Observing the Impact of Locative Media on the Public Space of Contemporary Cities

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Abstract
The concept of public space in contemporary cities is vastly different from what Habermas (1991) conceptualized initially as today we have virtual platforms that engage with us constantly. With the increasing digitization of our postmodern society, communities are able to migrate onto a virtual platform to form imagined social relations across time and spatial distances, enabled by social media and mobile devices equipped with GPS functions. Locative media features on Google Maps and Facebook provide the means to connect communities with their physical and virtual locations. This article examines the impact of the relationship that communities have with their concepts of space in our present-day cities and the issues that arise in their negotiations to define their physical and virtual territories.

Introduction
We live in an increasingly mechanized society in this digital generation. Ubiquitous media has invaded and pervaded our lives and appears here to stay. Where we used to receive round-the-clock information through the television and radio physically fixed at certain localities (Lefebvre, 2004:47), today we carry their digital images and sounds with us on the road by means of mobile apparatuses. If printed flyers in our mailboxes are not enough for advertisers, the marketers’ messages have found their way onto the exterior of our city skyscrapers, dazzling us with flashing lights and alluring visuals (McQuire, 2006).

The contemporary city is filled with complexities beyond its basic function of being a public place for gathering people. No longer is it just an urban landscape of walkways and buildings but it is now gleamed with a layer of visually-enticing mediascape, demanding our every attention. In busy cities like Hong Kong and Japan, flashing billboards cover the face of buildings all through the night, giving them the reputation of being cities that never sleep. In an invisible realm, a more pervasive yet subtle datascape penetrates every dimension of the air with bytes and information, as mobile devices such as mobile phones, handheld PDAs and laptop computers with Wi-Fi capabilities are on the move in cities and travel with their human agents from place to place.

With the increasing digitization of the city comes the increase in the amount of information collected on these mobile human agents tracked through their mobile devices, and this has become a routine part of everyday life (Lyon, 2003:97). Where mass media used to perform the role of disseminating information through authoritative organizations such as news channels and governments, Lemos argues that we are now in the post-mass media era, where “anyone can produce information, ‘releasing’ the editorial center” to a state of joblessness (2010b:404). Information is no longer distributed through one-way communications and becomes “bidirectional” through mediums such as “blogs, wikis, map collaboration, chats network, social software networks, etc” (Lemos, 2010b:404). Today, we have the ability to “move physically/spatially and virtual/informational at the same time” and this is the “main feature of mobile...
Observing the Impact of Locative Media

computing and post-mass media function” (Lemos, 2010b: 404-405), which presents itself in the form of locative media.

**Locative Media**

The term locative media was first used by Karlis Kalnins in 2003 in Latvia to set apart “the corporation use of location-based services from artistic propose” (Lemos, 2010b:405; Tuters and Varnelis, 2006). Locative media is defined as a “mobile media with geographical positioning and context sensitivity” (Santaella, 2011:295). Tuters and Varnelis state that “broadly speaking, locative-media projects can be categorized under one of two types of mapping, either annotative— virtually tagging the world—or phenomenological— tracing the action of the subject in the world” (2006:359). In contemporary cities, locative media is localized and encapsulated in the form of individual mobile devices carried by human agents. Every movement or digital input a person makes can add information to a dataspace, and the resulting amount of data collected can be phenomenal. Characterized by “Foucault’s ‘disciplinary society’ to embody ‘spatial flexibility and continual monitoring,’” and what Deleuze term as the “control society,” data-collection on individuals is now an everyday routine to monitor human movement and action (McQuire, 2008:142-143). The focus, Deleuze argues, is no longer on the mass but on the individual as each person becomes a databank filled with digital footprints, information as well as patterns of behavior (McQuire, 2008:143).

