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Locative Media and Identity: Accumulative Technologies of the Self

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Abstract

The role of location-based social networks (LBSNs) on identity is a relatively unexplored area within the growing cannon of work on locative media. Following an exegesis of Giddens's argument that narrative biographical accounts are critical in self-identity in the modern age and Foucault's technologies of the self, this article positions LBSN, and in particular Foursquare, as a contributor to self-identity in users' lives. A close reading of ethnographic and interview data from Foursquare users reveals that in the context of the presentation, maintenance, and reflection upon self-identity, LBSN use can play an integral role in the self-identity of its users. The contribution of LBSN to indicators of user lifestyle, the intentional sharing of particular locations, and user recollection of events and locations are the key features of how LBSNs provide conduits to self-identity. The degree of usage in everyday life is identified as critical in the positioning of LBSN as a key contributor to identity narratives. With the integration of LBSN features into more mainstream social media platforms, this contribution to self-identity in the social media age is resilient to the demise of stand-alone LBSN applications.

Introduction

Much like social networking sites (SNSs), a body of research now surrounds location-based applications (see Crawford & Goggin, 2009; de Souza e Silva & Frith, 2010; de Souza e Silva & Gordon, 2011; de Souza e Silva & Sutko, 2011; Evans, 2015; Humphreys & Liao, 2013; Wilken, 2012, 2008; Wilken & Goggin, 2013). Research in this field has explored how locative media are used to communicate and coordinate social interactions in public space (Campbell & Kwak, 2011; de Souza e Silva & Sutko, 2011; Humphreys & Liao, 2013; Wilken, 2008), leading to a persistent sense of co-presence (Licoppe, 2004; Ling & Horst, 2011; Rainie & Wellman, 2012), affecting how people approach physical space (Ling & Campbell, 2009; Martin, 2014), turning ordinary life "into a game" (Frith, 2013; Hjorth & Richardson, 2014; Licoppe & Inada, 2008), and pointedly altering how mobile media is understood (Farman, 2012). "One of the goals of this area of research [has therefore been] to critically explore and understand the roles and impacts that mobile media have on individuals' everyday experience of place" (Humphreys & Liao, 2013, n.p.).

Questions of spatiality are accordingly important in this context. As Elden (2004) notes, "[in] recent years within social theory there has been a noticeable shift from questions of temporality to those of spatiality" (p. 189). In part, this "shift" was galvanized by the work of Lefebvre (1974/1991)

and de Certeau (1984), and their suggestion is that space is never simply given, but rather socially constructed. In the context of location-based media then, these applications do not simply mediate everyday spaces, but more significantly provide the potential for new experiences of place to emerge.

A corollary to this "spatial turn," however, has also meant that there has been a distinct lack of scholarly attention in areas revolving around the marking of one's location and identity. While there have been some exceptions where the performative side of marking one's location through location-based applications such as Foursquare have been explored in the context of impression management (Cramer, Rost, & Holmquist, 2011; Evans, 2015; Guha & Birnholtz, 2013; Saker, 2016; Schwartz & Halegoua, 2014), several factors are noteworthy. First, these studies have frequently applied Goffman's (1969) division between "front stage" and "back stage" behaviors as it pertains to "performances" of the self (Saker, 2016; Schwartz & Halegoua, 2014). Second, the temporal character of this identity-based practice has not been fully examined. Third, such examples are still

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comparatively rare. It is therefore our intention to theoretically extend extant research on location-based applications, and more specifically Foursquare, by uniquely drawing on the work of Giddens (1991) and Foucault (1988), as well as explicitly addressing the temporalities that underpin locative media and identity.

Identity

In *Modernity and Self-Identity*, Giddens (1991) outlines a framework to understand the role of identity in a modern society. For Giddens, social structures and human agency are inextricably connected, with the former being reproduced by the latter through the repetition of certain human actions. "In the setting of modernity . . . the altered self has to be explored and constructed as part of a reflexive process of connecting personal and social change" (Giddens, 1991, pp. 32-33). Self-identity is therefore "a person's own reflexive understanding of their biography" (Giddens, 1991, p. 53) and "an on-going project that we are constantly modifying, updating, safeguarding and so on" (Siapera, 2012, p. 173). For Giddens, the self is consequently tantamount to a *kind* of project, or a work of art (Foucault, 1998). Identity is accordingly seen as being in "a perpetual beta phase, to use new media terminology" (Siapera, 2012, p. 173), never quite complete, but instead always in the process of becoming. Significantly, this means the notion of self-identity can be altered.

