Part II

Performing location, place-making, and mobile gaming

Chapter 5

Online place attachment

Exploring technological ties to physical places

Raz Schwartz

> *@IAmAru: "I feel like I'm betraying my @Foursquare mayorship by going to the other Starbucks"*[1]

For Aru, the user behind the *Twitter* handle @IAmAru, being the *Foursquare* mayor of a specific Starbucks carries special meanings. Although all other Starbucks have the same décor, same menu, and same background music, he continuously chooses to go to this particular one just to maintain his virtual mayor title. But @IAmAru's choice of words is not accidental. "Betraying" is a strong, emotionally charged word mostly used in relationships between two individuals. Although in this case, it is utilized to portray a special connection between this user and a specific branch of the famous coffee shops chain.

One might say there is nothing exceptional in Aru's statement as we all have special ties to certain physical places. However, as the introduction of new online location-based services like *Foursquare* set the ground for hybrid, net locality (Gordon and de Souza e Silva 2011) interactions that carry the influences of both the online connection and the offline presence, we must ask ourselves, what are the elements that "online connect" someone to a certain physical place? Why do people, like @IAmAru, feel an intimate attachment to a specific place by using these technologies? And which theoretical frameworks can we apply to the study of this attachment?

These questions are the main subject of inquiry in this chapter, as I examine the tensions and implications of online interactions to local connections between people and places. Although in recent years there is a growing body of literature that examines location-based social networks, these studies mostly focus on studying the affordances of this technology in regard to interactions between different users. The studies that did look at the connections between users and places explored how, for example, location-based social network users assign information to physical places, and "read and write" locations (de Souza e Silva and Frith 2010, 2012; de Souza e Silva 2013) but did not examine the ways these interactions instrument and maintain attachment between people and places. In this chapter I study these activities through the lens of "Place Attachment" (Low and Altman 1992), an interdisciplinary theory used to study people's ties to

physical places. By analyzing users' interviews, press coverage, and software interface, I set out to examine the role that checking in to places, obtaining mayorships, leaving notes and tips, and labeling public venues has for our connection to the physical places. The main contribution of this work to current literature is therefore with the introduction and application of Place Attachment to the examination of location-based online social interactions.

This chapter begins with a literature overview of mobilities and location-based technology research along with a description of the Place Attachment theory. This body of work frames my research questions as part of the growing efforts to study social interactions that are mediated by mobile devices and online social networks. Then, I describe the methodology and the results of a series of interviews with twenty-five *Foursquare* users through examining three categories: place-naming, ownership, and events. I present several examples and discuss how these interactions are framed within this theory. Finally, I argue that these interactions are part of a wider notion of "Online Place Attachment," an online–offline personal connection to physical spaces mediated by location-based technology.

I focus in this work on activities that take place on *Foursquare*, one of the most popular location-based social networks. *Foursquare* was first launched in March of 2009 and offers its users to "check in" to the places they visit and instantly share that information with their friends. The application is designed for use with smartphone devices as the location data is gathered automatically through the device's GPS component. In January 2013 the company reported that the service has over thirty million users worldwide, making it one of the largest location-based services in the world.[2]

Every day, millions of users share their endeavors with their friends and explore new places through *Foursquare* in their local surroundings as the application is designed to encourage the sharing of local knowledge. For example, when a user launches their application they can choose if they would like to check in or just see their friends' activities and explore nearby places.

When checking in, the application finds the user's exact location and creates a list of nearby venues. The venues list is based entirely on user-generated content, which means that if a place does not appear on the list, the user can independently add it. This venue will later appear when they or any other user will try to check in at that location. When the user checks in they can decide if they would like to share it with their friends on *Foursquare*, *Facebook*, or *Twitter* or just stay "off the grid."

Moreover, the application offers its users several other tools to supplement their activity. Among these are tips, likes, pictures, and lists. In this way, users can share their recommendations and experiences through the tips option that will be displayed to other users who will also check in to that venue. Users can also take pictures and add them to the location they visit so other users can also see them. "Like" is an option that was added only in later versions of the application and allows users to annotate a place by "liking" it. Lists provide users a way