Where people of ancient times used to meet centrally in the city market square to interact and discuss issues of local and common interests, our modern physical cities no longer serve those functions in the same way. Instead, we face increasing isolation in big cities, and turn to our private media as channels for social networking and human-to-human engagements. With the high mobility of global citizens travelling in and out of cities, Lemos argues that “the very emphasis on locating and indexing everything with coordinates and tags … reflect[s] the culture of fear and insecurity” and views annotation as a form of fixing the “fear of drift and disorientation” (2010a:133). The Global Positioning System (GPS) feature of mobile phones allows telecommunication companies to pinpoint the position of any individual through latitudinal and longitudinal coordinates. Such a technological feature makes a compromise on people’s natural need to interact physically and allows them the ability to ‘see’ and communicate with one another on a virtual platform. The “culture of insecurity” that can result from this limited form of social interaction may “greatly increase the different forms of control, monitoring and surveillance” through individual’s use of “portable mobile and networked devices” (Lemos, 2010a:135). This move from a physical public space to a virtual one ensures a different form of human social interaction and creates an “augmented reality.” Its study generates interest among scholars, marketers, gamers and locative media artists alike. It also leads us to question our concept of space and prods scholars like Thielmann to ask if instead of putting ‘www’ on the Internet to represent ‘who, what, when’, we might convert it to ‘wwww’ to connote ‘who, what, when, where’ as we move into a future where there is an increasing obsession with virtual spatial placement (2010:3).

**Locative Media Framework**

A theoretical framework is needed to demonstrate the interaction between technological devices and humans and their relationships and influences with each other. We can adopt Bruno Latour’s Actor-
Network Theory, which suggests that both social and technological determinism have a part to contribute to the networked relationships between machines and human agents (Thielmann, 2010; Latour, 1996). It is suitable for use in relating to locative media because it allows us to refer back to Latour’s concept of the “Internet of Things” as a pretext towards the vision of “an integrated part of Future Internet” where “physical and virtual ‘things’ have identities, physical attributes, and virtual personalities and use intelligent interfaces, and are seamlessly integrated into the information network” (Vermes et al., 2009). This networked relationship is well demonstrated by the trend of “geotagging objects instead of people” and letting “these objects tell their stories,” and it allows locative media to create “an awareness of the genealogy of actants and agencies” (Thielmann, 2010:11-12). The effect of this is enhanced through densely populated communication networks and its social network features which allow individuals to consciously choose spectacle over privacy, sharing details about their whereabouts and posting it up online easily for their direct communities to see (Lemos, 2010a:138). Issues of surveillance, control and monitoring arise as younger generation users in particular start to conceive and embody the “great paradox of contemporary surveillance” where “instead of striving to maintain privacy, [they] strive to increase self-exposure” (Santaella, 2011:305; Blatterer, 2010:76).

What sort of information is being made available, how are these data about human mobility being archived, and what are the implications of such increasing availability of digital information? This datascape can very well be what Foucault conceptualized as a “heterotopia” which is a conceptual space that mirrors real, tangible, physical space, “a kind of enacted utopia in which real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested and inverted” (Rousseaux and Thouvenin, 2009:176). Lemos terms this as ‘information territory’ where control is determined over digital space and boundaries in the form of information organized by bytes and data (2010a:132). Within such a framework, issues of surveillance and control come into play as technological advances quickly reaches a stage where we are obsessed with the precise whereabouts of both humans and objects. With locative media, subjects are constantly on the move. The concept that we have of space as fixed and immovable is no longer as relevant, as being mobile on a social networking platform means more “concentrat[ion]…on communication and less on representations of space” (Speed, 2010:170). This mobility causes problems in the formation of territorial boundaries, especially with “informational territory” (Lemos, 2010b). As such new territories are created within physical boundaries, at the “intersection between urban space and cyberspace” and these places are a “result of negotiations among territories,” leading to “new senses of places emerg[ing] from these new layers of territories” (Lemos, 2010b:405).