> Self-identity, then, is not a set of traits or observable characteristics. It is a person's own reflexive understanding of their biography. Self-identity has continuity—that is, it cannot easily be completely changed at will—but that continuity is only a product of the person's reflexive beliefs about their own biography. (Giddens, 1991, p. 53)

In posttraditional societies, Giddens (1991) proposes that one important way identity is constructed is through lifestyle. "A lifestyle can be defined as a more or less integrated set of practices which an individual embraces, not only because such practices fulfil utilitarian needs, but because they give material form to a particular narrative of self-identity" (Giddens, 1991, p. 81). In modern societies, we are all coerced into choosing certain lifestyles: habitual practices that are reflexively open to modification. "Lifestyle choices, then, can give our personal narrative an identifiable shape, linking us to communities of people who are 'like us'—or people who, at least, have made similar choices" (Gauntlett, 2008, p. 112). A person's identity can thus be found within their "capacity *to keep a particular narrative going*" (Giddens, 1991, p. 54, emphasis in original). This is accomplished through the construction of a biography that details the "self" in a fashion that makes sense to the individual in question. These practices then produce a certain level of "ontological security," which is described as "the confidence that most human beings have in the continuity of their self-identity and in the constancy of the surrounding social and

material environment of action" (Giddens, 1991, p. 92). As a result of this, "the materials we use" to construct any given identity, "as well as circumstances under which this construction takes places, acquire an increased significance" (Siapera, 2012, p. 173).

This last point is important when it comes to considering new forms of identity formation, narration, and maintenance. Here, we question the extent to which users of Foursquare might associate the practice of this location-based social network (LBSN) as an indicator of a particular lifestyle choice, and how this may tie in with their sense of self. Aside from the possible social and playful effect of sharing one's location in this fashion, when individuals share their location, they are also sharing information about the places they frequent. Whether aware of it or not, users are revealing something about their identity through their location. For example, it may underline a desire to be "seen" at this or that place, or *vice versa*, because of what this place outwardly connotes. As Goggin (2013) argues, "place is a fundamental pillar of human identity," as well as "a key category of understanding the dynamics of new media" (p. 202). Just as "[social] networking sites (SNS) . . . provide opportunities to create an identity . . . through digital objects like photos, videos, and self-descriptions" (Belk & Ruvio, 2013, p. 87), LBSNs enable users to establish their identity through the places they choose to share, which may then feed into a sense of personal biography, again affecting their identity in a recursive manner (see Cramer et al., 2011; Guha & Birnholtz, 2013). From this position, it could be argued that location and its relation to identity is presently being surfaced by LBSNs.

Another way of approaching LBSN in the context of identity is through Foucault's (1988) "technologies of the self." In a similar vein to Giddens (1991), Foucault suggests that identity is, in part at least, constructed by the individual. As he explains, "[the] subject constitutes itself in an active fashion" (Foucault, 1998, p. 291). "Far from simply forming automatically in relation to our practical role, the self-constitution of the subject according to Foucault passes through techniques . . . and indeed entire technologies . . . of the self" (Kelly, 2013, p. 517). Here, Foucault is referring to "the multiplicity of ways in which individuals constitute their identities in a creative and constructive fashion" (Elliot, 2013, p. 110). This includes their beliefs, values, and perhaps their use of LBSNs. "Technologies of the self" permit

> individuals to effect by their own means or with the help of others a certain number of operations on their bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality. (Foucault, 1988, p. 18)

Foucault is not suggesting that individuals are free from social and discursive conditioning or that they are no longer entrenched in various structures of power. Far from it. As Siapera (2012) notes, "for Foucault, individuals actively

construct their own identities, by using discourses and practices which are already steeped in power relations" (p. 173). Research on the political economy of LBSN (see Evans, 2013) within the context of digital immaterial labor (see also Jarrett, 2015) would emphasize the power relations between digital capitalism and the performativity of locative social media with regard to checking-in to places, here we draw on a different line of enquiry. Foucault explored the notion of self-modification through an examination of the ethics of the ancient Greeks. Ethics (in the ancient Greek sense) refers to "the elaboration of a form of relation to self that enables an individual to fashion himself into a subject of ethical conduct" (Foucault, 1998, p. 263). The ethics of the ancient Greeks were linked to a notion of "care for the self," which was accordingly associated with another "technology" of the self, namely, "self-knowledge." "Each of the technologies relates to a fundamental injunction, to take care of yourself on the one hand, and to know yourself on the other" (Kelly, 2013, p. 518). Knowing oneself, however, is not as passive as it might sound, as knowing ourselves through self-knowledge, is in effect to change ourselves. As Kelly (2013) explains,

> Paradoxically, knowing ourselves is in actuality one of the acts by which we constitute ourselves: our attempt to know ourselves is not a neutral act that allows us to see what was already there, but for Foucault a ritual by which we change and produce our own subjectivity. (p. 518)

To know yourself is not a technique that occurs in a manner abstracted from self-knowledge. The self, as a result of being explored and documented in this way, or rather as a result of being cognizant that it is being explored and documented in this way, is then modified. The use of LBSNs such as Foursquare could therefore be understood as a form of self-knowledge, or rather a "technology of the self," which carries its own physical implications. Indeed, when examined in relation to movements through space and place then, self-identity is not simply a cerebral activity but also a physical action. Self-identity accordingly necessitates an understanding of embodiment, as it is through the body that individuals experience the world and understand their place in the world, as well as interact with various "technologies of the self." In this vein, theorists such as Hjorth (2011) have written about our "haptic" engagement with smartphones, bringing the tangibility of mobile screens, as well as our physical contact with them, to the fore. For Elliot (2013), "[the] body is something we are, we have and we do in daily life; the body is crucial to an individual subject's sense of self, as well as the manner in which the self relates and interacts with others" (p. 104). As identity is explored here in terms of its connection to location, as well as its engagement with technology, these aspects of identity are necessarily entwined with the body and embodied experience.

