

Spatial Awareness in Locative Media Projects

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Abstract

This MRP focuses on the different applications that location technologies take part of such as, free based navigational systems like Google Maps, and Locative Media art projects; and analyzes their impact on people and their experience of space. By determining that Google Maps and Locative Media are on different sides of the spectrum of location technologies, I suggest that they are developing different territorial discourses through the use of digital mapping. I suggest that Google Maps is developing a territorialization of space by modifying the way in which the body recognizes space, by creating an image of the world that is designed towards a single user—the Google user—and by imposing itself as a map that is able to represent space. Using a theoretical approach towards understanding these effects, I then analyze three Locative Media project that challenge these ideas, they are: Cary Peppermint’s project “Indeterminate Hikes,” “Megafone/Montreal in*accessible” by Antoni Abad, and “Amsterdam Real Time” by the Waag Society.

Keywords: Google Maps, locative media, thirdspaces, mapping, deterritorialization.

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Dedication

To my sister, my loving voice of reason.

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Introduction

When I came to Toronto for the first time, I did not know how to move around the city and so I became an avid user of the self-location software Google Maps. Without it, I would not have been able to travel from my house to school because the distances were too great and I'd become lost. As time went along, and I became accustomed to the city and its places, I noticed that I had come to over rely on the technology—I had been using and was prioritizing my sense of vision over the rest of my senses. This led me to ignore the journey that connected point A to point B, while also leading me to second guess my instinctive decisions to move around the city when my instincts were not confirmed by my companion Google Maps. I was not paying attention to my daily journey and I continued to perceive myself as a tourist in a city where I had been living for over three months. My inability to relate was not only a problem of attention but of disembodiment; I was depending on my phone so much that even my experience as a pedestrian was altered. I was more vigilant about the instructions on my phone than about noticing my own body while I walked, and that increased my feeling of being out of place because, at moments, I would miss sites that were not shown on my phone. Was my disengagement with my spatial surrounding a result of my interaction with Google Maps?

Although I recognize the existence of other navigation systems apart from Google Maps, such as Bing Maps and OpenStreetMaps, I want to emphasize the pervasiveness of Google Corp's Google Maps software. Google Maps is a digital mapping service developed by Google that first appeared in 2005. It offers satellite imagery, street maps, panoramic views of streets, real time traffic conditions, route

planning for traveling and indoor maps of major buildings in the world. According to visual critic Anna Munster, Google is based on the logic of ‘making the world searchable’ and the corporation’s prevalence in our virtual lives has made us adopt that same ‘language of search’ into our physical lives. The act of ‘searching’ is a process of ‘cultural transcoding,’ which Lev Manovich defines as “the passage of values, language and concepts between digital structures and mass culture”¹ where we bring our virtual behaviour out into the physical world. In the case of Google Maps one might say that through location searching, digital values such as thinking of space as an image, are passed on from the virtual into the material world. This new language of searching is tied to the level of accessibility that Google has granted its users, which—born from its own mission statement of “making the world’s information universally accessible and useful”² —generates the assumption that Google can provide unlimited access and information to the world. Furthermore, the phrase ‘to google something’ does not only refer to obtaining information from the world wide web by making use of Google’s search engine, but— with the help of location technology— it also means being able to find it in the material world.

Through this MRP, I aim to conceptualize the role that Google Maps is having on the territorialization of space through the use of digital map making technology where location has become another layer of information in Google’s database. I suggest that Google Maps is territorializing space by changing the logic of how people move through space and how they relate to it, since the use of the program is a mode of being subjected to the control of Google corp. Hence, the

¹ Lev Manovich, *The Language of new media* (Massachusetts: London, 2001) 7.

² Google, “About Google”, accessed April 2, 2016, <https://www.google.com/intl/en/about/>

‘Google territory’ operates as a space dominated by the services that are displayed on the screen in which the borders of that territory exist between what is being shown and what cannot be seen; an example is the case of a local fruit shop and a Starbucks, where the local fruit shop is not likely to pay a monthly fee to Google and thus does not appear on its map.

Due to the ubiquity of location-aware mobile technologies, locations are no longer secondary conceptualizations of places, but have developed to take on "complex, multifaceted identities that expand and shift according to the information ascribed to them."³ Locations are now imbued with meanings that continuously change due to the different interactions that users have with them and act as an important feature of places by attaching cultural and emotional significance to them. However, for software like Google Maps, location information is more about tracking its users and defining what their needs could be in order to locate them in the path of that product, than about producing a space that is focused on how it is socially constructed.

The production of space is a concept that was born out of the so-called ‘spatial turn’ that took place in the social sciences and humanities in the 1970s. This conceptual turn insisted that space is a social production rather than a neutral stage or background where activities take place. The production of space, according to urban theorist Henri Lefebvre, deals with the relationship between people and space, where space is something that people produce together and people are, in

³ Rowan Wilken and Gerard Goggin, “Locative Media: Definitions, Histories, Theories” in *Locative Media* (New York: Routledge, 2015), 3.

turn, produced by the space around them.⁴ Lefebvre also argued that practices of working with ‘diversion’ in the production of space could serve as an effort to “divert the totality of capitalist space.”⁵ Diversion comes from the artistic movement Situationist International (SI)⁶, which employed the technique of ‘detournement’ also known as “turning expressions of the capitalist system and its media culture against itself.”⁷ This meant that there was no situationist art per se, but only a situationist use of means that would turn into situationist art.⁸ Lefebvre developed his theories of space and exerted a big influence on the SI, — which explains why they share similar ideas— however, for Lefebvre ‘detournement’ was not an artistic practice, but a spatial and political one. Detournement was more about experimenting with space, architecture, and urbanism, which were key to the concept, than with the development of broad cultural production.⁹ Continuing with Lefebvre's view on the production of space, urban theorist Edward Soja argued that space should be:

[A] knowable and unknowable, real and imagined lifeworld of experiences, emotions, events, and political choices that is existentially shaped by the generative and problematic interplay between centers and peripheries, the abstract and concrete, the impassioned spaces of the conceptual and the lived.¹⁰

⁴ Lukasz Stanek, *Henri Lefebvre on Space : Architecture, Urban Research, and the Production of Theory*. (Minneapolis, MN, USA: University of Minnesota Press, 2011), 39.

⁵ Bill Brown, *Not Bored! Anthology 1983-2010*(Cincinnati, Ohio: Colossal Books, 2011), 321.

⁶The movement Situationist International was an international organization of social revolutionaries made up of avant-garde artists, intellectuals, and political theorists, prominent in Europe from its formation in 1957 to its dissolution in 1972. (Wikipedia)

⁷ Kathryn Ramey, “Film Destroy” in *Experimental filmmaking: Break the machine*. (New York, London: Focal Press, 2015), 8.

⁸ The detournement of maps was an act of subverting the orientation of a city so that the power of the state would not be recognized in the spatial experience. The SI would tear apart maps, put them back together indistinctively and add to them things like annotations, older maps and arrows in order to create new ways of navigating the city. By doing this, the city itself would become a situation. (Ko, 2008)

⁹ Bill Brown, *Not Bored! Anthology 1983-2010* (Cincinnati, Ohio: Colossal Books, 2011), 321.

¹⁰ Edward W. Soja, *Thirdspace: Journeys to Los Angeles and other real-and-imagined places* (Oxford: Blackwell, 1996), 31.