Perhaps it is these ongoing renegotiations with digital territories that increase our need to raise digital trackability and monitoring, obsessing with every point, every move and pinpointing every precise location. Santaella gives us three main regimes of surveillance over the formation of civil society. The first is based on Foucault’s panopticon, where “disciplinary surveillance…is exerted in circumscribed environments” (2011:297). This form of discipline adopts a top-down approach where authority and power is held in the hands of a few. The next is the “scopic regime” which is enhanced by the proliferation of image or video-capturing devices like mobile phones with cameras and its distribution through social networking means; and the third being a “tracking regime” (Santaella, 2011:297). In the “scopic and tracking regime,” the power of control lies in the hands of mass mobile users, enabling them
Observing the Impact of Locative Media

to conduct self- and group-surveillance on their own, and omitting the necessity of authoritative power to inflict discipline on them. In Foucault’s theories on the Western penal system, discipline is cultivated when people realize the consequences of their action through the punishments that can be inflicted upon them by the authorities. The panopticon becomes an ideal version of self-discipline where one would adhere to orderly conduct whether under watch or not. However, in this era where tracking becomes digital and no longer relies on laborious manpower, the panopticon concept “fails to account for ubiquitous and dispersed modes of surveillance inherent [and made possible by] locative media” (Zeffiro, 2006:8). Whereas the ‘panoptic regime’ comes from an era of “old and heavy top-down bureaucracies,” what we are witnessing today in media studies is a power shift towards individuals, as they remove the power of control from bureaucratic authorities and place it in their own hands - the hands of the masses - in the form of mobile devices (Santaella, 2011:299; Lemos, 2010:416).

By situating control in the hands of individuals, Nolan, Mann and Wellman argue for a new form of inverse surveillance, an “inverse panopticon” that they term “sousveillance,” which acts as a new form of resistance against the power control of information by bureaucratic authorities (2008:180). This “sousveillance” can be viewed as a “form of tactical media activism” where protesters use mobile devices and capture proof of authoritative abuses (Nolan, Mann and Wellman, 2008:180). This is evident in the recent Occupy Wall Street movement, which started in New York and spread to other cities such as Melbourne and Tokyo, each with their social agenda. In Occupy Melbourne, peaceful protesters question the violence that police adopt in their attempts to break up the protests, and have evidence in the form of images and videos captured on their mobile phones to be used against the police (Green Left, 2010). They were also able to capture “evidences” of any abuse from the authorities on the spot and feedback such information to fellow followers online for immediate effects. The old concept of the panopticon has converted into the masses being the authority (Foucault, 1977).

While we have observed the digital territory and the potential issues of control and surveillance, we also need to look at how it relates to the physical landscape of the contemporary city. Although we may be more familiar with the Cartesian concept of space in the form of body and mind, the digital sphere is an area that is relatively new in our postmodern times (Speed, 2010). In taking a closer look at the concept of space, “Lefebvre’s first concept, spatial practices” addresses physical space in relation to their usage; and then there is the “representations of spaces [as] described by Rob Shields” which addresses the “by-products of the machinations...[which] include maps, plans, coordinates, diagrams and any abstractly quantitative and artificial interpretation of space” (Speed, 2010:171). The “representations of spaces” that Shields identified overlays “spatial practices,” making it an integrated map where virtual parallels reality, as in our case with locative media (Speed, 2010:171). Lapenta probably best explains this after his research on “platforms that merge existing electronic media+the Internet+location-based technologies (or locative media)+AR (Augmented Reality) technologies” (2011:14). He views this integration as a combination of a few components. First, a virtual map is made possible because of the collation of images from users and satellite imaging. Internet users are able to contribute images from past to present extensively from their personal collections onto a sharing platform, “combined together in a contiguous linear space, juxtaposed, superimposed and merged by means of spatial (and not temporal) relation” (Lapenta, 2011:17). This is further enabled by technologies such as the GPS, which allows for localized devices to pinpoint a human agent’s location against the virtual map, engaging the physical
space as part of the process. Commercial companies are also fast developing newer models of mobile phones that have locative mobile media applications that are increasingly more precise in determining one’s physical location. The recent explosion of location-based features on mobile phones such as the University of Melbourne (which allows students to search for buildings and connect to Google Maps to coordinate and determine their intended routes) and Melbourne Yarra Tram’s tramTracker (which tracks where the nearest tram station is from user’s proximity and reflects real-time updates of when trams are to arrive) phone applications demonstrate consumer’s demand for an increased detailing and availability of such information to them. With the combination of all these data available on the Internet and embedded in the form of mobile phones, users carry with them ‘virtual maps’ that are formed out of “photographic images, signs, texts and sounds produced by geomedia users, and geolocationally merged with each other” (Lapenta, 2011:17).

