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"We Can Remember It for You": Location, Memory, and Commodification in Social Networking Sites

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Abstract

This article explores the spatial self through the performative aspects of location sharing and geotagging in the process of self-representation on social networking sites (SNSs). Based on the legacy of early experimentations with location-based technologies for social interaction, the article asserts that the representation of location in SNSs has more temporal than spatial attributes. The article explores the immediacy of networks and the different kinds of temporality encountered in SNSs to address the commodification of geotagged content uploaded on SNSs. Location-based data are valuable commodities bought and sold in the market. Therefore, the act of archiving memories on SNSs is commodified and performed within the predetermined functions and actions set within the SNSs' interfaces. SNSs devise ways to keep users constantly interacting with the present moment in time and simultaneously create memories of the recent past while disclosing personal data that companies use for profit.

Keywords

locative media, temporality, memory, spatial self, geotagging, location sharing, social networking sites, commodification

Introduction

This article discusses the spatial self in relation to temporality and memory, and asserts that users of social networking sites (SNSs) such as Facebook, Instagram, and Twitter are constructing their spatial selves based on shared locations and geotagged images that depict places visited and activities done in the recent past. The article reviews the way the context of location is used on SNSs and other location-based applications and goes on to explore different kinds of temporalities produced in and via SNSs. The article analyzes the dynamics of the commodification of the recent past in relation to constructing an online identity on SNSs and concludes that the commodification of narrating the recent past is an integral part of any discussion concerning the spatial self.

In Bergson's (1889, 1896/1988) theory of duration, the virtual past survives into the present, and memory intersects with the qualitative sensations received by the sensorium in the process of conceiving the here and now. The present moment is made up of elements of the past (memory), sensory motor functions (body), and other stimuli from the outer world. On SNSs, the daily documentation of everyday life and activities contributes a character of immediacy and nowness; everything is shared "in the moment." Most content shared on SNSs (images, videos, and status updates) is concerned with the here and now, depicting activities that took place very recently that were recorded at the time and shared shortly afterward. In the timeline feeds of SNSs, the present is made up of images of the recent past. Increasingly, we interact with time-based interfaces that present information according to a time hierarchy (most recent first). On a global scale, this daily documentation of everyday activities is a new cultural trend. SNS users are not only constructing "idealised performances of who a user is" (Schwartz & Halegoua, 2015, p. 5) but are also essentially constructing memories of the recent past.

The article draws examples from SNSs such as Facebook, Instagram, and Twitter and uses the term *SNS* as established in recent literature (see de Souza e Silva & Frith, 2010; Kaun & Stiernstedt, 2014; Papacharissi, 2011; Reading, 2014; Ritzer & Jurgenson, 2010; Turkle, 2011; Wilken, 2014) to describe web-based and smartphone applications that allow user profiles and the posting of text, pictures, and videos that other users can comment on, "like," and share. These SNSs

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are chosen because location features prominently on their interfaces, which allow users to tag the location of content using exact geographic coordinates (geotagging) and also declare their own current location (location sharing). The article does not focus on other Web 2.0 platforms and smartphone applications such as YouTube or Snapchat, as location does not form part of user interaction with content or the process of self-expression and performativity of online identity. Ever since their introduction, the personal photographic camera and the family album have been marketed as mementos and artifacts used to conjure up memory, nostalgia, and contemplation (Gye, 2007; Hirsch, 1999; Slater, 1985/1999). If the photographic image is a memento of the recent past, geotagged content shared on SNSs can be seen as "memory tags" of the recent past. Borrowing from Barthes's (1981) term, a photograph depicts "what has been" and "what was there once"; the geotagged photograph depicts "I was there once."

This article looks at the representation of location on SNSs and not the effects of it on the perception of actual physical space, which have been discussed elsewhere as hybrid spaces (see de Souza e Silva & Sheller, 2015; Drakopoulou, 2013). In such cases, digital information is layered over actual locations (de Souza e Silva & Frith, 2010; Drakopoulou, 2013; Graham & Zook, 2013), giving new and additional meaning to places. On SNSs, instantaneous access to the digital terrain allows users to implement the representation of their online identity by geotagging and instantly sharing an activity of the physical world, either while it is happening or soon afterward. On the user side, the act of sharing a location or geotagging a photograph is an act of memory, performativity (Mendelson & Papacharissi, 2011, p. 256), narcissism (Lovink, 2007), and participation in a collective networked sociability (Papacharissi, 2011). On the SNS's side, that act is then translated and analyzed by algorithms that will in turn display suitable advertising content (Fuchs, 2014). Users are actively expressing their identity, as constructed and set by the format of the SNS interface, and by doing so they are turning themselves into commodities that are bought and sold by companies to make a profit.

The first part of this article explores the performative aspects of location sharing and geotagging in the process of self-representation on SNSs. The second looks at the legacy of the locative-media movement (early experiments with locative-media projects both in the commercial and artistic sectors, before the introduction of the smartphone) and argues that the representation of location in SNSs has more temporal than spatial attributes. The third explores the immediacy of networks and the different kinds of temporality encountered in SNSs. The fourth part explores the elements of memory through the viewpoint of Bergson's duration. Last, the article explores the market value and commodification process of geotagged content on SNSs.