In analyzing the role of embodied LBSN use on identity, this article examines how embodiment can be approached in relation to smartphones and their impact on dealings with space and place, as the kernel of this article is that the use of LBSNs have the potential to affect how users feel about themselves as well as how they interact with their location. We draw on an examination of embodiment that explores the boundaries between the body and smartphone technology, drawing on the phenomenology of Merleau-Ponty (1962, 1964), that looks to understand how an embodied identity that is forged through LBSN use is congruent with Giddens notion of self-identity as facilitated by a narrative account of activity. To do this, it is equally important that the affordances of Foursquare, which are the focus here, are established and defined. Van Dijck's (2013) work on social media platforms, combining Actor-Network Theory (ANT) with a political economy perspective, is helpful to this end. Van Dijck posits "a complex analytical framework for the analysis of social media platforms" (Kaun, 2014, p. 196) revolving around six areas of circumspection: technology, usage/user, content, ownership, governance, and business model. Taken as a whole, this framework provides access to what Nagy and Neff (2015) refer to as "imagined affordances," which "emerge between users' perceptions, attitudes, and expectations; between the materiality and functionality of technologies; and between the intentions and perceptions of designers" (p. 1). For the most part, the "imagined affordances" of Foursquare addressed by this article, and mobilized through a confluence of factors, are the ability to document, share, and archive locative moments, which might be witnessed by a potential audience and that facilitate a certain accumulative temporality.

Here, we conceptualize the use of Foursquare as a conscious indicator of a particular lifestyle where LBSN use (and the sharing of location as a choice on the part of the user) is indicative of a deliberate choice to integrate LBSN into both the performance of identity to others (Goffman, 1969; Saker, 2016) and self-identity. As Foursquare lets users accumulate an archive of their spatial movements, LBSN use acts as a memory aid (Saker & Evans, 2016) and as a way of contributing to and consolidating one's sense of identity. However, we argue that LBSNs are different to other memory-based technologies, as they function in a recursive manner that reinforces the spatial and temporal dimensions that it contributes to the narrative of a person's self-identity. The contribution to identity is continually resurfaced (Evans, 2015) for reflection and integration by the user as the application makes suggestions, reiterates previous check-ins, and through its functioning organizes information that allows for location to become a salient aspect of self-identity. This salience is a property of the storage, retrieval, and sharing of location that is possible through the use of LBSN. Both the location and critically the time of location (temporal aspect of self-identity) are recorded and encoded in a specific, accurate manner that is both displayed to the user and recalled at

specific times in a recursive fashion that reinforces the event and location as part of a self-narrative. We therefore position LBSN as an important and novel technology of the self for users, which has novel effects on self-identity in terms of impression creation, impression management, and narrative accounts over time.

To examine how the use of Foursquare has a role in identity, this article reports on two original research projects designed to explore the experience of "the local" among Foursquare users. The first project took place between September 2011 and May 2012 using mixed methods including online surveys, face-to-face interviews, Skype interviews, and email interviews of 65 users of Foursquare geographically spread across the globe (although for consistency and to limit cross-cultural variations, only users from the United Kingdom and the United States have been included in this analysis). The second project took place between August and December 2012 with 22 Foursquare users interviewed, all of whom resided in the southeast of Britain. Both research projects involved a postresearch thematic analysis through the careful reading of full interview transcriptions, highlighting material that was of interest to the underlining research question regarding how usage affected the users ongoing narratives of personal and self-identity. This article investigates the effect of the use of Foursquare on self-identity through three movements: how LBSN has been integrated into the lifestyles of users, and how this integration perpetuates identity narratives; how LBSN can be conceptualized as "technologies of the self"; and how the temporal aspect of LBSNs both work into narratives of the self and complicate such narratives through the fragility of digital services and data. We conclude with reflections on how the impact on identity of these uses of LBSN may spread to other media forms and platforms.

Foursquare and Lifestyle

This research found that some participants understood their connection to Foursquare as being representative of a certain lifestyle (Giddens, 1991), which then fed into the perpetuation of a particular identity, one revolving around digital media technologies. This study is therefore in alignment with other research in the field that has made comparable observations (see Saker, 2016). This point is made by Mike:

> I always like to try out new Web 2.0/Social Networking services as soon as I hear about them.

Mike's interest in Foursquare is similarly tethered to a broader interest in "web 2.0/Social Networking." By describing himself in this fashion, Mike highlights that his use of Foursquare effectively folds into an ongoing narrative of the self, one that involves the use of digital media technologies. This verve was similarly expressed by other participants. Ryan verbalizes a comparable narrative of the self in the following extract, while discussing his move from Gowalla to Foursquare:

> Well I originally used Gowalla, and I used that up until it closed down, and then missed it and moved to Foursquare. I guess I've been interested in it before phones had GPSs. So while I was at Southampton I was quite interested in the idea of checking-in or some kind of location-based game. I tried very hard with a friend at Southampton to make something like that. It was in the days of smartphones running Java and things like that—before Android—and trying to get it to talk to a Bluetooth GPS, and all kinds of crazy things like that. So I was quite excited when the technology caught up. So yeah, initially I was playing Gowalla, and then moved onto Foursquare.