A space that is both real and imagined means that an existent urban landscape— composed by elements such as buildings, streets or parks— can take on different meanings as the result of the diverse ideas and hopes that people may hold for it. Soja called this type of space the Thirdspace. Essentially, Thirdspaces are an attempt at incorporating transient events into existing spaces as a way to make them visible through the different experiences they are able to assimilate; for example, a sidewalk that is often disregarded by its users can turn into a playground for kids as well as a place for older people to sit and spend time together, thus generating different meanings for different users. In other words, a Thirdspace signifies a connection between physical /geographical spaces and mental/cultural constructions of space, in which people are able to set different conditions to create different spatial experiences. Soja also argued that Thirdspaces need a ‘praxis’, “a transformation of (spatial) knowledge into (spatial) action in a field of unevenly developed (spatial) power,”¹¹ through which the role of space in the transformation of societies can be appropriated and reconstructed according to people’s needs. My intention with this MRP is to show that it might be possible that the use of mappings leads to the construction of Thirdspaces, which are only able to flourish through the constant interactions of new ideas and the unpredictability of actions. Thirdspaces oppose discourses of territorialization; where the latter enclose a series of changes¹² in the territory that transform it through the control of an authority, Thirdspaces operate in spaces that can not be limited by one definition. This paper

¹¹ Edward W. Soja, *Thirdspace: Journeys to Los Angeles and other real-and-imagined places* (Oxford: Blackwell, 1996), 31

¹² These changes are not necessarily physical, where the limits of a space can be seen, rather they concern restrictive acts that limit the use and the activities that usually occur in a space.

offers an analysis of some of the major effects that these digital navigation systems generate in contemporary societies and proposes to look at locative media as an artistic and technical field that distinguishes itself from a “straightforward placing of data, and [from] the technical capacity to locate,”¹³ and successfully engenders the creation of Thirdspaces.

In order to do this, I have divided my paper into two major sections. The first section explores the impact of Google Maps in space by expanding on three subsections. The first is “Space Embodiment”, which deals with the individual and the modifications that the subject experiences due to their use of location technologies. This subsection is concerned with the adjustment of the embodied subject to a digitalized way of being in space. The second section, “The Interface of Google Maps,” focuses on the image of the world that the program offers the user and the impact that the user has on the production of that image. The third section, “Digital Maps”, questions the ways in which maps are understood and specifically considers its navigational quality. I will analyze these three phenomena in light of theoretical approaches, employing Nigel Thrift’s theory of the non-representational to inquire about the knowledge that the body possesses to locate itself and how it is modified by the use of a digital map. Here, I also employ Anna Munster’s critique of the digital aesthetics of Google Maps; Valérie November, Eduardo Camacho-Hübner, and Bruno Latour’s evaluation of information that is produced by a map, and finally, Gilles Deleuze’s analysis of maps and the construction of subjectivities. To this end, my analysis will address the following questions: is the experience of embodying space less relevant for users of navigation technologies such as Google

¹³ Drew Hemmet, “The mobile effect,” *The International Journal of Research into New Media Technologies* 11, (2005): 34.

Maps? In other words, is a virtual narrative of space overriding the physical experience of space? In addition to this, I question how the aesthetic language, meaning the interface and visual images employed by Google Maps, mediates the ways users interpret and interact with space. And finally, I ask: what is the impact of navigating space with the information of a digital map that is seen as a digital representation of space?

The second section proposes to look at locative media as an alternative to Google Maps which challenges the distinct spatialized discourse that Google Maps produces by using Gilles Deleuze's concept of deterritorialization, as a lens for understanding locative media. These types of projects present a critique to the way location technologies are used, and present more creative ways of engaging with them, by taking on the problematic issues of territorialization as generated by Google Maps. The projects include: Cary Peppermint's Locative Media project, "Indeterminate Hikes", "Megafone/Montreal in*accessible" by Antoni Abad, and "Amsterdam Real Time" by Esther Pollack and the Waag Society. Through an analysis of these locative media projects, I will try to determine whether these projects a viable alternative to Google Maps.

Section One

1. Space Embodiment

I present a fictitious but common use case of Google Maps to examine the subject's ability to engage with her environment via this technology. Imagine two people who are walking down a street, looking for a particular address. One person is using Google Maps on her phone and the other is venturing in a new place following written directions obtained beforehand from friends who have recommended a particular place to visit. My intention with this comparison is not to state that one experience is more engaging than the other, but rather to premise that the level of engagement of the subjects with their space is different; while one person can dismiss the details of a particular setting and rely on her mobile device, the other one needs to be aware of specific details in order to navigate space and not get lost. The bodies of the subjects thus respond differently to their environments; the first subject, using her mobile device is only assimilating visual information, while the second subject is alert to her entire sensorial system because there is no mediator that comes between her and what is happening around her. I suggest that navigation programs like Google Maps can work to modify the subject's understanding of space since it is privileging the user's visual interaction with space. The risk of understanding space as an image is that the user might not develop an embodied practice of space since "we perceive an environment in terms of the possibilities for action that it provides."¹⁴ In turn, these action possibilities depend on how we experience what the environment is supplying us with— by

¹⁴ Dennis R. Proffitt, "An embodied approach to perception by what units are visual perceptions scaled?." *Perspectives on Psychological Science* 8, no. 4 (2013): 476.

having agency within our space we know whether the surfaces of objects are smooth or if the ground floor can be walked upon.¹⁵ In other words, it is only through action possibilities that we are able to embody our visual perceptions of space. The importance of embodying our perceptions lies in the fact that each body will experience things differently meaning that spatial embodiment is a personal experience. Nevertheless, my interest goes beyond spatial perception to that of the affective modifications that Google Maps may cause in the relation of a person and her space. In order to explore this, I will make use of cultural geographer Nigel Thrift's theory of the non-representational (NRT), as way to inquire the ways in which the body knows where it is and what happens when it is following the instructions of a digital map.

1.1. NRT and Spatial Embodiment

Non-representational theory, also known as NRT, is based on "the leitmotif of movement in its many forms."¹⁶ Movement, according to Thrift, is the base of human life and its entire doings in the world, reflecting back on the world's state of perpetual becoming which refers to it being, in essence, a process rather than a determined thing.¹⁷ His theory comes from a dissatisfaction of privileging the dimensions of the visual in the social sciences and so, in NRT Thrift manages to bring together cognition and pre-cognition, thinking and thinking about thinking, as a way to look at all of the senses.¹⁸ NRT then focuses on "shared experiences,

¹⁵ Dennis R. Proffitt, "An embodied approach to perception by what units are visual perceptions scaled?." *Perspectives on Psychological Science* 8, no. 4 (2013): 476.

¹⁶ Nigel Thrift, *Non-representational theory: Space, politics, affect.* (Routledge, 2008), 5.

¹⁷ Emma Waterton, "Landscape and non-representational theories," in *The Routledge companion to landscape studies*, (Routledge: London 2012), 67.

¹⁸ Ibid.

everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills, affective intensities, enduring urges, unexceptional interactions and sensuous dispositions,”¹⁹ and by doing this it gives an important emphasis to the body and its actions and interactions with other people and with the world itself.