Performativity, Self-Representation, and Location in SNS

Interaction between social network users is characterized by reciprocity and by "gestures of presence" and "rapid urgent immediacy." For example, one may ask, "Are you online right now?" (Gregg & Driscoll, 2008, p. 134). There's also a certain "banality and simultaneous sincerity" to much of the social interaction on SNSs (Gregg & Driscoll, 2008, p. 134), since content depicts mundane daily activities. In SNSs, content is made for a specific audience, thus from its inception content is made to be shared. Axiomatically, taking a photograph is capturing a moment and keeping a memento. Similarly, the act of uploading implies that photographs must be shared immediately or soon after they are taken in order for their meaning to remain prominent and relevant to their audience. Immediacy and performativity are two definitive elements of content shared on SNSs. Facebook is a performative environment where the user is both audience for and producer of content. A study of college students using Facebook found that the collection of shared photographs exhibited an idealized version of college life, a "look at us" presentation that mainly depicts values of college life providing "visual evidence of social networks" (Mendelson & Papacharissi, 2011) and therefore was "a narcissistic photography of self-expression" (Papacharissi, 2011, p. 317). The drive for self-promotion on SNSs is both a narcissistic venture, and a consumerist desire to collect more stuff (Lovink, 2011). As Ritzer and Jurgenson (2010) assert that the prosumer is an integral part of consumer culture, it can be said that the self-expression performed in SNSs is mainly a consumption practice that is generating surplus value.

Self-Representation and Its Limitations

Schwartz and Halegoua (2015) call the spatial self the "presentation of the self based on geographic traces of physical activity" (p. 5). As those geographic traces act as memory devices, this article asserts that the spatial self is constructed from a curated appropriation of past activities. However, for SNSs, this revisiting of the recent past to construct an image of the present self is a profit-making device. The element of nostalgia can be seen most vividly in Instagram's retro filters and Facebook's "Your memories on Facebook" reminder, which actively encourages users to re-share previously shared photographs. In that sense, it can be said that SNSs commodify memories, as their economies are based on engaging users both as commodity and networked laborers (Papacharissi, 2011, p. 311). It has been argued that the predetermined layouts and functions of SNSs interfaces simplify the way and give little freedom to present oneself in multiple ways online (Lovink, 2011, p. 41; Turkle, 2011). Turkle's (2011) study showed that subjects felt that constructing a Facebook profile is "like assembling cultural references to shape how others would see" them (Turkle, 2011)

and noted that teenagers often feel "exhausted by its pressure for performance" (Turkle, 2011). The architecture of SNSs allows for particular affordances (boyd, 2011) with which users must comply in their social interactions with others. These standardized layouts and affordances at once conceal and enable the monetization process undergone by personal data.

Location Sharing and Geotagging

For the purposes of this article, it is helpful to distinguish between location sharing and geotagging. Geotagging means that exact location coordinates (usually GPS) are attached to status updates, photographs, and videos, either automatically by the device, which records the location as part of the media's metadata at the time the content is generated, or manually by the user afterward. Geotagging may be either synchronous or asynchronous, as users may decide to retrospectively geotag an image they uploaded some time before. Increasingly, SNSs are automating geotagging, giving users the option to set it on or off. Location sharing means that users have made a decision to announce their exact current geographical location using either a smartphone application or the SNS's website; they can also add descriptive text. Location sharing is typically synchronous; the location is added while the user is still at the physical location or soon afterward. It must be noted that this article does not explore location from the ontological viewpoint of accessing information about the location where one is situated; or the way places are enriched when layers of electronic information are overlaid onto actual physical space; or the effects of spatial amplification (see augmented realities; Drakopoulou, 2013; Graham & Zook, 2013). Rather, this article explores the act of remembering and performing an identity online by broadcasting a location recently visited (location sharing) or attaching a location to a photograph (geotagging) through the SNS.

Location is "becoming the mediator of our social and networked interactions" and the "organisational logic" that underpins the structure of networked interactions (de Souza e Silva & Sheller, 2015, p. 4). Traditionally, location can be perceived as being at a place (Wilken, 2014). With the introduction of locative media, location can be perceived as both exact geographical coordinates and as the meaning acquired from the digital information attached to that location. Location is becoming increasingly important in constructing identity profiles on SNSs (Frith, 2015, p. 73) that are implemented by the "specific narrative of a physical place" (Schwartz, 2014; Schwartz & Halegoua, 2015). People may revisit past photographs and geotag content to remember those places and revive memories (Ozkul & Gaunlett, 2014, in Frith, 2015, p. 91). Route-tracking applications also link places with memories; one can show off their running route and also use that tracked route as memory (Frith, 2015, p. 93). This article argues that indicating location in SNSs (via either geotagging or location sharing) is performative and therefore both a representational and a temporally meaningful act, because the visible geotagging displayed on the SNS interface is essentially a retrospective review of the recent past and is therefore more temporal than spatial.

I Was There Once

In the same way that the photograph was marketed as a memento, on SNSs the process of keeping memories of places recently visited and constructing an identity through that representation aims to keep users sharing personal data. The commodification of memory artifacts can be traced back to the introduction of the photographic camera to the market. From 1888 through the 1970s and 1980s, Kodak's advertising and promotion heavily invested in the creation of the amateur photographer, installed the idea of the family album as a memento, and established the snapshot format as part of leisure activities (Slater, 1985/1999). Roland Barthes (1981), in *Camera Lucida*, argues for the historical testimony imprinted in photography: "If the photograph cannot be penetrated, it's because of its evidential power" (p. 106) and asserts that "the photograph does not necessarily say what is 'no longer'; but only and for certain 'what has been'" (Barthes, 1981, p. 85). Instantaneously capturing and sharing the cameraphone image is a collective experience; in this process, Barthes's ideas of "what was," "what has been," or "something that was there once" overlap with the immediacy offered by the technological capabilities of the networks and hardware used.