It is significant that Mike and Ryan both have occupations that revolve around technology, and that they reference these connections when discussing their link to Foursquare. This casts a light on why they might share this particular interest and how they developed it in the first place, as well as the way in which lifestyle connects to work (Giddens, 1991). This is also the case for John:

> Well, probably the most pertinent fact would be that I worked for IBM for thirty-seven years, and working in the IT industry, with computers as an emerging industry, I started work obviously before there were any PCs or mobile phones, or anything like that, so I sort of grew up with that technology and really developed an interest in the new technologies as they emerged. I tended to work with younger people. I was probably old enough to be their dad. In later life I worked in IT support, and the people I worked with were very young, and I think that influenced me a great deal because they were always very keen on new technologies, and I tended to go along with them. When the new mobile phones came out I was quite interested in them. I didn't get one for a very long because, sorry, I mean I haven't had one for very long, because I just never got around to getting one. But then I was bought one for my birthday and I've been using it for well over a year and a half, and yeah, I'm interested in all technologies really: computers, cameras, mobile phones; anything of that ilk.

For Doug too, it is his role researching the field of digital media, as well as the kind of connections and commitments this entails that eventually led to him signing up to Foursquare:

> Well it is because I got into Gowalla basically. Gowalla has now shut down. I found Gowalla through the South by Southwest announcement and I just thought that sounds interesting. I tend to sign up to every social network going, because of my job. Gowalla sounded a little more interesting because I quite like the idea of reality and the social network coming together. So unlike Twitter where it doesn't really have any impact, this was focused on merging these two aspects, which I thought was quite interesting. Some of it is off of the back of this old Carnegie Mellon talk by this guy, I can't remember his name, about gamifying a lot of general process, like going on a bus and

getting points etcetera, he goes in to this whole thing, a lot of it is about Facebook, and I was kind of interested in this just generally, so it was just a service that I thought sounded interesting, so I joined Gowalla, which was pretty cool. Obviously Foursquare was coming along at the same time. I just didn't think Foursquare was as good.

It is apparent then, for certain users, it is their desire to stay up-to-date with various new media developments stemming from their professions that sees them engaging with Foursquare. As Mark, a computer science student, explains,

I like to be in touch with different social media things that are going on, and I saw that [Foursquare] and thought I'd give it a try.

Likewise, it was Amy's job as a web designer that led to her discovering Foursquare:

Obviously I read a lot of blogs about things like social media and things like that. I think it was around the time of South by Southwest, and obviously they have big pushes at South by Southwest.

Alongside the perpetuation of identity through lifestyle, this research also illustrates that Foursquare can provide participants with the opportunity to connect with communities of people who share their interests, stemming from this lifestyle, which in turn affects their self-identity. This is particularly true of Foursquare "Super Users," who as an ascribed group spend more time engaging with other "Super Users." While these participants have not usually met before they communicate about their use of Foursquare through online forums, as well as other various social media networks. As Dennis explains,

I've met some really interesting people online. I wouldn't say they'd all be my best friends or my drinking buddies, but they're good to have a chat to when you're bored late at night and there is nothing on television, or you can't be bother to read that night; there's always someone on Twitter or someone in the forum that you can have some banter and a laugh and a joke with. There's just a small group of us and we get on really well.

Foursquare significantly allows Sarah to "socialize" with a "circle of people" who understand and appreciate her obsession with this LBSN. This point is made in the following extract, as she explains how Foursquare has affected her day-to-day life:

Oh, immensely, as I say, it's the UK super users; there's a chap called Chris Thompson and he runs the About Foursquare blog, I get on really well with him, so speak to him a lot, but yeah, I've definitely made some friends that I would meet up with in real-life if I was well enough. It's just nice. There are a lot of my friends online that sort of don't understand it, don't get, not particularly interested in it, so it is nice to have that little circle

of people that I can literally rabbit about Foursquare with, all day. I am bonkers about Foursquare. I don't know why I've got the enthusiasm that I have? I just appreciate it so much, as it has changed my life; it has got me out the house so much more than what I used to. So I've just got this big appreciation for it.

Interestingly, the "circle" of friends Sarah mentions is geographically dispersed, which is a situation that many "Super Users" experience. Mark touches on this point when asked whether he had met any "Super Users" face to face:

Well, no, because a lot of them are based all over England. There's not really many near me. The closet would be Dennis, because he lives in Woking. So we've crossed paths many times. I've had a few close misses with him. I was there to see Derren Brown and he was checked-in at a pub nearby and I didn't notice, I wasn't paying attention you see, and he was like, I could have seen you then.

However, this is not to suggest that Foursquare cannot or does not lead to physical encounters, as Dennis explains,

I have in the sense of, like this guy Ian, I had no idea who he was, then I got a message saying he'd stolen my mayorship, and then I saw his Twitter, and tweeted him to say, give that back, and then you just get chatting, and it has got to the point where we've gone for one drink.

Through associating with this particular lifestyle, Foursquare not only confirms identity for participants through the perpetuation of a use of social media and mobile technologies, at the same time, it also provides new social opportunities, which similarly feed back into their ongoing personal narratives. In this vein, Foursquare can provide participants with a way of reflexively mediating their identity, while also allowing them to forge new social connections. This itself is significant, "[while] television, telephone, and internet research have shown the importance of media to build new social connections . . . there has been relatively little research exploring how mobile technology may also serve this function" (Humphreys, 2008, p. 115).