Body practices play a central role within NRT since this theory takes into account biological expressions of the body which are not registered as cognitive, such as affects which are “inexpressive: unable to be brought into representation.”²⁰

In looking at the pre-cognitive Thrift says:

...this historically sedimented ‘unconscious’ ranges all the way from the simple facts of how we measure out the world so as to ensure that we are in the right place at the right time to the way that our bodies are fired up by body disciplines often learnt in childhood and which push us in particular ways even before cognition begins to have its say.²¹

NRT places a lot of importance in the neurobiological claim that says that ninety-five per cent of embodied thought is in fact pre-cognitive.²² In other words, body practices are less dependent on the conscious part of the brain, which is in charge of making decisions rationally, and more dependent on the part of the brain that learns by doing. These practices are based on experimentation— “performativity, embodiment, and emotion on the pre-cognitive level”²³ — since it is only through movement that the body gets to express itself without being limited

¹⁹ Hayden Lorimer, “Cultural geography: non-representational conditions and concerns,” *Progress in Human Geography* 32, no. 4, (2008): 552.

²⁰ Steve Pile. “Emotions and affect in recent human geography.” *Transactions of the Institute of British Geographers* 35, no. 1 (2010): 8.

²¹ Emma Waterton, “Landscape and non-representational theories,” in *The Routledge companion to landscape studies*, (Routledge: London 2012), 70.

²² Nigel Thrift, *Non-representational theory: Space, politics, affect*. (Routledge, 2008), 14.

²³ Susana Zaragozá, “SPACE, but not as we know it: Locative Mapping and Non-Representational Geographies” (master’s thesis, University of Amsterdam, 2010), 6.

by thoughts of identity, which would correspond to that of the representational.²⁴ At the same time, these practices are at the core of spatial issues, since they are developing the possibilities for people to think about space through expressive and intuitive action that is possible through that same space. This means that space is able to make itself known through an “empirical ‘knowledge-in-practice’.”²⁵ NRT then, offers an opportunity to understand how movement and space impact and produce each other, since the moving body produces space and space influences the movement of the body.

1.2. Google Maps and Spatial Embodiment

The increased use of mobile navigation technology has altered the relation of pedestrians and space while navigating cities. Studies on the effects of digital navigation suggest that “pedestrians who use computer navigation fail to envision, encode, and memorize the cognitive maps they otherwise would have. The cost of convenience, in other words, is spatial (dis)orientation.”²⁶ These studies show that the decrease of this cognitive ability is a universal phenomenon that happens no matter the city or culture that people who use digital navigation come from. However, my interest is not that cognitive abilities to remember landmarks are being lost; it is known that in moments of technological evolution, the brain as well as the body adjust to the changes and thus our bodies will eventually become refined by them. Instead, my inquiry is in exploring the

²⁴ Nigel Thrift, *Non-representational theory: Space, politics, affect*. (Routledge, 2008), 14.

²⁵ Hayden Lorimer, “Cultural geography: non-representational conditions and concerns,” *Progress in Human Geography* 32, no. 4, (2008): 554.

²⁶ Stefan Münzer, “Is Google Maps Changing Our Behavior?,” *Citylab*, last modified March 29, 2013. <http://www.citylab.com/tech/2013/03/how-google-maps-changes-pedestrian-behavior/5134/>.

affective responses that are altered in our experiences of digital wayfinding as shown by common practice: walking with a personal mobile device.

Wayfinding through walking is one form of moving around space that constitutes a practice of spatial embodiment. Embodiment is understood as an “indeterminate methodological field defined by perceptual experience and mode of presence and engagement in the world,”²⁷ which means that in order for the body to become familiarized with a new place it needs to be present and engaged with its environment. Artist Joanna Helfer says; “[walking] is, and always will be, our most basic and intuitive form of travel. It is seemingly simple, putting one foot after the other, but under the surface it wanders into culture, religion, landscape and philosophy.”²⁸ She is referring to an embodied practice of walking that does not include looking at a mobile device. Besides serving the function of getting from one place to another, walking can also be understood as one type of movement that not only relocates the body, but that also reintegrates the body with its environment. According to Michel De Certeau, walking is a practice of resistance by which pedestrians creatively engage in a reinterpretation of the established meanings of places.²⁹ For Thrift, the practice of walking becomes:

[A] natural practice to be indulged in for its own sake... it can become a means to contact the Earth, to be at one with ‘nature’, even to be deemed therapeutic. It becomes a means of gathering stillness, without having to stay still, a means of contemplation and mystical communion to be found within the body.³⁰

Thrift’s focus on nature comes from his understanding of nature as a “key site of

²⁷ Thomas J. Csordas, *Embodiment and experience: The existential ground of culture and self*. Vol. 2. Cambridge University Press, 1994.

²⁸ Joanna Helfer, “Essay on walking.” *Cargo collective*. Last modified December, 2008. <http://cargocollective.com/joannahelfer/essay-on-walking>

²⁹ Michel de Certeau, *The practice of everyday life* (Berkeley: U of California P, 1984), 123.

³⁰ Nigel Thrift, *Non-representational theory: Space, politics, affect*. (Routledge, 2008), 67.

contemplation and mysticism in the modern world as a result of the evolution of a set of body practices which, as they have taken hold, have produced an expanded awareness of present time.³¹ Walking then, becomes a resistant practice for the velocity of the modern world; a ‘practice of slowness’.³² And so, what happens when this practice is guided by a digital map? I suggest that there is a clash of different temporalities— which I will expand in the following section when I look at the program’s interface— that disengages the subject from her environment because the interaction between subject and space, which happens at a pre-cognitive level, is traded for a cognitive process of verifying facts. The user is now confirming the information that she is receiving from her screen and is not aware of the sensations in her body.

Nevertheless, the importance of embodied practices is not limited to the understanding of the body and the effects that these practices produce in it, but also includes the role of space in these practices and how they are also shaped after space. In the practice of walking, the body is making meaning of a space, transforming that space into a place. The subject’s experience has given that place history and meaning, and is now part of her memory, but the space that she has walked through—because she was able to embody it— has also received something from her. According to NRT, spaces are fluid processes that have porosity and no boundaries; this changes the perspective of spaces as being “physical ‘somethings’ that are simply viewed”³³ to knowing that spaces actually possess an entire array of sensory experiences that are able to modify embodied

³¹ Nigel Thrift, *Non-representational theory: Space, politics, affect*. (Routledge, 2008), 56.

³² *Ibid.*

³³ Emma Waterton, “Landscape and non-representational theories,” in *The Routledge companion to landscape studies*, (Routledge: London 2012), 72.

practices.³⁴ These sensory experiences are also known as affects, and depending on the amount of interactions that a space might have, different spaces will present different affective intensities. According to Thrift:

Particular affects like anger, fear, happiness and joy are continually on the boil, rising here, subsiding there, and these affects continually manifest themselves in events which can take place either at a grand scale or simply as a part of continuing everyday life. Some spaces might offer more experiences because there are more activities existing in them, such is the case of cities.³⁵

Every place then, has an inherit state of aliveness that increases or decreases according to the amount of affective responses that get circulated there. This is the reason why people often describe cities like New York or London as exciting and alive. At the same that they experience these emotions in their bodies because their memories are loaded with the affects that they obtained in those places, and when they remember them the body remembers the sensations. And so, when subjects are immersed in the experience of following their digital maps, the circulation of affective responses decreases. This happens because, as I have previously stated, the subject needs to be able to embody a particular place and this is defined by being present to where she is and to what is happening. It is due to this lack of presence that the subject might no longer be able to engage in place-making, since her attention to her device is not allowing her to create memories that are more than visual images. The privileging of the senses of vision and hearing that comes from Google Maps, reinforces the idea that space is separated from movement and reinforces a sense of linearity where one thing happens after another; the maps ignore the fact that “[l]ife is a meshwork of

³⁴ Nigel Thrift, “Space,” *Theory, Culture & Society* 23, no. 2,3, (2006): 142.