The meaning of cameraphone images derives partly from photography's historical "evidential power" and depiction of "what has been" and partly from the instantaneous manner in which time-based media objects are uploaded on SNSs. During the 2000s, researchers largely concluded that cameraphone images are made for collective viewing and sharing in the moment and are most likely to be shared while the event is taking place as opposed to afterward (Döring, Dietmar, Hein, & Hellwig, 2006; Ito & Okabe, 2006; Ling, 2005; Van House & Davis, 2005). A cameraphone image depicts a moment of the recent past; in other words, it presents a "recent now"—that is, something that took place very recently and was shared soon afterward. Because images shared on SNSs inherit temporal characteristics and properties such as memory from the portable photographic camera and also inherit the immediacy of network technologies, they too can be said to depict "a recent now." The temporal characteristics of immediacy and nowness of geotagged cameraphone images shared on SNSs turn Barthes's assertion that a photograph depicts "what was" and "what has been," to the "I was there once—very recently." If photographic images are mementos of the past, adding geotagging and representing such images on maps (such as Facebook's image maps) enables geotagged content shared on SNSs to be seen as "memory tags" of the recent past. The emphasis on the now

and creating memories of the recent past are the two elements that underpin interaction on SNSs.

Behind the scenes, these interactions turn into valuable commodities in the form of metadata that are sold to third parties that use them to create personalized advertising and collect further valuable metadata about users' habits, interests, and tastes. On SNSs, the constant sharing of the present moment in time and showcasing the "I was there once" is a process by which users are constantly exposed to advertising while creating new content in the form of personal data that will in turn be interpreted to display more targeted advertising to the user. As will be shown, these smooth, easy-to-use interfaces conceal the backend operations of the platforms that turn geotagged content into data that can be analyzed to reveal user habits, street traffic, and footfall statistics that can be sold on to third parties. The predetermined layouts and affordances set by the SNSs interfaces conceal the politics of platforms that propel users to increasingly share specific private data such as location to monetize and sell them.

Locative-Media Legacy and Location as Temporal in SNSs

The article asserts that location as used on SNSs, whether by location sharing or geotagging, is temporal and purely a performative act as, unlike other locative media, it does not promote interaction within physical spaces. Between 2000 and 2008, the locative-media movement focused on reappropriating the urban environment by way of interactive systems that blended the user's actual physical location with a virtual network of social interaction. During that time, approaches were developed in both commercial and artistic sectors, such as Dodgeball (2000-2005) and the Yellow Arrow project (2004-2006). The end of early experiments in locative media is marked by the introduction of the smartphone in 2007/2008, when mobile and location-based technologies were integrated with the web (Drakopoulou, 2013; Goggin, 2011) and locative-media applications moved to the commercial sector (de Souza e Silva & Frith, 2010, p. 491). On SNSs, the dynamics and politics of profit-making schemes have changed the context in which location is used. For the purposes of this article, it is helpful to think about the way the context of location was used in early locative-media applications and projects and the way it is used today on SNSs and smartphone applications.

Location and Social Networks

In Locative Mobile Social Networks (LMSNs), interaction among users is based on their geographical location and its representation on a map, as well as the physical proximity of other users. Interaction is conceived within players' immediate surroundings (de Souza e Silva & Frith, 2010). LMSNs provide a location-aware network or platform that enables people to gather in physical space, as in the case of flash mobs (de Souza e Silva & Frith, 2010). Dodgeball allowed users to broadcast their location (de Souza e Silva & Gordon, 2011) to initiate social interaction and meet at physical locations. Similarly, in locative-media games, users' proximity is the raison d'etre of the interaction, as these games were situated within a specified locality or within the game's magic circle—they were situational and interaction was based on proximity between players (de Souza e Silva & Sheller, 2015; Drakopoulou, 2010).

Today's Location-Based Social Networks (LBSNs; Frith, 2015), such as the mobile dating applications Tinder, Grindr, and Happn, use proximity as a sorting filter, but they lack the engagement and interaction with physical locations that characterized Dodgeball, where meeting was more immediate. Location-based dating applications can be used to find and meet new people rather than connect with friends (Frith, 2015, p. 77). In these applications, the layer of the information space is used to mediate and initiate a meeting in actual physical space. Newer LBSNs such as Swarm, Yik Yak, and Shout focus more on sorting content according to the geographical proximity of users, enabling them to share a collective expression of a certain moment in time. On LBSNs and LMSNs, physical proximity initiates social interaction. LMSNs use location and physical proximity as the triggers for social interaction between users, while LBSNs use location as a sorting filter to bring users together. On SNSs, location (geotagging and location sharing) is used neither to initiate social interaction at a particular location nor as a grouping filter. Instead, location on SNSs is purely representational and a retrospective review of the recent past, and therefore temporal and a device used to keep users generating personal data.

Writing Space and SNS Image Maps

The locative-media movement's early experiments, such as the Urban Tapestries and Yellow Arrow projects, attempted to reappropriate places by inserting user-generated content onto an electronic map or at a specific place in the city. Drawing on ideas first engendered by the Situationist International (Tuters, 2012), early locative-media experiments created alternative city maps as ways of perceiving a specific locale. In locative-media projects, spatial annotation on electronic maps and interfaces enriches and enlarges actual physical space, and the layering of information onto actual physical locations creates opportunities to reappropriate the use and perception of a particular locality (Drakopoulou, 2010). Instagram and Facebook provide image maps; that is, world maps on which geotagged images and visited locations are represented, and these can be shared with friends. Facebook's image map and Instagram's Photo Map are designed to evoke memory and perform an identity and are not annotative in the same way as locative-media electronic maps were. They are personal, rather than intended for communal use. When using Facebook's or Instagram's maps, one is "writing space" by

annotating a map with memory images. For Frith, there's no clear differentiation between "location-based composition and location based-memory," as he argues that sharing location is still "writing space." If location-based memory can be seen as part of a larger trend toward personal digital archiving (Frith, 2015, p. 93), then it can be argued that it is increasingly used on SNSs as a feature that conceals these sites' backend data collection.