Location-Based "Technologies of the Self"

A further question on self-identity emerges from this choice of lifestyle and integration of LBSN into ongoing personal narratives. A consequence of this integration of LBSN into lifestyle (as an indicator of a technologically influenced lifestyle) is that users of Foursquare are mindful of the impression that checking-in at a venue results in their location being shared with a defined group of connections. Users no longer have to be physically present with friends for their friends to know where they are, or what they are doing, nor do they have to address specific individuals. The sharing of location in this fashion has consequences for identity. "It positions the user within a network: not just as a member of an online

community, but in relation to the network more generally" (de Souza e Silva & Gordon, 2011, p. 12). It is not simply the sharing of locational information that is effective regarding identity but also the constructed meanings attached to any given space (see Cramer et al., 2011; Guha & Birnholtz, 2013; Saker, 2016). The shared, mediated identity of the user is forged through the places users check-in to, just as space is itself constructed through social engagements (de Certeau, 1984; Lefebvre, 1974/1991; Soja, 1996). In addition, the research demonstrates that for some participants, the practice of checking-in and sharing their location through Foursquare affects their self-identity as well as their shared, social media identity. As Ben explains, while discussing how people often share their location through Foursquare to suggest something about their identity:

> That is what I do to be fair.

Here, Ben understands that the sharing of space can be used as an indicator of a particular identity, one which is associated with the connotations thought to be associated with this environment. Foursquare and indeed other LBSNs allow identity to be perpetuated and modified through locative information. We suggest then that the effective role of Foursquare as it pertains to self-identity can be approached through Foucault's (1988) "technologies of the self." To reiterate, identity for Foucault "is constructed through certain techniques, or practices" (Siapera, 2012, pp. 172-173), through, "the multiplicity of ways in which individuals constitute their identities in a creative and constructive fashion" (Elliot, 2013, p. 110). As Foucault (1988) suggests,

> Technologies of the self . . . permit individuals to effect by their own means or with the help of others a certain number of operations on their bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality. (p. 18)

In this vein, Foursquare is effectively a location-based "technology of the self." By sharing locational information, the application contributes to how some identities are constructed, continued, and altered. The mode of construction is significant here, as in this instance concomitant identities are in part shaped through location, and an awareness of what location might mean. This is established by the fact some participants subsequently *felt* compelled to share their location at a particular place. Aimee demonstrates this point:

> I'm not overly concerned about my image but I do check in more often if I'm somewhere and I want people to know I'm there (like at a concert, skiing at Lake Tahoe, visiting a hip restaurant, or when I'm in Hawaii). I avoid checking in to my home, work or boring places. I check into the gym so I can go on record that I worked out. I would not check in places like the doctor's office. The only exception is I'm pregnant and the next

appointment we can find out if we're having a boy or girl. So I will check in and let people know when I find out.

In sharing her location with friends, Aimee feels that the locations that are shared should fit into a coherent narrative that is consistent with her self-identity and the carefully curated identity that she is creating online. Aimee is identifying herself as the kind of person who engages with pastimes such as going to the gym, and in the future will use this as a way of making explicit the new identity of "impending mother." This illustrates the use of Foursquare as being a location-based "technology of the self," as by becoming more aware of the importance of location to certain friends, Aimee consequently becomes aware of what these locations might mean in terms of her identity. Martin shows a similar tendency:

> I'm pretty aware of the image I put out using Foursquare and Twitter. I will confess that if my friends saw me check in to burger places all the time, I probably wouldn't hear the end of it.

For both Aimee and Martin then, Foursquare revolves around the likelihood of an audience. This research is accordingly in alliance with other studies that have examined Foursquare in the context of impression management (see Cramer et al., 2011; Guha & Birnholtz, 2013; Schwartz & Halegoua, 2014). Usage is part of an ongoing negotiation and presentation of identity that is both directed to their friends but is also part of a conscious effort to control and curate a narrative of identity that is stable, affirms their self-identity, and presents this "self" on their terms with regard to location. As a by-product of this technique, Aimee and Martin not only change their spatial movements but also require their locative performances to be seen by others. Saker (2016) has previously described this process as "the affirmation of identity through the potential of surveillance" (p. 7). In this vein, users require their locative selves to be seen for their performed identities to be realized. As a location-based "technology of the self" then, Foursquare evidently leads certain participants to engaging with the spaces and places they frequent differently than they would outside of this practice, as a result of a heightened cognizance of the nexus between place, identity, and surveillance. Felicity poses this process of curating an ongoing biography of the self:

> I may as well be blunt about this. Nowadays, people will go and Google you anyway. So you might as well build an image online (rather than letting things people post about you be the only search results they get). I do create online identities under my real name (and at the same time careful when it comes to reputation management). I think that if you have the choice to create/maintain an image, you should take it. I try to sound professional and decent on my social networking accounts in case potential employers find me, but I also like to present myself as a normal person.