³⁵ Nigel Thrift, *Non-representational theory: Space, politics, affect.* (Routledge, 2008), 171.

successive foldings, not a network, in which the environment cannot be bounded and life is forged in the transformative process of moving around.”³⁶ In other words, Google Maps creates a separation of spatial experience where we are being taught where to look, in spite of having an environment that is communicating with us through all our senses.

Furthermore, if we consider bodies to be the means of transportation for affects, then these experiences do not stay in the body that experienced them, but they move and relocate in other bodies and other spaces.³⁷ This is why Thrift asserts that bodies are ‘territories of becoming’ —because bodies are also porous and in interacting with other bodies/territories they keep on recreating themselves. However, by privileging the information that users are obtaining from their devices while being in a new place, and by limiting their experience to a visual dimension, the construction of affective memories is less possible, and we are less likely to experience knowing the essence of a place, since both of these experiences need to have an embodied practice. In addition to this, since Google Maps is taking charge of leading us through unknown spaces there might be a marginalization of certain spaces; I will argue in the next section that, because they are not profitable to Google, they are not part of the image showed in our screen and as a result the sense of aliveness of those places is diminished.

³⁶ Nigel Thrift, “Space,” *Theory, Culture & Society* 23, no. 2,3, (2006): 140.

³⁷ *Ibid.*

2. The Interface of Google Maps

Google Maps, it can be argued, portrays the world through a homogenous use of imagery, maps, terrain and 3D buildings; this can work to incite people to think that this is how we should see the world— from above, at a distance and through an intermediary. Anna Munster's article *Welcome to Google Earth* argues that Google does not offer an image of the world, but rather presents its users with imaging operations that are constitutive of the economy of networked corporativism.³⁸ Munster states that the program's increased visibility of the world signals a less accurate way of seeing it, since the appearance of the program constructs the illusion that the world is becoming transparently visible because Google has “wrap[ed] the entire Earth in imagery.”³⁹ Based on these arguments, I want to suggest that Google Maps is generating a vision of the world that is developed exclusively for the Google user. This visual is based on the user “becoming the locative point from and for which Google's events occur”⁴⁰ and is made possible by the aesthetics of the program.

Google Maps presents itself as ‘a great eye’ that sees the world and allows us to see it as well, without referencing the sophisticated technological processes that must happen in order to have that ‘eye’ functioning properly. This opaque understating of the materiality of Google Maps, which involves machine and human intelligence, is what I want to draw attention to here, as I query the construction of the Google user and its impact on the construction of Google's world visual. I will investigate whether the opacity of Google Map's interface results

³⁸ Anna Munster, “Welcome to Google Earth.” In *Critical Digital Studies: A Reader*, eds. By Arthur Kroker and Marilouise Kroker. (Toronto: University of Toronto Press, 2012), 409.

³⁹ *Ibid*, 400.

⁴⁰ *Ibid*.

in its users being unable to recognize how much it relies on their interaction, in order to understand the economy of network corporatism mentioned by Munster. To further expand on this idea of opacity I will explore the concept of the transparent interface of Google Maps, and the ways that users are able to interact with it.

2.1. The Transparent Interface

It is arguable that the increased visibility of Google Maps is due, in large part, to the program's aesthetic of transparency, since the imagery of the program is reinforced by the way in which the program frames it. The notion of transparency moves between two definitions; the first and most common one alludes to the optical property of matter. Transparency, according to sociologist Luis Pablo Francescutti (2012), is a quality of translucent bodies that has been passed, metaphorically, to fields of public interest such as the media.⁴¹ The second one is linked to the idea of 'the window,' which according to new media scholar Jay David Bolter, makes the concept of transparency specific to the medium of the screen through which a program is able to materialize. When creating an interface, designers generally envision a transparent window that "present[s] the user with an information workspace without interference or distortion [so] the user focus[es] on the task, not the interface itself."⁴² Transparency is about taking attention away from the interface so that it goes unnoticed to the user. The transparency of

⁴¹ Luis Pablo Francescutti, "Wikileaks: transparencia total. Límites y posibilidades de una demanda utópica." *Estudios sobre el mensaje periodístico* 18, no. 1 (2012): 90.

⁴² David Jay Bolter and Diane Gromala, "Wooden Mirror: The myth of transparency" in *Windows and mirrors: interaction design, Digital art and the myth of transparency*, (The MIT Press, 2003), 33.

Google Maps finds itself in the latter of these definitions; it develops an aesthetic of transparency because it does not focus on the medium, but rather focuses on what the medium is producing in order to overlook the operation's visual production. Transparency is meant to achieve a separation between the visuals that the program is displaying and the processes that generated those visuals.

According to Bolter, the main goal of the digital interface is to translate signs and signals from two different worlds— the machine world and the human world.⁴³ The interface is the connector of these two domains, and the person using an interface has a basic interaction with it that repeats itself independently of where and what type of screen is being deployed.⁴⁴ This interaction is based on the users' orders to the interface, also known as inputs and in turn, the interface provides answers, or outputs, back to the user. "Inputs" are the information that the user is searching for, while "outputs" are the information that the interface is providing to the user. For example, when using Google Maps my input is the location of where I am and the location of where I want to go, while the output of the program are the trajectories that the program generates between those two locations, these can be adjusted to the type of transportation I select— for example, walking, biking or using public transportation.

Google Maps' interface serves as an example of the 'transparent window' by allowing the user to see images and digital maps that represent the world and

⁴³ David Jay Bolter and Diane Gromala, "Wooden Mirror: The myth of transparency" in *Windows and mirrors: interaction design, Digital art and the myth of transparency*, (The MIT Press, 2003), 33.

⁴⁴ Ricardo Diviani, "El audiovisual en Internet y el "fin" de las audiencias," *Interfaces y pantallas*, last modified December 2, 2009, https://interfasesypantallas.wordpress.com/2009/12/02/el-audiovisual-en-internet-y-el-%E2%80%9Cfin%E2%80%9D-de-las-audiencias-apuntes-sobre-dispositivos-mediaticos-y-actores-de-la-comunicacion/#_ftn7.

overlook its frame, which is made up of ongoing processes of acquiring data, analyzing it and displaying it.⁴⁵ The images that the program works with are satellite images, and satellite images are data acquired by aerial sensor technologies that are gathered within long distances. Although they may resemble aerial photographs, these images are technological constructions of visuals that represent space.⁴⁶ As artist James Bridle argues:

It's worth bearing in mind too that many of the images are snapshots, or stills, in many forms, and not fully-formed objects. Whether a frame from an online video, or a screen capture of an online map (remember, digital maps are animations on pause), or fragments of code or spam; all of these are snippets, they are only momentary representations of ongoing processes.⁴⁷

This is to say that to be looking into the window of Google Maps means to be looking at ongoing image-making functions that are in fact, a pseudo-human interpretation of the way the machines see the world.⁴⁸ The 'sublime beauty' of Google Map's data visualization, as Munster describes it, is the result of the program's visualization method that allows the viewer to perceive its images as if they were generated the instant that she initiates the program. There is a disregard of the fact that they are a collection of different moments in time all sown into one. These moments exist because people with mobile devices, knowingly or unknowingly, are "coding every bit of the logic of the road onto a representation of the world so that computers can simply duplicate (infinitely, instantly) the

⁴⁵ Alexis C. Madrigal, "How Google Builds Its Maps, and What It Means for the Future of Everything," *The Atlantic*, last modified September 6, 2012. <http://www.theatlantic.com/technology/archive/2012/09/how-google-builds-its-maps-and-what-it-means-for-the-future-of-everything/261913/>.