How would these new digital technologies impact contemporary cities and social connectivity? How does it impact concepts of authoritative surveillance with the rise of user-generated content alongside increasing digital trackability? We explore how locative media functions and still serve the purpose of bringing communities together through certain location-based features on Google Maps and Facebook.

Case Studies: Google Maps and Facebook

Google Maps is the output of Google Inc., which started its offering as a search engine before expanding its business into other media-centric businesses. Google Maps relies on the interaction of the satellites panning around Earth with Earth itself, thereby making physical locations searchable when the user keys in postal addresses onto the Google Maps platform. Realistic features include being able to observe any physical space on Earth from a God-view as users can choose their viewing options: satellite view shows realistic images of buildings and streets, and traffic view is particularly useful for drivers who can check on road congestions before they set off for work in the morning. The benefit that Google Maps has brought to people’s lives is undeniable. No longer do drivers need to pull over and check on their paper map every now and then to make sure they are on-route to their destination. Today, all they need to do is to download Google Maps as an application on their mobile phone and they can trace their route point by point as they drive. They can even opt for Google Maps to pre-plan their routes, and decide whether they want to avoid toll roads, or choose a longer but more scenic drive.

Through Google Maps, imagined communities are created around localities (Lapenta, 2011:19). Users can contribute photos, reviews and breadth information about a particular location (refer to Figure1 on Federation Square, Melbourne, Australia) and this is especially useful for travelers who wish to explore their planned visitation site virtually before being there in person. Peer production is a recent cultural phenomenon where one stands “on the shoulder of giants” and makes contributions by refining or adding onto existing works (Bentley, 2006:37). At a micro level, produsage (the output of the combined role of being a consumer and producer at the same time) takes place where images of localities are uploaded by the larger community as part of their willing and ‘collaborate engagement’ with Google Maps (Bruns, 2008). Furthermore, the combination of users and the availability of this virtual network allows for the proliferation of content, giving chance for such an organic community to be born and grow in vibrancy (Latour, 1996). The concept of space is eliminated, and instead of the traditional concept of sharing space in social interactions, connections are now made over ‘shared’ time in a digital space.
Observing the Impact of Locative Media

Figure 1

(McQuire, no date:14). The locative feature of Google Maps is enhanced by the capabilities that the GPS provides, hence the GPS built into the mobile device cannot be undermined in its role. Relying on satellite transmissions, it is essential as part of this virtual mapping through its precision in connecting virtual locality with the physical. Digital tracking is no longer confined to use by the authority as a means of surveillance but has a greater purpose towards enhancing everyday living through precise navigations around a densely populated city. For example, with the GPS feature on mobile phones, some uses have been to track missing or stolen phones (Cassavoy, 2011) as well as locating missing persons (TODAYonline, 2011). Such a concept of surveillance is no longer for the sole purpose of ensuring discipline and inflicting rightful punishment but has developed to allow for increased spatial understanding and knowledge, a use that unfolds towards more extensive social purposes.