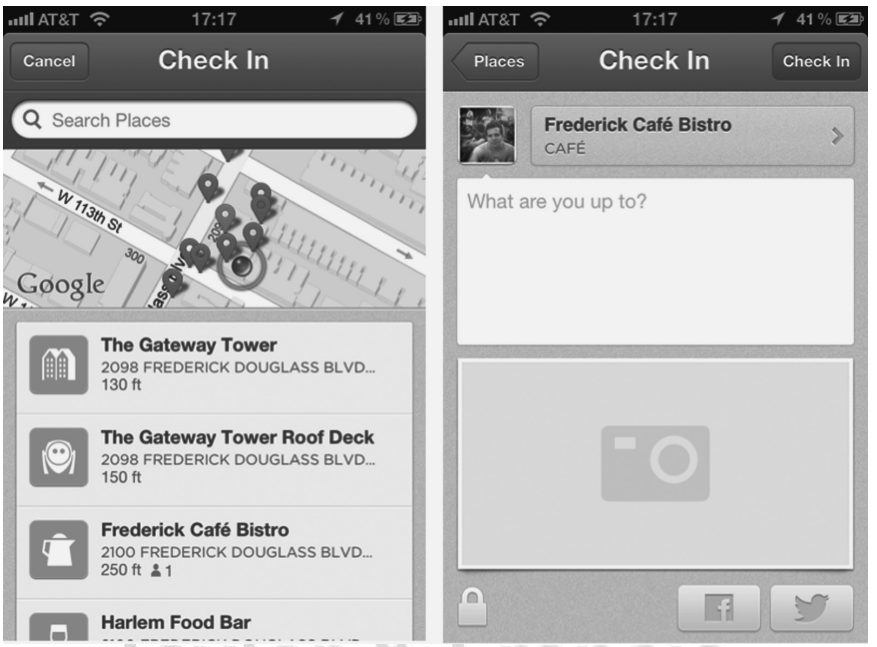

Figure 5.1 Check-in screens (© 2014, Foursquare Labs, Inc).

to group several different places under some kind of a commonality like "My Favorite Hummus Places in NYC."

In addition, users can also utilize the application to explore places in their locality. By clicking the "Explore" tab on the application, users can get recommendations on places to go based on various categories such as food, coffee, sights, etc. These places are organized by a "curated social graph," a method by which the application can prioritize venues in close proximity and recommends places that match the users' personal preferences based on past activity and friends' check-ins.

In 2012 *Foursquare* launched a redesigned version of the app that included a new "Friends" tab that operates as a timeline of friends' activity. In this tab users can see these activity updates organized from the most recent backwards. On the timeline, users can interact, "like" other users' check-ins, view their photos, and read the tips and lists they added.

In addition to sharing the location of the user, viewing other users' activities and exploring places nearby, the service also utilizes game mechanics to motivate its users to compete with each other and earn virtual titles and badges. In this way, users can get points, badges, and "mayorships" of specific venues that were visited most frequently in a certain time period.

Foursquare therefore offers its users ways and tools to not only interact with their friends or other *Foursquare* users on the go but also to document the

physical places they visit. Since the emergence of this technology, these types of interactions were the subject of inquiry of researchers from various fields as I will describe in the following section.

Mobile technology and physical places

Mobile technology has changed the ways we think about our relationships between people, actions, and space (Dourish 2006; Ling 2004). We now interact in digital networks rather than the previous door-to-door, home-to-home communications (Wellman 2001), using various technologies like mobile phones and social media networks to manage relationships with individuals in a context that is not set to a specific physical location. We can therefore see a shift from a traditional mass media culture to a new personal communication society (Campbell and Park 2008). This change is also reflected in our physical environment, as people now use mobile communication to appropriate public spaces for personal purposes. As a result, we now have new temporalities and spatialities for public participation (Sheller 2004). Public participation is now enacted both online and offline by demonstrations in physical places such as Zuccotti Park, Tahrir Square or Rothschild Boulevard as well in the *Twitter* feed with the #occupy in the US, #jan25 in Egypt and #J14 in Israel.

In other words, the introduction of mobile technology fosters various forms of interaction that did not exist before and produce a sense of self for users, which is derived from the intersection of the virtual and physical realms (Farman 2011). And although these options may not increase our spatial awareness and encourage meeting more people (Sutko and de Souza e Silva 2011), this move to networked individualism as a looser, more fragmented set of social networks that provide on-demand support, opens new ways of interaction between people and places (Rainie and Wellman 2012). Places are no longer only appropriated for a specific group.

But despite notions that treat these places as non-places (Augé 1995), namely places that are losing their significance and meaning to us through the development of communication technology, previous works found that using location-based technology can actually promote users to experience their locality through mobile games (de Souza e Silva and Hjorth 2009), facilitate the creation of third spaces (Humphreys 2008, 2010; Schwartz 2013) as well as better represent the different dynamics of the local social groups that operate in a city (Cranshaw *et al.* 2012).

These abovementioned works are only a small part of a large corpus of academic efforts that investigate interactions between people and places. For example, Place Attachment is an interdisciplinary theoretical concept that was conceived during the late 1980s and originated from different studies in anthropology, architecture, family and consumer studies, folklore, psychology, sociology, and urban planning. The term represents a symbolic relationship that is created by people who give culturally shared emotional meanings to a particular

place. This in turn is argued to provide the basis for both the individual and a group understanding of their local surroundings.

Ever since then, there has been extensive research work done in the study of the connection between people and places through this prism. In her work, Low (1992: 166) explains Place Attachment as following "the symbolic relationship formed by people giving culturally shared emotional/affective meanings to a particular space or piece of land that provides the basis for the individual's and group's understanding of and relation to the environment."