⁴⁶ Bryan Palmer, "Geographic Information Systems," *Slideplayer*, <http://slideplayer.com/slide/6333242/>.

⁴⁷ James Bridle, "The New Aesthetic and its Politics," *Book Two*, last modified June 12, 2013, <http://booktwo.org/notebook/new-aesthetic-politics/>.

⁴⁸ *Ibid.*

judgments that a person already made.”⁴⁹ The data that Google Maps shows us does not involve a recognition of who or what is producing it; the consequences of this is that users distance themselves from this process without realizing they are part of them. The effect of being immersed in an invisible language of data that is mainly generated by Google influences the users to disregard how processes of technological operations are connected, as well as our participation in them. This implies that its users are not able to question it or demand different outcomes from it, even though they are constantly generating data for the program and are also having their profiles become more and more individualized.

2.2. The Google User

The individualisation of technology through the construction of a user's profile, entails a process of data recollection that has the objective of creating a useful image of the consumer for a corporation or business. This means that a user will be able to become identified according to the type of data she is producing and consuming.⁵⁰ The Google user, for example, is constructed around the searches submitted by the user, the user's specific information obtained from the user's documents, and the personal information provided by the user.⁵¹ The data can be retrieved explicitly or tracked implicitly and it may comprise the users' histories of purchasing and searching activities, as well as demographic and psychographic

⁴⁹ James Bridle, "The New Aesthetic and its Politics," *Book Two*, last modified June 12, 2013, <http://booktwo.org/notebook/new-aesthetic-politics/>.

⁵⁰ Gediminas Adomavicius and Alexander Tuzhilin, "Personalization technologies: a process-oriented perspective," *Communications of the ACM* 48, no.10 (2005): 2.

⁵¹ Bill Slawski "Google's User Profile Personalization and Google Plus." *SEO by the Sea*, last modified September 17, 2012. <http://www.seobythesea.com/2012/09/googles-user-profile-personalization-google-plus/>.

information.⁵² This process of data collection, whether in terms of location, images, or daily activities, is part of processes of surveillance—also known as dataveillance. Roger Clarke defines dataveillance as “the systematic monitoring of people's actions or communications through the application of information technology,”⁵³ and he argues that it has serious implications for individualism and society such as: creating a lack of democracy, since users cannot be part of the creation of terms of use that impair them from being able to make improvements to the platform; manipulation of consumption behaviour, which results in a weakening of human creativity due to the negation of self-discovery processes; and unawareness of free labor⁵⁴, due to the user’s exploitation based on the fact that she is generating value for someone else without knowing about it and she is not considered as a work force that should have access to any type of remuneration.

This type of surveillance is not necessarily intended to control a menacing individual, but to create databases that represent the individual through information. Often users are not fully aware that they are generating more information than what they are interacting with because, as a result of not reading the terms of agreement. These could be considered consequence of the automated action of accepting a download; they are allowing the GPS sensor of their mobile device to be permanently on.

Navigation systems follow a similar pattern of the individualization process

⁵² Gediminas Adomavicius and Alexander Tuzhilin, "Personalization technologies: a process-oriented perspective," *Communications of the ACM* 48, no.10 (2005): 2

⁵³ Roger Clarke, "Information Technology and Dataveillance," *Roger Clarke*, last modified February 2009, <http://www.rogerclarke.com/DV/CACM88.html#Conc>

⁵⁴ The unawareness of free labour distinguishes itself from digital activism since the latter is based upon the idea of engaging in a political action, whereas free labour implies that the user does not know that she is participating in any action that involves a practice of generating information for the use of someone else beyond herself.

of technology in making use of the user's data explicitly, as well as implicitly. The fact that the data extracted by Google Maps is mainly based on locations and coordinates of addresses could seem as a somewhat irrelevant preoccupation to its users since it is abstract information, but it is part of the process that helps determine what products/places fit best the needs of their users. This way, the program is able to transform into a more efficient advertising platform that not only shows the user what to buy, but one that also shows her where it is and how to get there.

Furthermore, in addition to obtaining information from its users' histories, Google also works with collaborative mapping and crowdsourcing through mapping sites like Google Map Maker, OpenStreetMap project, Geowiki and Wikimapia, in order to generate content to the program's database through the voluntary contribution of individuals. These contributions are done in order to verify the information provided by the program and improving base maps and other projects produced by the same contributors, similar to a peer-to-peer review. However, these actions of collaboration are not seen in the user's interface because the program's efforts are focused towards improving the individual dimension of the program; in other words, the Google experience only works for the Google user.

3. Digital Maps

Throughout history, cartography has been an important part of the

territorialization of space and the creation of boundaries due to its ability of representing the ideology of dominant forces within spatial conflicts.⁵⁵ To territorialize means to assign 'identities' for collective subjects by implementing a series of marking, or signs that define the territory, and therefore categorize and individualize human beings within that structure.⁵⁶ The role of maps consisted mainly of lending credibility to political discourses by way of showing them as fixed truths among people who have no say in their constructions, nor access to them once they were finished. The history of cartography is filled with examples of maps that are constructed around one vision, such as Europe's 19th Century map of Africa, which portrayed the center of the continent as an inhabited blank space that was seen as potential land for whichever empire got there first.

Authors November, Camacho and Latour argue that looking at a base map in digital maps presents the same inability of bringing maps and territory into relationship that existed before the digital versions of maps. These narratives of power have not been disrupted by the use of modern geographical technologies like Google Maps, even if they are widely spread and almost anyone can access them, since they are still defining the territory according to its economic interests and generating boundaries between what is being shown and what is not.

However, due to the property of digital navigation in digital maps, social scientists are now able to classify the mapping enterprise into two different types of use. These are: the mimetic use, which refers to looking at the map as a visual

⁵⁵Sébastien Caquard, "Cartography I Mapping narrative cartography," *Progress in Human Geography* 37, no. 1, (2013): 137.

⁵⁶Etienne Balibar. "Europe as borderland," *Environment and planning D: Society and space* 27, no.2 (2009): 195.

interpretation of space; and the navigational use, which implies that the navigator uses the information of the map in order to detect relevant cues in physical space that allow her to go from one signpost to the next.⁵⁷ November et al. argue that maps in general cannot be a truthful representation of space because they miss interpreting the dimension of time which gives a space its characteristics of movement and transformation. According to the authors, “[t]he very idea of a time separated from a space... comes from dreaming over a map too long.”⁵⁸ In other words, the danger of stripping the dimension of time from space can only generate abstract representations of an environment. These representations fail to show the dynamics and permanent reconfigurations of spatial practices. The map of a neighbourhood’s territory, for instance, fails to consider the daily routines that each neighbour has, which define the character of the neighbourhood beyond its physical shape. Through Google Maps what we see of a neighbourhood are pieces of land occupied by houses, schools and stores, but we miss viewing the relations among each component of this place. This happens because, as November et al. argued, digital maps—Google Maps—are only meant to help in the navigation of that space by using those houses and schools and stores as signposts through which the user/navigator is able to find her way.

3.1. The Basemap

The realistic impression of the map is a construction that accompanied the

⁵⁷ Valérie November, Eduardo Camacho-Hübner, and Bruno Latour, “Entering a risky territory: Space in the age of digital navigation,” *Environment and Planning D: Society and Space* 28, no. 4 (2010): 585.