Felicity, a heavy Foursquare user, positions her use of all social media and other online services as an exercise in image management. Her use of social media is tailored toward a professional image for potential employers, and as such her use of Foursquare and other services is tailored with this image in mind. At the same time, Felicity desires to be seen as a "normal person," and it is in this brief kernel that her self-identity and online narrative meet. The need for being perceived as professional and decent corresponds to the notion of normality, and this narrative of normality directs activity on social media and location-based social media as well as other potential online identity indicators. Felicity does not indicate whether her life is "normal," but it is critical to her identity narrative that she is perceived as normal. In Foucault's (1988) conceptualization of technologies of the self, he argued that such technologies allow

> individuals to effect by their own means or with the help of others a certain number of operations on their bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness. (p. 18)

Felicity does this through careful curating of her online and social media profiles that affect her means to transform her self-identity as a competent, professional person into an online identity for others to perceive her in a way consistent with this image. Her LBSN use is a part of this continual curating of identity, and self-narrative of professionalism.

Identity and the Accumulation and Time

An important aspect of identity not covered by concepts such as the spatial self (Schwartz & Halegoua, 2014), and one that markedly separates this piece of research from other studies, is the preservation of temporal features of LBSN use, and LBSN as a memory-based technology. Although the use of LBSN in this manner has been reported in detail elsewhere (see Saker & Evans, 2016), the use of LBSN as a memory technology that contributes to the ongoing narrative of self-identity was not the focus of that work. Users of Foursquare who utilize the application to document and archive the passing of time are not only remembering moments and locations but are also using these recalled check-ins and locational histories to both contribute to and reinforce an image of themselves. Foursquare allows this extensive spatial self to accumulate automatically and to be recalled easily, along with providing recall opportunities through histories presented to users in the application and through third-party applications like Timehop. The construction of this history of mobile check-ins does not require intentional use on the part of the user; the application stores this information and relays it to the user automatically. However, some participants intentionally journal their locational histories as part of their self-narratives:

Admittedly, I'm one of those people who probably over-shares thinking someone cares about it. Like I said before, I use most social media for my own sake. I know I'm just some guy, and I'm probably quite dull, but I like to keep a memory of my life backed up somewhere. Plus, you never know who might get curious. Perhaps I'm relying on my dull nature to prevent someone malicious from stalking me? (Martin)

The idea of keeping a memory "backed-up" is indicative of an intentional desire to keep a permanent narrative of movements, mobilities, and locations, which is equally indicative of a desire to preserve one's sense of self. Martin's use of Foursquare already has an intentional direction toward being reviewed, reflected upon, and being integrated into present and future narratives of the self. This intentionally directed use of LBSN was similarly reported by other participants in the research:

I want to have the history of my own data, where I have been or what kind of TV programme I've watched. I just like to collect that kind of data on myself. I think it is because I am a designer. I think a lot of designers are obsessed with data visualisations. There was this one designer and he tried to make an algorithm of himself. He has got all of these lines, and graphs, with data visualisations of things like where he has been during the last year, or how many beers he has drank, or the top three places he has visited. So that kind of thing. (Robbie)

To keep track of my moving history, to kind of map out where I go throughout the day. (Ellie)

In response to the question on why do you use Foursquare, Ellie responded that her usage was solely to chart her movements and to create a mapped-out history of her everyday locations. Such a mapping of the everyday is a contribution not only to a self-history but also to a self-identity that recognizes application and mobile technology use as a salient part of identity. In a similar vein, Doug suggests that Foursquare helps him preserve his memories:

I'm an AFC Wimbledon fan, and so I have traveled to a lot of away games, going to these weird grounds in the middle of nowhere, and I was reading a book recently talking about some of the games, and I did not have any recollection of being at certain games, and as I was reading it I was thinking I wished I'd gone to that. It was only when I spoke to my dad, who seems to have a better memory than me, and he'd say you did go, and then I'd do a Google search and find I'd written stuff about the match online. There was one when I'd done a whole report about being somewhere that I didn't even remember I'd been. So I sort of see Foursquare as a way of recovering these lost moments.

Foursquare does not simply record Doug's movements through space and place but also guards a certain image of the self that might otherwise wane with time. The notion that this mapping of self movement can be part of a narrative of the self is of course contingent upon LBSN use being possible in

the future. The effectiveness of these techniques is reliant upon the data being available at a later date and being retrievable to the participant so this narrative can be told and retold. Such a dependence on digital services and data retention assumes a permanence to services that is in contrast to the often ephemeral nature of social networking services (beyond monolithic social networking services such as Facebook). The very real possibility of losing access to accumulated identity projects was markedly felt by participants who had used the LBSN Gowalla prior to Foursquare, and who had then lost their data when this LBSN unexpectedly shut down. As Doug explains in the following extract:

> The most annoying thing ever is that [Gowalla] never released the data. There is no way of getting it now. I want to port it on to Foursquare. I still tweet Gowalla now, but obviously get nothing. That is why Gowalla killed me.