The level of details that Google Maps provides poses a privacy problem for many countries, especially in the area of national security. To battle the issue on privacy, “Google uses a computer algorithm to prowl through its image data looking for faces and car license plates and then blurring them” and people who find inappropriate content can make a submission to Google requesting for its removal (Koh, 2009). This involuntary opt-in decision is interesting as it makes for the assumption that people are not as concerned about their personal anonymity in the digital world. This might be an easy conjecture to make given the increasingly voluntary public spectacle that digital users choose over privacy, as they become more willing to share minute details of their whereabouts and life over a virtual platform. This
very deliberate and public projection of the self into the digital space appears to be a newfound fixation that is increasingly popular with the younger generation as we addressed earlier, and it has turned its way into a form of self-surveillance. This creates sufficient motivation for engineers to invent “devices that are capable of talking to other devices via new protocols, in such manner that location becomes a new kind of data applied to the net” (Santaella, 2011:306). Self-exposure reaches a new height through users’ population of content on Facebook. Travel photo albums are created and named, showing intimate details of one’s life to the world and one’s perspective on the travel destinations and status updates fight for attention on a virtual space crammed with personal information alongside targeted advertisements.

This increasing fascination with personal spectacle can be seen through Facebook’s launch of the check-in feature in 2010 called Places, where users can enable the GPS device on their mobile phones and “check-in” to cafes and art houses and have those updates reflected on their Facebook statuses (refer to Figure 2). One wonders why users would want to do that and the probable answer we could see is the creation of an imagined popularity through the voluntary announcement of such information on their profile pages. This could be the accumulation of cultural capital that Pierre Bourdieu conceptualized in his field theory (1998) and it certainly calls to question the contradiction to a panoptic version of society (Zeffiro, 2006:8). However, a year after its launch, probably due to competition from similar “check-in” applications such as Foursquare and Gowalla, Facebook decided to expand this location-based feature to be part of “(status update, photo, or Wall post), from anywhere (regardless of what device [one is] using)” (Refer to Figure 2; Protalinski, 2011). Debord described modernity as an immense
accumulation of “spectacles,” a collection of images of every aspect of life that fused in a common stream and created ‘a pseudo-world apart’ (cited in Lapenta, 2011:16). The desire to see and be seen takes on a whole new meaning on a virtual platform, where cultural capital is pieced together through the imaging of places one visits and the type of information one chooses to share. Relational capital is hence built on such a foundation in this virtually networked space. Facebook Places allows users the choice of checking-in with their friends with them. Like the privacy issue with Google Maps, it is a feature which users have to opt-out of if they wish to maintain their privacy. In a community-based environment, “deliberate disclosure of personal data is a necessary component of networking interaction” (Blatterer, 2010:76). In this digital generation, Erving Goffman’s concept of the public representation of the self (1959) is transported onto a digital forum, integrating both physical and virtual locations seamlessly through the advances of digital technologies. Through a collective of users who have no qualms about contributing content about themselves and their spatial identity online, it appears that the power held by authorities is slowly transferring to the mass.

Conclusion

Community building is essential as part of any modern city living. Yet, the fast pace living of city life also means that people are shifting in their locations all the time. Locative media adapts to engage such audiences while they are on the move, bringing security through locative knowledge, and delivering stability of some form into the “culture of fear and insecurity” that Lemos addresses (2010a:133). Perhaps in following the footsteps of how the God of the Old Testament created the world by speaking the world into being (Genesis 1:1-24, The Holy Bible: New International Version), today we type in or upload text and images onto a digital platform, creating virtual personas and bringing ourselves to life in this virtual existence (Lapenta, 2011:19). As cities increase in human density, we face increasing insecurity and the need to publicize more details of ourselves online to our immediate community in the need to connect across space and time, and ironically that leads to a state where the community can conduct self- and group-surveillance of some form, radically transforming Foucault’s concept of a “discipline society” (1977). Through major network company’s assumption that users prefer spectacle over privacy, it embraces some level of cultural affirmation that in such a system where we openly share our data and personal information, we are leaning towards the reliance of mutual accountability instead of a single authoritative figure.
REFERENCES


Observing the Impact of Locative Media