The Yellow Arrow and Urban Tapestries projects predate social media; their "spatial reappropriation" meant that physical presence at a particular location formed part of the context for social interaction between users. In the Yellow Arrow project, an individual would leave a yellow arrow sticker in a physical location; someone else arriving there later would send the code on the sticker via SMS to the project's phone number and receive in return the message the poster left. In Urban Tapestries, users made spatial annotations within the system's platform by leaving messages and pictures on a representational map (Frith, 2015, p. 85). Whereas LBSNs encourage meeting in physical locations, on SNSs, location tagging remains within the SNS platform; tagging may or may not trigger a meeting with someone in real space. In contrast to early location-based experiments and games, on SNSs declaring location (location sharing) or stamping content with geographic coordinates (geotagging) are not "locative." That is, they have nothing to do with being physically present at or interaction with that location. Wilken (2014) provides an interesting definition of the term "locative" as being in, at, and with location. On SNSs, location is a performative act where actual physical space, the location the photograph was taken (geotagging), or the location one was at very recently (location sharing) becomes a referential in the process of self-representation performed on the SNSs. The cultural meaning attributed to the location depicted in the photograph or indicated by geotagging is a way of expressing who one is, one's tastes, and so on. This process is then translated to rich metadata and locational data that are valuable commodities to the market. Therefore, the act of declaring location on SNS is a commodified act.

Moved outside the SNSs platform, geotagged photographs regain their place-based meaning. For example, Lev Manovich's Selfiecity project analyzes geotagged selfies taken in different cities to produce a data visualization that represents mood, poses, frequency, and other elements, inviting audiences to draw their own conclusions about that city's culture. Equally, Schwartz and Hochman's (2014) study of geotagged photographs on SNSs taken in New York City parks provided very rich data about residents' use, times, and habits (Schwartz & Hochman, 2014). In that sense, geotagged content can provide indicators about how to study and understand such places using the social media data generated and rich, temporal data derived within them (Schwartz & Hochman, 2014). Location in SNSs is both temporal and a commodification practice, as personal digital archiving is being commodified, providing the market with rich metadata to be bought and sold. Because geotagging and location sharing are designed to evoke a memory of a place—and depict an action or activity of the recent past—they are representationally locative and temporal. Representing location on SNSs is an act of memory and performativity, based more on temporal than spatial elements. Even when SNS users are accessing the application "on the go," or changing their course based on information received on their mobile devices, on SNSs, location remains representational as it is essentially a retrospective review of the recent past.

Whereas early location-based experimentation used location contextually to initiate interaction between users and system, on SNSs, location is purely representational (expression of identity) and temporal (retrospective review of the recent past). Via the SNS-set standardized process of self-representation, users are caught in a constant reproduction of the present moment in time. As will be shown in the next section, users recreate and interact with the recent past, recycling content and recreating the now. This constant documentation of everyday life and the communication of the present moment in time are functions set by the SNSs interfaces designed to keep users sharing valuable personal data and conceal the fact that all this uploading is designed to generate commodities.

Immediacy and SNSs

To further support the argument that location on SNSs is temporal and representational, this section of the article explores the temporal qualities of SNSs and the ways the network's immediacy characterizes the shared content. The timeline's temporal origins can be found in diary keeping, blogging, and text messaging. Traditionally, archival order was based on spatial, index, and mapping structures. Because computer networks and databases involve time-based procedures in filing and sorting data, they are increasingly temporal (Ernst, 2005). Archiving, real-time processing, and "on the fly" are all ways of describing hardware and software processes that produce the immediacy and instantaneity that characterize ICTs (Information and Communications Technologies; Hoskins, 2009). The technologies that support SNSs are also characterized by immediacy, "real-time" exchange of data, and "on the fly" processing to create personalized advertising.

The Nowness of ICTs

Networks' ability to deliver data instantly is supported by various technical components such as satellites, nodes, base stations, relay nodes, stationary processors, and data storage farms. ICTs change both our use of time and our sense of measuring it (Crang, 2007, p. 76). ICTs in general tend to create a perpetual fluctuation of the now: "In pursuing more of the present, we lose it completely" (Murphie, 2007, p. 125). Virilio argues that the advance of instantaneous communication has caused a rift in the way the present—the now, the instant—is

perceived (Virilio, 1997, pp. 24-25). The loss of delay in instantaneous communication creates a kind of perpetual present with the result of creating an amplificatory present that in turn creates a futureless present. "The endless present—leaves behind the centre of fixed space for good" (Virilio, 1997, p. 143). For Virilio (1997), the photographic or video image freezes time; that time-freeze is a kind of "fixing of the present" (p. 28). Communicating in "real-time," and no longer facing the confines of local space, social activities conducted with tele-action create "the time of an endless perpetuation of the present" (Virilio, 1997, p. 143). For Varela, "nowness is not a point or an object but a location" as the visual field is occupied by a "specious present" (Varela, 1999, p. 278 in Murphie, 2007, p. 128). The "now" as experienced through the use of ICTs can be seen as amplified and transferable. Instantaneous communication of text, photographs, and videos in SNSs can be seen as mediation or a perpetual dissemination of one's "now"—how one feels, what one wants—that is described in the context of an immediate future and that is communicated instantly.

By engaging in a perpetual process of disseminating one's present moment, users leave digital traces in the form of personal data and location coordinates that are valuable commodities in the market of targeted advertising and user profiling, consumers' preferences, and behaviors. In computer networks and social media, there is an emphasis on the new—"what's happening right now" (Gehl, 2011). The relationship of immediacy and networks is integral to the way content is shaped, circulated, and annotated in SNSs. ICTs are characterized by immediacy, as in milliseconds data are transferred from one device to another or uploaded onto SNSs. Web 2.0 enables real-time interactions between users as they annotate and discuss content. "Networks privilege a reading of reality . . . and shift our focus to the event, the happening or the now" (Berry, 2008). The relationship between immediacy and networks can be seen from their real-time drivers and archival properties (Mackenzie, 1997) and also in the connection between speed and information (Virilio, 1997), and used to discuss the evolution of our culture's emphasis on the "real" into an emphasis on the new (Gehl, 2011, p. 1233). In televised broadcasts, the LIVE logo attributes the element of reality to televised events the same way that on SNSs the emphasis is on the now; "what's happening right now?" creates the feeling of immediacy.

