality, rather it corresponds with the actual sensory world that is subjected to fluctuating degrees of variation, the general mutability and contingencies of sentient life [14], (which can be captured by various sensors forming a perpetual flow of data) one which does not transgress the geography. Thus, we often find geographic data in locative media supplemented by other data captured by gyro sensors and accelerometers leveraging on our proprioception, suggesting the corporeal dimension of virtuality.

5. Geoscape: Negotiating the in-between

Echoing post-virtual theory that purported information has a material property, the post-virtual allows us to experience locative data as a tangible element. The post-virtual theory postulated a phenomenon negotiating the in-between: the geographic proximity and virtual proximity of locative media are not mutually exclusive. The tension between geographic/virtual of locative media cannot be constructed as a choice of either/or, but rather has to be understood as a new reality of "both/and," as Yoon *et al.* says, "the ephemeral repatriation of the virtual is neither the virtual as it was, nor reality as it was – it is a new reality [1]." In this sense, the new reality that we inhabit resonates with Miller's notion of "geoscape," which he defines as the planet's life zone, including everything that lies below, on, and above the surface of the earth that supports life [16]. He asserted that most data, at some levels, is spatial and that all type of data (physical, biological, social, cultural, economic, urban, etc.) can be geo-referenced [16].

Now I turn to the practice of three media artists working in locative media technologies to explain more discursively the extension of our geographic space. The public sculpture *Data Cloud* (Fig. 1) created by Jeremy Wood, the pioneer of GPS drawing, is an overt example of locative artwork that is located in the new geoscape, annexed to many different stacks of reality. *Data Cloud* is composed of public benches all at different heights and positions, overlapping and intersecting with each other and with the ground like a visual glitch [17]. It illuminates the discrepency between our geospatial data and our actual whereabouts. Inevitably, it lures viewers into a hybrid space conjured up by cognitive space that enables a metaphysical speculation, a physical space where the viewer is habituated and the virtual space where technology thinks the viewer is. This underlines the fact that these spaces are nonetheless imbricated.

Fig. 1. Jeremy Wood, Data Cloud, 2008. Public sculpture exhibited in Beatrixpark, Amsterdam for the Checking Reality exhibition at Platform 21. (© Jeremy Wood)

Aram Bartholl's public installation *Map* (Fig. 2), which has been installed in multiple city centers since its inception in 2006, transcends the boundaries between what we see on screen and what we see in reality. The installation comprises a life size red map marker that we find on the ubiquitous Google Maps interface. The size of the life size red marker in physical space corresponds to the size of a marker in the web interface in maximum zoom factor of the map [18]. *Map* suggests a perplexing perception of reality ramified by the increasing influence of locative media in our daily life, where we see digital data annotating the physical space.

Fig. 2. Aram Bartholl, Map at Kasseler Kunstverein, "Hello World" solo show, 2013. (© Aram Bartholl)

Geotagging provides a linkage of information with location. By doing so the media content will be overlaid on real-world settings and can only be experienced by users equipped with mobile phones or other mobile device with GPS and media playback capabilities at the same location. Hemment used the metaphor of "person as 'cursor'" to explain that the navigational structure of media content digitally annotated in the world is predominantly a database with the environment itself turned into a medium and interface for browsing [19]. This metaphor is taken literally by Sebastian Campion to bring the *Urban Cursor* (Fig. 3) before the public in Figueres, Catalunya in Spain. *Urban Cursor* is a GPS enabled sculpture in the form of a three-dimensional computer cursor that can be used as a bench in a public space [20]. *Urban Cursor* responds to input from people touching it and moving it around the city, analogous to the cursor movement in a computer screen. The trail of *Urban Cursor* throughout the city can be seen on Google Maps. On the map, you can also find photos uploaded by participants. The photos are spatially arranged by matching the photo's digital time stamp with the GPS coordinates of *Urban Cursor*. *Urban Cursor* is partly in the physical space and partly in the virtual terrain, but the sum of all parts is reconstructed in totality in what O'Rourke called a "hybrid datascape [15]" – a synthesis of digital and embodied world.

Fig. 3. Sebastian Campion, Urban Cursor, 2009. GPS enabled public sculpture placed on a public square in Figueres, Catalunya in Spain during the festival Ingravid (© Sebastian Campion)

6. Conclusion

Locative media is modifying our relation to spatiality. Our daily muse in cognitive space and our daily lives on earth and in cyberspace are inextricably linked. As Richards' *Virtual Body* suggests, the heightening of corporeal and affective experiences through the very dispersion of bodily location has become a key aspect of information aesthetic [14]. Information arts put forward by Stephen Wilson has transgressed its virtual boundaries into physical reality. With the locative media as affordance, locative art permits us a re-evaluation of the aesthetic of reality, guiding us to see virtual as reality and vice versa. This hybridity brings a new dimension to Land art pioneered by much-celebrated land artists such as Robert Smithson, Hamish Fulton, and Richard Long. I claim that locative art continues the legacy of Land art to celebrate the harmony between the landscape and art and to protest against the perceived artificiality of modern art, but transgressed to give way to the virtual world. Half a decade after the Land art movement, we see the earth is newly exposed to various layers of reality that is not just virtual, but also cognitional and philosophical. Locative artists are exploring a new reality by assembling different layers beyond our familiar environment. Their creative endeavors can facilitate our contemplating where we can locate ourselves in the age of cybernetics.

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