⁵⁸ *Ibid*, 596.

historical invention of ‘territory,’ which needed a compelling tool for shaping states.⁵⁹ From this moment on, maps were the elaboration of a space that had no memory of what had existed there before, and projected an imagined—or technologically constructed—image on top of it. Once this image was done, territories were able to be imagined. This is the ideology upon which a base map is constructed and, using November et al. words, is a mimetic interpretation of space.

In digital maps, the base map has the function of providing background details necessary to orient the location of a map so that the user can create a map with existing information. In Google Maps, the base map consists of a white background that symbolizes the ground, a blue background for water, lines that symbolize streets, green patches that represent nature, and at a closer distance, geometrical figures that represent buildings. The program tells the user that to make a map is to ‘drop pins’ in locations and establish routes, minimizing the actual importance of what it means to map.

According to Deleuze, maps are essential to expressing the identity of a journey and what the subject journeys through, giving great importance to the trajectories that are created rather than to the objects or landscapes that it may evoke.⁶⁰ A trajectory “merges not only with the subjectivity of those who travel through a milieu, but also with the subjectivity of the milieu itself, insofar as it is reflected in those who travel through it.”⁶¹ Deleuze is arguing for a spatial

⁵⁹ Valérie November, Eduardo Camacho-Hübner, and Bruno Latour, “Entering a risky territory: Space in the age of digital navigation,” *Environment and Planning D: Society and Space* 28, no. 4 (2010): 585.

⁶⁰ Ibid.

⁶¹ Gilles Deleuze, “What children say,” in *Essays Critical and Clinical*, trans. Daniel W. Smith (UK:Verso, 1998), 64.

relation where space has stopped being considered a static surface on top of which social processes and subjects come to existence and are instead, seen as active participants of those processes. The practice of mapping is about acting out on an instinct and satisfying the need for “understanding the world around us and our place in it.”⁶² It does not involve setting up boundaries and limits that are fixed or trying to create representations of the territories upon which we move.

For November et al., the base map opposes itself to the navigational principal of any paper map or a digital map because a navigator needs to confirm each cue that is found in the map, and the base map is by definition a historical construction. In other words, just like the captain of a ship, navigating is about relating the information provided by the map, the tidal state of the water, and the reefs that may appear at the surface. It is not an automated action of going to places. A navigational map instead, focuses on signaling cues and landmarks to the navigator in order for her to confirm them and continue her journey because “everything [in space] is on the move.”⁶³

Deleuze argues for a map in which:

[T]he imaginary and the real must be, rather, like two juxtaposable or superimposable parts of a single trajectory, two faces that ceaselessly interchange with one another, a mobile mirror. Thus the Australian Aborigines link nomadic itineraries to dream voyages, which together compose “an interstitching of routes,” in an immense cut-out [découpe] of space and time that must be read like a map.⁶⁴

Dreams and real objects are equally important in a map, and just like the

⁶² Katherine Harmon, *You are Here: personal geographies and other maps of the imagination* (New York: Princeton Architectural Press, 2004): 10, 11.

⁶³ Valérie November, Eduardo Camacho-Hübner, and Bruno Latour, “Entering a risky territory: Space in the age of digital navigation,” *Environment and Planning D: Society and Space* 28, no. 4 (2010): 598.

⁶⁴ Gilles Deleuze, “What children say,” in *Essays Critical and Clinical*, translated by Daniel W. Smith (Verso, K, 1998), 63.

combination of nomadic itineraries and dream voyages, it is not enough for a map to only deal with the objective part of a journey, but to also engage with momentary experiences such as unplanned encounters and affective memories. Therefore, maps cannot be tied to understanding or even seeing the territory of the world because that would mean engaging “the map in a destiny for which it was never made and for which it could never succeed.”⁶⁵

What can be seen with digital technologies is that the mapping experience teaches users to navigate different types of spaces— cities, schools, museums, etc. In essence, it is teaching us the technique of navigating, which before the advent of digital technologies was only limited to geographers. This technique is about receiving and sending information that “allow[s] other agents to find their way through a maze of data”⁶⁶ — any type of data. However, this possibility of feeding information to a database is limited when the mapper is faced with a base map; her contributions are restricted and her insights may not have the right format to work with.

November et al. state that the inability of mapping information that is only topographical comes from the divide between ‘human’ and ‘physical’ geography, which is a product of employing the map through its mimetic use.⁶⁷ This has created a reductive understanding of the world where the ‘physical’ stands for the *real* representation of the world, and the stories and experiences of the ‘human’ are a complement to that representation. There is no space for subjectivities

⁶⁵ Valérie November, Eduardo Camacho-Hübner, and Bruno Latour, “Entering a risky territory: Space in the age of digital navigation,” *Environment and Planning D: Society and Space* 28, no. 4 (2010): 596.

⁶⁶ *Ibid*, 586.

⁶⁷ *Ibid*, 594.

because they are not taken into consideration by the sciences, and so the map is a scientific construction that produces images according to what science technology can see. What November et al. propose with the navigational practices is that every type of information is necessary when navigating space, so everything has to be inserted onto the map. He states:

If you do not know where to put ‘humans’ on the map, you should be just as concerned about what to do with the nonhumans. *No one* and *no thing* ever resided in the virtual image of the map. The mountain range on the map bears no more resemblance with the mountain range ‘out there’ than the village, the economic market, or the recommended road outlined in green on their tourist’s Michelin map. Either you are able to pull all of them on the map depending on the precise navigational usages at hand or none of them.⁶⁸

November et al. are arguing for the deconstruction of the divide between ‘human’ and ‘physical’ geographies, and the substitution of maps that work with ‘realistic interpretations’ of the world for a navigational one, which can only happen if the map is not based on an image. Maps are not meant to represent the world, but to help people navigate it. This is the important distinction that is missed in Google Maps because, even if it generates routes of navigation, it does not teach us how to navigate space, but rather it takes us to places. As well, it does not help us to step away from the superficial construction of the space as image because the program does not work with subjective interpretations. Google Maps, I am suggesting, is not a navigational tool. I want to clarify that by making the case that maps should be navigational tools, I do not mean to imply that all maps are only navigational, but rather that maps of territories are meant to

⁶⁸ Valérie November, Eduardo Camacho-Hübner, and Bruno Latour, “Entering a risky territory: Space in the age of digital navigation,” *Environment and Planning D: Society and Space* 28, no. 4 (2010): 594, 595.

be navigational. The mapping impulse is not only about creating boundaries around territories, but about creating and recreating maps that act as abstract representations that serve as the medium through which we understand our place in space, which can be as different as the space of our bodies to the space of the cosmos.

Section Two

4. Locative Media Projects

As I have shown in the previous sections, Google Maps is generating new forms of spatial production that alters the way in which individuals embody space, the way we see the world, and the way in which we use maps to navigate space. By looking at locative media projects as an alternative to Google Maps, I want to propose that these kinds of spatial experiences are methods of deterritorializing maps through which different levels of spatial engagement are able to be reached.