So-called Web 2.0 sites, from Facebook to blogs, are sites of immediacy: They emphasize the now. For example, Facebook used to ask users, 'What are you doing right now?' as a prompt to post status updates (Gehl, 2011, p. 1232). This emphasis on the new or very recent can be simply interpreted as "Web media corporations relying upon users to do the work of quickly and cheaply processing digital artifacts to generate an informational and affective surplus" (Gehl, 2011, p. 1234). Tomlinson's (2007) "culture of immediacy" implies the closing of the gap of the "middle term" (p. 91), for example, by abolishing waiting time. SNSs aim to create a sense of immediacy by showcasing content that is happening right now. This focus on content that is characterized by immediacy and nowness results in user interaction and creation of content that is constantly reproducing the present moment in time. That's the fundamental basis of the process of commodification. SNSs exploit the sense of immediacy and nowness to keep users interacting with advertising content and generating data that companies can collect, analyze, derive profits, and exploit to determine future targeted advertising. What's more, the way the present moment in time is reproduced and represented varies from SNS to SNS. It is interesting to observe the temporalities as set by particular SNSs, and how the reference of time and of the present moment in time is prolonged via the way time and duration are represented on the interface.

Facebook Time

Investigating the temporal logic of a media technology and the temporal rhythms of use it produces (Keightley, 2013), it could be said that Facebook creates its own time, a social media time that consumes users (Kaun & Stiernstedt, 2014, p. 1159). In presenting media objects in temporal order, "Facebook platform structures temporal experience" (Kaun & Stiernstedt, 2014). SNSs timelines are not so much temporal archives, but rather an interface that emphasizes the new by placing the most recent first. Facebook itself archives enormous amounts of data; however, the interface is designed to push people to constantly upload new posts rather than to engage with older ones (Kaun & Stiernstedt, 2014). Equally, the service's usefulness as a personal memory archive is limited, though Facebook is enhancing it by offering the "share your memories" feature (Kaun & Stiernstedt, 2014). Facebook's user experience is characterized by immediacy, ephemerality, and "liveness," creating an atmosphere of rapid change by replacing old stories with new ones (Kaun & Stiernstedt, 2014). On SNSs, therefore, the present moment in time repeats endlessly, shared not for archival purposes but for the purpose of constantly engaging with new content to comment on, share, "like," and annotate.

Instagram Time

Instagram orders photos on the timeline in a temporal order that Instagram sets. Each photo's upload time is indicated by reference to the user's log-in time (1 hr ago, 1 week ago), obscuring the exact time and date the photo was taken or uploaded. Filters may also alter the meaning of a photograph or evoke the past (as, for example, the "1979" filter; Hochman & Manovich, 2013). Taken together, these factors create "three different temporal references" (Hochman & Manovich, 2013). Therefore, Instagram images "lose" their specific time and place stamps in favor of the archival order set by the application, making these images "atemporal," "timeless or time-thickened" (Hochman & Manovich, 2013). In that sense, Instagram's entire concept is

based on viewing images of the recent past. Borrowing from Hochman and Manovich's analysis, Instagram's "time thickness" is a way of prolonging the "nowness" of the image. Indicating the time of upload in relation to the user's log-in time prolongs the image's immediacy.

Cultures of the Now

Research has shown that mobile media content conveys actions that the sender and recipient will perform in the immediate future or have performed in the recent past. For example, people use the mobile Short Message Service (SMS) to communicate "things that would happen in the next hours or next day," and include personal news, location information, distant future coordination, and emotional grooming (Ling et al., 2005, p. 83). We use SMS to communicate our present state: how we feel, where we are, what time to meet, and what we will do next. Status update culture is a direct descendant of practices first established in mobile media in general and text messaging in particular. On SNSs, status update culture influences the meaning of content uploaded and shared as it mainly depicts a recent now. Also, there is a street-level viewpoint in this content and this, combined with the content's ephemeral nature, grants it a "snapshot of reality" quality. As cultural content is increasingly defined by "when and where," the status update culture, and snapshots of everyday life on social media, together with other forms of user-generated content, can be seen as parts of an emerging cultures of the now. In commodifying the recoding and broadcasting of daily activities, this prevailing cultures of the now on SNSs reveal a cultural tendency to constantly reproduce the present moment in time.

Remembering the Now

In observing that status updates and geotagged images capture and communicate a place visited in a very recent moment in time to construct a self-representation in the present, Bergson's concepts of duration and the memory cone are appropriate theoretical models to conceptualize the process of "sharing in the moment" in timeline interfaces. In *Time and Free*, Will Bergson (1889) discusses duration as a moment in time, immeasurable and infinite, that contains sensual elements (qualitative sensations), memory, and time passing in a forward motion toward the future. Duration is the process of conceiving the here and the now, moving in a forward motion toward the future—while retaining elements of the past (Lawlor, 2003). Duration is the "prolongation of the past into the present" (Ansell Pearson & Mullarkey, 2002, p. 180). In *Matter and Memory*, Bergson (1896/1988) imagines our perception of space and the present moment in time as contiguous images, which are rippled upward in a cone structure, expanding across space and time. The sensori-motor mechanism is all the information we receive from our senses, which are affected by our memories, which in turn differ in intensity (Bergson, 1896/1988, p. 175). Comprehending reality, and hence defining the present moment in time, is dependent on our sensori-motor experience, our memories, and the future as it unfolds. Our perception of the present moment in time is defined by a process of infinitely expanding memories of the past and the recent past. As he puts it, "Practically, we perceived only the past, the pure present being the indivisible progress of the past gnawing into the future" (Bergson, 1896/1988, p. 150).