The significance of Doug's data is thus revealed here in his suggestion that Gowalla effectively "killed him." In this vein, Doug's locative log evidently stands for something more than simply a testimony to his historical movements though space and place. From Doug's vantage point, his archive serves as a potential proxy for his identity; it is a mapping of who he is in the context of this particular technology of the self, and the parameters that govern it. As it pertains to identity then, it is not simply the marking of location that is solely important here, or the physical performance that precedes it, of equal importance is the accumulative character of this record. Foursquare markedly allows day-to-day movements to be fed into a temporality that develops with continued use. For the individuals who choose to orientate themselves toward this functionality, the significance of their archive concurrently increases with the time amassed. While the imminent sharing of location can momentarily be used to influence how participants believe they are perceived by others, as demonstrated above, the archiving of locative time is contrastingly a solitary pursuit that enables participants to effectively construct an image of themselves, by themselves, for themselves. It is our contention that this practice is not undertaken by these participants to alter the perceived self per se, but rather to preserve the self perceived. Consequently, for Doug, the loss of his Gowalla profile symbolizes both the loss of his locative data, as well as the partial "death" of his identity. Doug's emotional response is accordingly indicative of the extent to which he understands this archives as being a reflection of his own identity project, which is itself a result of the temporality involved, and indeed the authenticity this elicits.

Conclusion

The research reviewed in this article positions the impact of LBSN on identity as part of a number of technologies of the self that impact upon identity and that are integrated into everyday use in the perpetuation of personal narratives of identity. Given the population researched (LBSN users), it could reasonably be expected that such narratives not only encompass LBSN but also smartphones, social media platforms, online presences, and general interests in technology and the sharing of information about themselves through digital means. As individual LBSNs fade from front stage, with only Foursquare (in a modified form) being an active LBSN in 2016, the findings of this research may be seen as passé and a reflective account of a time passed in social media history. Such a view would ignore that many of the features of LBSN have been seamlessly folded into other, existing LBSN such as Facebook and Twitter. While Twitter does not afford a check-in facility like LBSNs did, the location awareness of the application and the (often automatic) sharing of location through tweets offers a locational dimension to the micro-blogging activities of the platform and adds context to the information shared on that platform. More explicitly, Facebook has integrated a check-in facility to its mobile services, where users can indicate where they are and what they are doing directly on their Facebook profile and onto connected users news feeds (with map data of the location). Given that Facebook profiles act as a timeline of personal information and Facebook has already integrated the automatic recall of past events into its user interface, the salient aspects of usage of LBSN have been integrated into the larger behemoth of social networking. The sharing of location for identity and the journaling of location for self-identity therefore remain as important facets of social media use even if users no longer frequent LBSN services.

While the research then retains relevance, the scope of the research outlined here may be questioned. The research reported here constitutes a case study of British and American users, and a comparative analysis with users from other cultural and linguistic backgrounds may uncover different patterns of usage and orientations toward usage of LBSN. At the time of the research being conducted, a group of frequent Foursquare users were interviewed about their usage of the application. The generalization from these participants to other social media users is questionable (or indeed to users of other LBSN), and the use of LBSN as a "technology of the self" is closely linked to the amount of usage of the application and the integration of that usage in everyday life. A casual user of LBSN would not have LBSN in the role of a "technology of the self," but a user who has integrated the application into his or her average everydayness (Evans, 2015) may have practices of use that afford the application this status. Despite this, the mechanisms of impact on identity and more importantly the reflective use of location for self-identity remain important aspects of the form and LBSN and its integration into other services. As a "technology of the self," LBSNs act to journal location and provide nudges to reflection and integration into self-narratives, and as such if taken into everyday average media use (see Evans, 2015), then LBSNs fulfill the premise of Foucault's idealization of

such technologies, while satisfying Giddens's notions of biographic narratives that are critical to self-identity in modern society.

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References

Belk, R. W., & Ruvio, A. A. (2013). *The Routledge companion to identity and consumption*. New York, NY: Routledge.

Campbell, S. W., & Kwak, N. (2011). Mobile communication and civil society: Linking patterns and places of use to engagement with others in public. *Human Communication Research*, *37*, 207-222.

Cramer, H., Rost, M., & Holmquist, L. E. (2011, August 30-September 2). Performing a check-in: Emerging practices, norms and "conflicts" in location-sharing using foursquare. In *Proceedings of the 13th International Conference on Human Computer Interaction with Mobile Devices and Services* (pp. 57-66). New York, NY: ACM.

Crawford, A., & Goggin, G. (2009). Geomobile Web: Locative technologies and mobile media. *Australian Journal of Communication*, *36*, 97-109.

de Certeau, M. (1984). *The practice of everyday life* (S. Rendell, Trans.). Berkeley: University of California Press.

de Souza e Silva, A., & Frith, J. (2010). Locational privacy in public spaces: Media discourses on location-aware mobile technologies. *Communication, Culture & Critique*, *3*, 503-525.

de Souza e Silva, A., & Gordon, E. (2011). *Net locality: Why location matters in a networked world*. Chichester, West Sussex: Wiley-Blackwell.

de Souza e Silva, A., & Sutko, D. M. (2011). Location-aware mobile media and urban sociability. *New Media & Society*, *13*, 807-823.

Elden, S. (2004). *Understanding Henri Lefebvre*. New York, NY: Continuum International Publishing Group.

Elliot, A. (2013). *Concepts of the self*. Polity.