Deterritorialization is defined as the complex movements by which something escapes or departs from a given territory, where a territory can be a system of any kind, conceptual, social, or affective.⁶⁹ Many art-driven forms of locative media make use of technology to combine different kinds of information—personal, emotional, historical, and more—to add it onto the physical territory and give new meanings to space. Locative media projects incorporate any type of media technologies with location services such as GPS, mobile phones, Wi-Fi, Bluetooth, RFID, etc.⁷⁰ According to theorist Andre Lemos, locative media projects produce ‘augmented realities,’ which is the process of ‘augmenting’ video or photographic displays by overlaying the images with useful computer-generated data accomplishing an interconnection between digital and physical

⁶⁹ Paul R. Patton, *Deleuzian Concepts: Philosophy, Colonization, Politics*, (California: Stanford University Press, 2010), 52.

⁷⁰ André Lemos, “Medios Locativos y Territorios Informativos. Comunicación Móvil y Nuevo Sentido de los Lugares. Una Crítica sobre la Espacialización en la Cibercultura,” (presentation, in *Comunicación en el Seminario Internacional “Inclusiva-Net: Redes Digitales y Espacio Físico”*, MediaLab-Prado, Madrid, 2008.)

worlds. Moreover, because the intention of these projects does not pursue a corporate-economic interest, they are able to offer more experimental options; they are more interested in different responses than one instruction that becomes automatic. They have the potential to subvert the spatial thinking that is being generated by no cost navigational systems like Google Maps. To explore how locative media projects provide significantly different experiences of spatial production to the ones given by Google Maps, I will analyze the different possibilities of embodying space, perceiving the world, and navigating space that are problematic in Google Maps, as I have argued in Section one. My intention is to show that locative media projects are good approximations of the development of creating mappings that help create Thirdspaces. To do so, I will analyze the projects Indeterminate Hikes, Megafone, and Amsterdam Real Time, explaining: how they are designed; the intentions of the artists to develop new kinds of mappings; and the intended experience of the user.

4.1. Indeterminate Hikes

Indeterminate Hikes (IH) is a locative media project developed through a mobile media app platform of free access created by artists Cary Peppermint and Leila Nadir. It works upon a Google Maps base map layer in order to create paths of navigation or walking tours that contain a series of tasks to be completed by the user while en route. Some examples of the tasks are: “[t]ake a picture of a cloud. If there are no clouds, improvise as you see fit” or “[s]top here and say aloud: ‘non-

human animals are people too.”⁷¹ These new type of paths are not intended to be an ‘efficient’ way of traveling, but rather a more sensitive way of engaging with the urban environment because the goal of the project is for the user to be more alert to her daily surroundings. It can be said that this project reflects the ideals of the avant grade movement Situationist International (SI), by making use of the concept of ‘detournement’ and diverting the common use of Google Maps and digital navigation by creating purposeful interruptions in what tends to be an automatic mode of traveling.

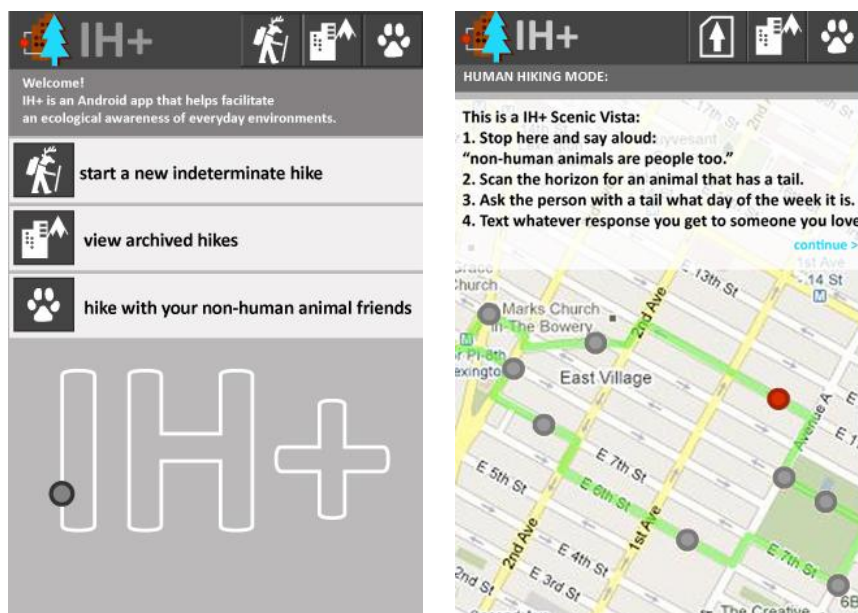


Fig. 1 and 2: Indeterminate Hike at Re-new Digital Arts Festival, Copenhagen, 2012, < <http://www.ecoarttech.net/project/indeterminate-hike/>>

This project also diverts the way in which mobile devices are commonly used since the device is no longer a tool for fast communication, but an ignitor of the user’s sensorial system. The practice of going into nature in order to develop an intense emotion is also re-appropriated in the project it is focusing on “renew[ing]

⁷¹ An Xiao, “Where Psychogeography Meets Mobile Phones,” *Hyperallergic*, last modified February 28, 2012, <http://hyperallergic.com/47555/1a-re-play-mobile-art/>.

awareness of the often-disregarded spaces in our culture that also need attention, such as alleyways, highways and garbage dumps,⁷² as a way to develop a new sense of urban awareness that can also generate intense emotions.

This project gives a response to common digital maps that only take into account the visual sense of the user by generating a different type of spatial guidance in which the entire body is engaged in movements that are similar to the fast paced rhythm of the urban scene. Each participant is adding their experience into the urban space and giving new meaning to it through their affective responses to space. IH is enhancing the experience of space not only for those who participate, but also for those who stand by them because everyone is affected by these new interactions. The project's playful approach brings more awareness to the participants about where they are and what is happening on that particular moment; it enables users to embody that space through their actions and the movement of their bodies. These mappings expose familiar sides of a city and allow the participants to revisit their thoughts and beliefs about them. Moreover, this project incorporates the premise of 'learning by doing' since participants are no longer memorizing routes that get them to places, but they are learning how to differentiate one place from another through the affective memories that are triggered by them. In essence, IH is a tool that incorporates the experience of the body to generate processes of place-making.

Although this project makes use of Google Maps, the project is not encouraging a global view of the space—what I previously called the

⁷² An Xiao, "Where Psychogeography Meets Mobile Phones," *Hyperallergic*, last modified February 28, 2012, <http://hyperallergic.com/47555/la-re-play-mobile-art/>.

Google world— but instead is asking the participant to question what is being displayed on the screen and to find an alternate meaning. IH is in fact an interpretation of the navigational map that November et al describe; a map that guides the navigator through signposts that have to be analyzed by the navigator. It is a step-by-step process in which the navigator is constantly confirming that she is on the right path that will take her to her destination. Therefore, Indeterminate Hikes cannot be thought of as an image of space, but as a navigational map that helps the navigator to find her way through space.

4.2. Amsterdam RealTime

Amsterdam RealTime was a piece made for the exhibition ‘Maps of Amsterdam 1866-2000’ at the Amsterdam City Archive in 2002. It was developed by artist Esther Polak together with the Waag Society, and is currently available for viewing at the website realtime.waag.org. The project mapped the city of Amsterdam based on how the people moved through the city. The artists invited all of Amsterdam’s residents to be a part of the two-month long experiment—from October 3rd to December 1st of 2002—which made use of a GPS tracking system and a portable GPS device in order to collect the participants’ data. At the time of the exhibition, a screen projected the traces made by the participants in the form of an animation where lines represented the movements of every person, and through the movement of these lines, the map constructed itself.

The intention of the group of artists was to illustrate the ‘mental maps’ that people elaborate about the city where they live. It showed the possibility of looking at the different types of motions that a city has and recognize its patterns and

rhythms as a way to acknowledge the city as a living organism.