The memory cone model, Bergson (1896/1988) proposed, articulates the comprehension of being in time and space. For Bergson (1889), reality is a mix of mental and sensual elements, which are mainly internal memory images and external sensory stimulants from the outer world. The technical question in Bergson's conception of reality as something always in the making—and its interdependency with memories manifested as images—is addressed by Deleuze in *Cinema 1*. Deleuze relates Bergson's memory images to the images of cinema (Deleuze, 1983/1992). Mark B. N. Hansen uses this approach to describe how temporal objects in new media are technically elementary forms that manage to affect memory and explores the potential impact of technology in perception (Hansen, 2004, p. 256). Drawing upon the idea of duration as a thick moment in time, that includes in it, not in a serial manner, the past, present, and future, this article asserts that contents uploaded on SNSs with a timeline interface are durational objects in the sense of presenting a complex relation of past, present, and future, and are archived as memories. Through the technical capacity for instantaneous data delivery and the immediacy of networks, content shared on SNSs is predominantly concerned with the recent past and immediate future. Geotagged images are memory images; they are durational objects, as they depict a recent moment in time and space that instantly becomes past and a memory as soon as it is shared—and directly afterward they are stored in an archive. Thus, they evoke both a spatial (place-based) memory and a temporal one.

Temporal Objects

In duration, the present moment of consciousness is always moving toward the future because time moves in a forward motion in successive moments, although each one retains elements of the past. In the same manner, SNS content depicts a moment in time that retains elements of the past. They are time-based representations of a recent moment in the past—viewed in the present, thus, they depict a recent now. For example, photographs may depict an event that took place very recently, while status updates communicate feelings and aspirations of the present moment, things that have happened or are about to happen. Because of their interrelation with the past–present–future timeline and space, geotagged content uploaded on SNSs can be understood via the notion of duration. In the sense that geotagged photographs and status updates are temporal objects containing the

timeline of past–present–future, they are memory images of the recent past.

Nostalgia and Aggressive Re-Remembering

Sharing images on SNSs can be seen as constructing a self-representation by archiving geotagged memory images. Nostalgia is an idea that relates to the family photographic album. As Hirsch (1999) says, "The personal photograph is an object of complex emotional and cultural meaning, an artifact used to conjure memory, nostalgia, and contemplation" (p. 178). Photographs can belong separately to either the private (amateur photography) or public domain (news photography; Hirsch, 1999). In global events, amateur photographs can create a collective memory of the event by crossing the public–private boundary. For example, the amateur images of the beating of Rodney King were shared publicly, making the personal public and historical at the same time (Hirsch, 1999). However, SNSs blur the formerly distinct boundary between public and private (Mendelson & Papacharissi, 2011, p. 256). They operate as personalized groups of friends and associates; sharing a photograph is not opening it up for viewing by the general public but rather sharing it within a personalized network. In that sense, sharing the images is, inevitably, communicating the content as well as an action of "a performative nature to a variety of audiences" (Mendelson & Papacharissi, 2011, p. 256). This blending of private and public in SNSs' images and content attributes the elements of performativity and memory. Users are seemingly archiving memories, projecting an image of their identity and geotagging and location sharing can be seen as acts of both self-representation and archiving of memories.

SNSs may be seen as part of the culture and politics of individualism that emphasizes personalization and nostalgia (Ritzer, Dean, & Jurgenson, 2012, p. 392). Mobile media literature has addressed archiving of temporal objects such as SMS to create a database of memories (Ito & Okabe, 2005). On SNSs, archiving is similarly an act of keeping mementos but it is also a form of self-expression. By showcasing "treasured memories," users actively construct a self-representation. By archiving special events, users perform an identity based on a retrospective review of images from the recent past and therefore create an image of a social self by which users express themselves by to their groups of friends. Alongside the sense of immediacy SNSs employ, interaction with interfaces that are a retrospective review of the recent past are used by SNSs to keep users constantly interacting with the timeline. Because locational data are so commercially valuable, SNSs devise different ways to acquire even more and propel users to geotag previously uploaded content.

For example, Facebook Moments bills itself as "a private way to share photos with friends." It is a feature designed to encourage users to share more photographs and address privacy concerns by creating small inner circles of friends to whom these memorable photos can be restricted. The algorithms that analyze this content provide valuable metadata. The propulsion to share in the moment and sort content according to its immediacy—its nowness—can also be seen in other new ventures such as Twitter Moments: "the best of Twitter in an instant." Increasingly, Facebook employs an aggressive re-remembering practice by prompting users to re-share content and offering the option to geotag it. With features such as "Your memories" and "On this day," Facebook is using memory and nostalgia as mechanisms to propel users to actively engage with the re-sharing of content. Facebook has added the feature "Let us know if there are people you don't want to see memories with," allowing users to edit and author the memories displayed on the timeline. This obligatory memory stimulation in Facebook unmasks the ruthless pursuit for profit because active re-sharing of past photographs, status updates, and video clips generates greater user engagement and therefore more valuable metadata. Revisiting the recent past is characteristic of the cultures of the now; however, the constant retrospective review of the recent past and sharing in the moment produce rich commodities to sell in the market, as will be discussed in the next section.

From an ontological viewpoint, it can be argued that as in Bergson's duration, the present moment in time is made up of memory images (time) and stimulations from the outer world (space), on SNSs, there's a constant repetition of the present moment in time as users interact with time-based media objects that are tagged with exact location coordinates. From the viewpoint of a political economy of SNSs, experiencing the present moment in time as a constant repetition is purposely designed labor set by companies so that users will produce commodities in the form of metadata.