Evans, L. (2013). How to build a map for nothing: Immaterial labour and location-based social networking. In G. Lovink & M. Rasch (Eds.), *Unlike us reader: Social media monopolies and their alternatives* (pp. 189-199). Amsterdam, The Netherlands: Institute of Network Cultures.

Evans, L. (2015). *Locative social media: Place in the digital age*. London, England: Palgrave.

Farman, J. (2012). *Mobile interface theory: Embodied space and locative media*. New York, NY: Routledge.

Foucault, M. (1988). *Technologies of the self: A seminar with Michel Foucault*. Amherst: University of Massachusetts.

Foucault, M. (1998). *Essential works of Foucault, Volume 1: Ethics* (P. Rabinow, Ed.). Perseus Distribution Services.

Frith, J. (2013). Turning life into a game: Foursquare, gamification, and personal mobility. *Mobile Media & Communication*, *1*, 248-262.

Gauntlett, D. (2008). *Media, gender and identity: An introduction*. London, England: Routledge.

Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford, CA: Stanford University Press.

Goffman, E. (1969). *The presentation of self in everyday life*. London, England: Penguin.

Goggin, G. (2013). Placing media with mobiles. In A. Bruns, J. Burgess, & J. Hartley (Eds.), *A companion to new media dynamics* (pp. 202-208). Chichester, West Sussex: Wiley-Blackwell.

Guha, S., & Birnholtz, J. (2013, August). Can you see me now? Location, visibility, and the management of impressions on foursquare. In *Proceedings of the 15th International Conference on Human Computer Interaction with Mobile Devices and Services* (pp. 183-192). New York, NY: ACM.

Hjorth, L. (2011). Mobile@ game cultures: The place of urban mobile gaming. *Convergence: The International Journal of Research into New Media Technologies*, *17*(4), 357-371.

Hjorth, L., & Richardson, I. (2014). *Gaming in social, locative and mobile media*. London, England: Palgrave.

Humphreys, L. (2008). Mobile devices and social networking. *After the Mobile Phone*, 115-130.

Humphreys, L., & Liao, T. (2013). Foursquare and the parochialization of public space. *First Monday*, *18*.

Jarrett, K. (2015). *Feminism, labour and digital media: The digital housewife*. London, England: Routledge.

Kaun, A. (2014). *Jose van Dijck: Culture of connectivity: A critical history of social media*. Oxford, UK: Oxford University Press.

Kelly, M. G. E. (2013). Foucault, subjectivity, and technologies of the self. In C. Falzon, T. O'Leary, & J. Sawicki (Eds.), *A companion to Foucault* (pp. 510-525). Chichester, UK: John Wiley.

Lefebvre, H. (1991). *The production of space* (D. Nicholson-Smith, Trans.). Oxford, UK: Blackwell. (Original work published 1974).

Licoppe, C. (2004). "Connected" presence: The emergence of a new repertoire for managing social relationships in a changing communication technoscape. *Environment and Planning D: Society and Space*, *22*, 135-156.

Licoppe, C., & Inada, Y. (2008). Geolocalized technologies, location-aware communities, and personal territories: The mogi case. *Journal of Urban Technology*, *15*, 5-24.

Ling, R., & Campbell, S. W. (Eds.). (2009). *Reconstruction of space and time: Mobile communication practices*. New Brunswick, NJ: Transaction Publishers.

Ling, R., & Horst, H. A. (2011). Mobile communication in the global south. *New Media & Society*, *13*, 363-374.

Martin, J. A. (2014). Mobile media and political participation: Defining and developing an emerging field. *Mobile Media & Communication*, *2*, 173-195.

Merleau-Ponty, M. (1962). *Phenomenology of perception*. London, England: Routledge and Kegan Paul.

Merleau-Ponty, M. (1964). *Signs*. Evanston, IL: Northwestern University Press.

Nagy, P., & Neff, G. (2015). Imagined affordance: Reconstructing a keyword for communication theory. *Social Media + Society*, *1*, 1-9.

Rainie, L., & Wellman, B. (2012). *Networked: The new social operating system*. Cambridge, MA: MIT Press.

Saker, M. (2016). Foursquare and identity: Checking-in and presenting the self through location. *New Media & Society*, 1-16. Advance online publication. doi:10.1177/1461444815625936

Saker, M., & Evans, L. (2016). Locative social media and time: Foursquare and technological memory. *First Monday*, *21*. doi:10.5210/fm.v21i2.6006

Schwartz, R., & Halegoua, G. R. (2014). The spatial self: Location-based identity performance on social media. *New Media & Society*, 1-18.

Siapera, E. (2012). *Understanding new media*. London, England: SAGE.

Soja, E. W. (1996). *Thirdspace: Journeys to Los Angeles and other real-and-imagined places*. Malden, MA: John Wiley.

Van Dijck, J. (2013). *The culture of connectivity: A critical history of social media*. Oxford, UK: Oxford University Press.

Wilken, R. (2008). Mobilizing place: Mobile media, peripatetics, and the renegotiation of urban places. *Journal of Urban Technology*, *15*, 39-55.

Wilken, R. (2012). Locative media: From specialized preoccupation to mainstream fascination. *Convergence*, *18*, 243-247.

Wilken, R., & Goggin, G. (Eds.). (2013). *Mobile technology and place*. New York, NY: Routledge.

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