Fig. 3: Esther Polak, Waag Society, Amsterdam, 2002.
< <http://realtime.waag.org/>>

“The map highlights the power of collective experiences, poignantly visualizing the role of citizens as active participants in the process of shaping a city.”⁷³ It shows the real impact that each of one of the citizens, in this case the effect a small group that represented the whole has on the construction of a city. This artwork also signals a situationist detournement by deriving the use of GPS technology, which instead of generating traces beforehand so the user can follow them; it sketched the traces that had already been experienced and acted as a reminder of the relation that a person developed with space. This project occurred in 2002 when personal mobile devices were not of common use, and Google Maps was not yet an option, so it is important to acknowledge the fact that using GPS technology was not a daily practice and to use it meant to carry specific GPS devices, which in this project

⁷³ Ruairi Glynn, “Amsterdam RealTime - Waag Society,” *Interactive Architecture Lab*, last modified on February 21, 2006. <http://www.interactivearchitecture.org/amsterdam-realtime-waag-society.html>

were stored in a bag. This fact might have altered the participant's experience of embodying space because the bag was in clear sight, or it might have brought awareness back to the participants about them being in places and tracing those spaces for the project. Nevertheless, the person carrying a GPS was not being guided by it, instead she was using it with the purpose of creating spatial information that would be part of a larger project that included several other participants's information.

The use of GPS technology is one of the most important differences that can be found between the Amsterdam project and digital navigation systems like Google Maps. As I have previously argued, the interface of Google Maps is not meant to show other people using the program because it is focused on generating an image of the world that is mostly useful for the Google user alone. The construction of a map through the interaction of people, as Amsterdam RealTime has demonstrated, enables the creation of a representation of a city that shows different movements around the city, as well as different times and velocities, and thus can portray a city as a living organism rather than as an static image.

4.3. Megafone - Montréal *in/accesible

The project Megafone, developed by Barcelona artist Antoni Abad in the year of 2004, started as a collective interaction in which people expressed their concerns about space and architecture by making use of the technology of their mobile

phones and uploaded these concerns to the website of the project: megafone.net.⁷⁴ Since 2012, the Mobile Media Lab in Montreal became involved in the project and developed an android platform through which participants are able to document the spatial marginalization that people with disabilities encounter in the city of Montreal, although it stopped being updated in June 2014. The platform makes use of Google Maps as the base map layer and allows the publication of audio recordings, videos, texts and/or images onto an online map that shows the location in which participants experienced some sort of barrier or obstacle that disrupts their moving through the city; these included, for example, cars parked on sidewalks, holes in the pavement, sidewalks without ramps, stairs in main entrances, etc.

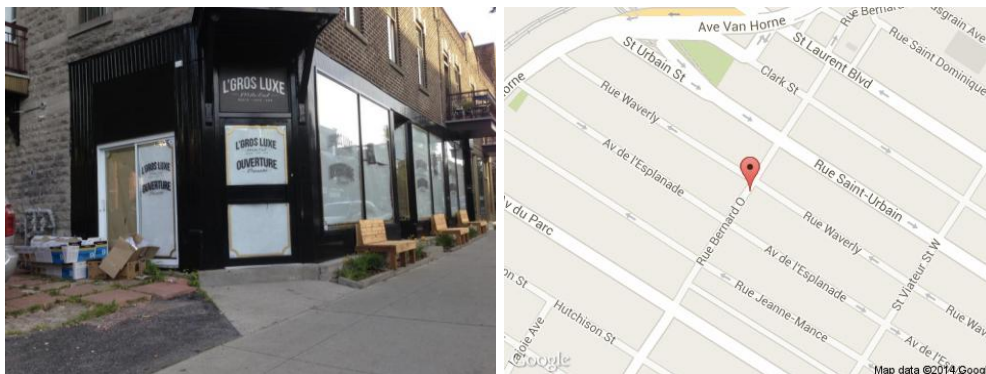


Fig. 4 and 5: Megafone, Montreal, 2013.
 < <http://megafone.net/montreal/message/index> >

This work debates the assumption that mobility is the same for every type of body as well as the relation that people develop with space, by generating awareness to different types of mobility through the experience of people with disabilities. The mapping that is generated through this

⁷⁴ Lluís Anyó and Iasa Monique Ribeiro, “Cultural Creation and Political Activism in the Digital World,” in *Citizen participation and political communication in a digital world*, ed. Alex Frame and Gilles Brachotte (New York: Routledge, 2015), 162.

platform brings an awareness on the difficulties that disabled people might face when following the directions of programs like Google Maps, since these programs do not take into account the disruptions or deteriorations of space at ground level. If a person on a wheelchair cannot cross the street because there is no ramp at the other side of the sidewalk, then the path traced stops being a possibility for her. Google Maps does not elaborate routes based on the condition of the subject's body, but on the places they have to go through whether they present accessibility challenges or not. In other words, Google Maps is not a navigational tool; this is exemplified in the use of these maps by people with disabilities. The project's demonstration of spatial embodiment through a state of disability raises different issues about moving in space, and the mapping that this project produces is a clear example of the universal narrative that Google Maps elaborates around mobility and space.

Conclusion

In this paper I have shown some of the effects that free-based navigational systems have in the production of space. This analysis looked into three different areas of the system's implementation as a way to provide different perspectives from the same phenomenon of using Google Maps, as a way to relate to space. Looking at spatial embodiment I am able to say that body practices such as walking are not removed from the place where they occur. Both space and the body are connected by an invisible web of affects and the disruption of this connection decreases the aliveness of a space. In the section on the program's interface my interest was to show the potential danger of high levels of automation. By exploring how deeply engrained the culture of surveillance is in our daily activities, I am able to affirm that we barely understand how it works, which is the real danger. Our relationship to space is becoming automatic and we are not aware of how much we are being influenced by the use of our devices. Finally, the section of digital maps is where I address the broader meaning of what a map is and the issues that mapping space entail; I argue that the narratives that maps are able to construct should present themselves as what they are: constructions of ideas that are led by some sort of authority.

Spatial technologies are shaping the way we interpret the world as well as the way in which we respond to it. Free-based navigational systems take part of a spatial discourse in which space is a container and its role is secondary. But through locative media art forms, space repositions itself as an actor and is able to expand the meaning of distances, locations, mobility, places and territory. It is not that space is changing because of technology,

but that technology is allowing people to see how rich and complex space has always been. Locative media projects are an alternative to technologies such as Google Maps that seem so far out of our reach that we do not see ourselves as capable of questioning them. With these types of projects, technology is interacting with people on a personal scale. Locative media aims at valuing experience over pre-established rules and modes of thinking about space that do not engage people's own knowledge and skills. These projects resist territorialization because they are not employing technology as a means to control people's interactions or perceptions of space, and neither are they creating a division between the participant and space, because what they are actually accomplishing is to act as a bridge between them.

As for my experience of engaging with space after exploring locative media art, I can see how both types of programs, locative media and Google Maps, make use of geospatial technology in very different ways. On the one hand, Google Maps, still my chosen navigational tool, takes me to unknown places with accuracy, and on the other hand, locative media projects are able to make visible hidden aspects of those places with subjective experiences rather than with geospatial accuracy. The pivotal point is that even though Google Maps helps me get to places efficiently, the goal has nothing to do with relating to those places, whereas locative media artworks generate a new awareness of space that deterritorialize my previous understanding of spatial technologies.

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