Commodifying the Performative Aspect of Location in SNSs

Social media content uploaded on SNSs incorporates the experience of everyday life as depicted in the form of time-based media: concise text, photographs, and video. Extracting a level of performativity, and therefore representation, the snap shooting of everyday life contributes a character of immediacy and nowness; everything is shared "in the moment." In SNSs, the performativity of group acts such as sharing a photograph of a night out at a club can traverse the boundaries of public and private and acquire "meme-like qualities of memorabilia" (Reading, 2009). There is a certain element of performativity in social media content. The user of new media objects is partly audience and partly maker.

Location Sharing and Performativity

With location sharing, one can precisely pinpoint one's current geographical location. Accessing the space of information while at a location and disengaging with people who are copresent at that location (Katz & Lai, 2014) have been much discussed. In a study on Foursquare, Cramer, Rost, and

Holmquist (2011) found that users are more likely to share their location when they are physically present at that location with others and thus performing a self-representation to the network. Check-in is an act of self-representation and to this extent there's a performative aspect of location sharing (Cramer et al., 2011). Location sharing is also social, as one may share their location in the hope that others nearby may join them. From the viewpoint of constructing an idealized image of oneself on SNSs, location sharing in SNSs—for example, by as checking into at specific place—is to "show off to others" (Frith, 2015, p. 73). By showcasing locations visited in the physical world, an identity in the information space or on the SNS is presented. Location sharing applications can be used both to find friends and to avoid others (Katz & Lai, 2014, p. 60), and can be seen as "a social negotiation amongst multiple actors" (Frith, 2015, p. 72). Interestingly, most of the business models developed for location sharing applications have failed to become profitable (Frith, 2015), as it turns out users did not find the rewards enticing enough to outweigh their privacy concerns.

On an experiential level, checking in or geotagging a photograph is a nostalgia mechanism; it is both actively performing a self-representation and creating a memory stamp of a particular time and space in the recent past. Applying a prosumer approach, sharing location and geotagging can be seen as commodified acts that actively create valuable metadata that can be sold to companies for the purpose of personalizing advertising and profiling users. This tension between the market value of location data and the performativity of identity through location sharing and tagging underpins the process of commodification of location and the spatial self on SNSs.

Prosumer

The SNS prosumer marks a new age of capitalism (Ritzer & Jurgenson, 2010), where there is less control of the worker and more focus on the prosumer as is the case of online consumption. In the age of the prosumer, there's a trend toward unpaid labor and offering products at no cost (Ritzer & Jurgenson, 2010, p. 14); prosumer culture is part of the consumer culture that developed in the 20th century (Ritzer & Jurgenson, 2010). On SNSs such as Facebook, prosumers choose to present themselves in particular groups and are free to select that representation with no input from the company (Ritzer & Jurgenson, 2010). This argument does not take into account the preselected format in which users are asked to express their identity, as Turkle (2011) suggests that these interfaces are limiting self-expression.

It is widely known that companies ultimately make profit from the nonmaterial labor performed by millions of users and so-called user-generated content (Terranova, 2000; Wasko & Erickson, 2009, Reading, 2014). The commodification of the labor of developers and content creators by YouTube (Wasko & Erickson, 2009) is an example of the way users' labor on Web 2.0 platforms and SNSs is exploited, turning their original content into a commodity with comparatively little monetary reward for the prosumer. "While the worker produces a great deal of surplus value, the consumer who 'works' produces nothing but surplus value" (Ritzer & Jurgenson, 2010, p. 26). Applying a political economy critique, the SNS user is a prosumer who produces surplus value and therefore all of the interaction and shared content become commodified. In that sense, then, the tension between the market value of data produced as part of SNS–user interaction and the human act of archiving memories and artifacts of a particular place and time is only part of a wider issue regarding Web 2.0 platforms and prosumerism. On one hand, users are interacting and producing content to document their everyday lives, and on the other, that content is commercially monetized. SNSs exploit the human habit of archiving memory artifacts in the form of images and text into a set of selectable choices, designed to induce users to upload their personal data.

Geotagging and Market Value

Geotagging makes it possible to indicate the exact geographical location where the photograph was taken. Geotagged photographs can be easily sorted by location. Adding descriptive tags such as "beach" means they can be easily browsed on a map and associated with points of interest (Liu, Yuan, Cong, & Xu, 2014). The combination makes them adaptable to multiple modes of representation. This adaptability to multiple formats and interfaces, as well as the richness of geotagged data, provides many commercial opportunities. Geotagging and location sharing can reveal individuals' patterns of movement through urban space and of consumption. This accumulation of data has "substantial financial value for advertisers and marketers" (Wilken & Bayliss, 2015, p. 184). Geotagging emerges as a new market opportunity (Visiongain US Gov Report, 2009). However, on some sites, users have become aware of the privacy risks; most Twitter users, for example, do not enable geotagging (Shubber, 2013). Partly, this is a result of education by websites that raise awareness. Location data can, for example, pinpoint where users work (Shubber, 2013). Even without geotagging, algorithms can trace where users live by analyzing their non-geotagged tweets (Solon, 2014). A 2016 U.K. Gov reports, "The commercial use of consumer data" recommends that companies should make clear to users how geodata are used for marketing purposes, and goes on to say that the amount of money spent on these kinds of datasets is not disclosed by companies (U.K. Gov, 2015). However, the fact that companies continue to collect this type of data—and actively encourage users to provide it—suggests its importance to them. For example, Foursquare's business model, both before and after its relaunch in 2014, was to sell user location data to serve relevant advertising content. In 2014, it also started selling user location data to developers and marketing companies. This opened up the market and showcased

the adaptability of user location data, not just for targeted advertising but also for measuring footfall in shops, streets, bars, and restaurants. The result is to create valuable statistical data that can be sold on to third parties (Crowley, 2014; Finley, 2016). Companies do not disclose the exact value of these transactions, which shelter under gray areas of the law that do not allow for transparency and accountability for such commodity transactions.

In 2016, an academic study used the police forensic method of "geographic profiling" to uncover the identity of the street artist Banksy (Hauge, Stevenson, Rossmo, & Combera, 2016). By studying the spatial patterns and locations of Banksy's street paintings, the researchers were able to pinpoint his home address. This example shows how rich and personal location-based information can be when linked with other datasets. This is what makes geotagged images and status updates valuable to commercial companies for advertising, user profiling, and other uses such as studying consumption patterns on a particular street. Because "a large portion of photos uploaded to social image-sharing services contain no geolocation information" (Liu et al., 2014), companies have created automated systems that detect the location shown in the photograph to prompt users to geotag both new and older content. A study of images posted to Flickr found that less than 50% were geotagged (Liu et al., 2014). Interestingly, this study used the time lapse between capturing the image and geotagging it as one of the methods of analyzing user geotagging behavior (Liu et al., 2014). Facebook is increasingly becoming a location-sharing platform, promoting features such as opt-in or opt-out of sharing location (Wilken, 2014) and allowing geotagging of both new and old content (Wilken, 2014, p. 1093). Users may see geotagged images shared online as a form of personal archiving, overlooking the fact that geotagged content is captured by algorithms which in turn analyze and spot patterns that can feed into advertising and general consumerism. SNSs emphasize and actively encourage geotagging content because it provides "richer" metadata, that are valuable in the market for big data, personalized advertising, and the growing Geoweb.

Because both geotagging and location sharing reveal places users have visited, these spatial practices can give precise information about an individual's habits, presenting commercial opportunities. With regard to their performative aspects, location-sharing and geotagging content on SNSs can be seen as acts of archiving memories of places visited to construct an identity both online and offline. Although personal archiving and keeping mementos is a natural human activity, on SNSs, geotagging and location sharing are an endless production of surplus value that is then translated into data that are bought and sold.

Conclusion

Having established that the evidential power of photography is implemented by the element of immediacy in social networks and having looked at the relationship between immediacy and indicating location on SNSs, this article has argued that location tagging on SNSs expresses identity by presenting a retrospective review of the recent past in the form of geotagged images and location sharing. And that is the process by which commodification is underpinned. The immediacy of networks and instantaneous data transmission engender a new cultural trend of sharing in the moment: the cultures of the now. We are entering a culture in which we are constantly interacting with time-based media objects that are shared while the event is still in progress or soon afterward. The timeline interfaces on Facebook, Twitter, Instagram, and other sites present content in a time-based hierarchy and use undisclosed algorithmic operations to select content most relevant to the user. SNS timelines are an endless reproduction of the present moment in time. By constantly interacting with timelines and interfaces that always represent the present moment, users are networked laborers constantly producing and mining their own personal data that then become commercially valuable.

Increasingly, interacting with time-based interfaces and timelines that emphasize the now and the recent past, we are caught in a perpetual reproduction of the now. This constant preoccupation with perpetually reproducing and representing the present moment in time using spatiotemporal indicators conceals the backend data collection performed by the SNSs. The affordances given to users via the SNS interface and its predetermined layout delimits and standardizes how an identity may be expressed on the SNS. Through these standardized layouts and set functions and options, expressing the spatial self on SNSs becomes a commodified act that aims to propel users to constantly share personal data and create commodities to be sold in the market of big data, with or without user consent. Time-based, networked technologies enable the archiving of personal data, photographs, videos, and text. The commercial interfaces of SNSs devise ways to allow for spatiotemporal stamping and archiving of recent moments of everyday life to turn these into profitable commodities. SNSs are founded on the premise of a perpetual engagement with the present moment in time—and it is that basis on which the commodification process is founded. Users as network laborers produce surplus value by indicating their location and geotagging content. As this article has shown with the Banksy example and the rise in value of location data market, these kinds of data can provide very specific information about people and places and are therefore highly valuable.

Engaged in a perpetual process of archiving the present moment in time and creating mementos to express an online identity, and with the addition of geotagged archived content, users provide valuable locational data that can create user profiles and preferences and also measure footfall traffic in streets. The spatial self is a personal data-emitting device. The spatial self is at once a representational construct as set by the standardized time-based, most recent-first interfaces of the SNSs and a data-emitting object for companies. While

users seem to be creating memories of their recent past and are presenting an identity through the representation of these past events on the SNS interface, in reality they are engaging in prosumerism, generating valuable data that algorithms detect, analyze, and turn into statistical data to be bought and sold by other companies. Users indicate location in SNSs for the purposes of creating a retrospective review of the recent past, showcasing places they have visited, and using these memory artifacts to construct a representation of their identity. As shown, these are carefully designed features set by the SNSs to keep users uploading their personal data, as creating these memory artifacts produces surplus value that is then exploited by corporations that turn these to metadata to produce detailed user profiles and other statistical data that reveal peoples' habits and preferences. As platforms and devices are increasingly automating geotagging media content such as status updates, photographs, and video, representing location in SNSs will take many new forms.

The temporal qualities of location sharing and geotagging on SNSs reveal that the immediacy of networks and the nowness depicted in the text, photographs, and videos uploaded to SNSs conceal the commodification of location. The early experiments in locative media of the 2000s produced models for interacting with physical space and the urban environment, and location became an important factor in the design of interaction between portable devices, online platforms, and people. However, the representation of location on SNSs is connected to memory, memorabilia, nostalgia, and therefore temporality, and does not generate actions in physical locations or alter or enrich the meanings of locations. Instead, it is designed to evoke memory and provide quantifiable data. On SNSs, geotagging and location sharing are performative and temporal, and conceal the profit-making aims of the companies that deploy these features to produce commodities for the market.

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