Moreover, Low describe a theoretical typology and provide several factors that create place attachment such as narrative linkage, economic linkage, linkage through cultural events, loss of land, and more. In her work, she argues that people's linkage to places can be traced through various factors such as the vehicle of story, place-naming and language, ownership of land, and participation in celebratory events such as parades or festivals; these all form place attachment to the venues we frequent.

Following this typology, various works applied the Place Attachment theory to the study of the critical role of public plazas (Low 2000), the importance of Place Attachment to community participation and planning (Manzo and Perkins 2006; Riger and Lavrakas 1981), and the proposed use of Place Attachment as a tool for neighborhood revitalization (Brown *et al.* 2003). Milligan (1998), for example, sees Place Attachment as comprised of both past interactions and potential interactions. In this way, the emotional connection that is created between people and places is constructed of both the memories associated with it and future experiences that we might have there.

As *Foursquare* interactions take place both online and offline, we must utilize the existing research that examined the connection among people and places as well as the ways in which location-based technology promotes local social interactions. Only by integrating these bodies of research can we examine what the elements are that connect someone to a certain physical place. Why do people feel an intimate attachment to a specific place by using these technologies? And how can a theoretical framework like Place Attachment be applied to the study of these interactions?

Methodology

This chapter is based on the analysis of participant observations, in-depth users' interviews, and media coverage of the location-based social network *Foursquare* collected through a six-month period from September 2010 to February 2011. I conducted twenty-five in-depth, semi-structured face-to-face interviews with *Foursquare* users from three cities in the United States (New York City, Pittsburgh, and San Francisco), representing accordingly the East Coast, middle-east USA and the West Coast. The participation requirement for interviewees was to have used *Foursquare* in a specific area for a period of at least three months and with an ongoing activity of at least three days a

week. These criteria ensured that the participants had a reasonable chance to interact with friends, explore places, and possibly obtain badges and mayorship titles.

The users were recruited by sending out *Twitter* messages to my followers asking to retweet the message to their own followers. The message linked to a webpage inviting people to participate in a study that focuses on "how people use *Foursquare*." These *Twitter* messages were retweeted by several people to an audience of approximately 2,000 people. I received messages from twenty-seven people expressing their willingness to participate, finally resulting in thirteen users that met my participation requirement.

In addition, I used *Foursquare*'s website to identify fervent users by the number of mayorships and titles they held. I contacted these users through their *Twitter* and *Facebook* accounts with a request to participate in my study. Out of the twenty people I contacted, twelve agreed to take part and share their experiences.

I conducted my fieldwork in Pittsburgh, New York City, and San Francisco; the demographics of this study consist of twenty-five *Foursquare* users (thirteen men and twelve women) ranging in age from twenty-four to thirty-five living in Pittsburgh ($n=8$), San Francisco ($n=7$) and New York City ($n=10$). The users I interviewed had a friends network ranging from twelve to 117 friends. All interviewees received $10 compensation for their participation.

The interview protocol was structured from open-ended questions investigating the nature of the social interactions people experience when using *Foursquare*. More specifically, the interviewees were asked about various topics such as their check-in practice (type of place, hours of the day, etc.), motivations, interactions with friends and strangers, place attachment, privacy concerns, and more.

All interviews, which lasted approximately an hour and a half, were conducted and recorded face-to-face and later transcribed. In addition to the interviews, I also documented in detail my use of the application during a one-month period (March 2011), which included both private and group activities.

For this study I conducted issue-focused coding (Weiss 1994) of the interviews based on three of the categories identified by Low (1992: 166): Place-naming, Ownership, and Events. I then did more in-depth thematic coding of the data within those broad categories to identify potential patterns and common themes in discussions about physical venues and social interactions using *Foursquare*.

Results

While coding the data according to the three categories, I noticed several unique practices that described the connection between the people and the places they visit. Each of these categories represents a different type of action taken by users in relation to a specific venue.

Place-naming

Foursquare's venues database infrastructure allows users to create their own venues without any naming guidelines. Namely, since *Foursquare*'s venues database is entirely based on user-created places, users can freely create and name any kind of venue they wish and add it to the growing database. Past studies showed that users who were able to create their own venue names used that to list names that made sense mainly to the people in their group (Barkhuus *et al.* 2008). This concept was termed "private geographies," a mutual sense of different places that differentiates social groups (Brown *et al.* 2007).

Seventeen out of the twenty-five users I interviewed confirmed that they had created at least one venue since they first started using the application. Usually, they created these venues when a new business opened and it did not appear on the list. In addition, they also utilized this function in case they decided to open venues that served as an inside joke among their group of friends (such as "hell"). Although creating fake venues is a common practice, it is perceived as controversial. While several users saw it as a way to create interest in *Foursquare*, others saw it as a gateway to create noise and weaken *Foursquare*'s network. As Michael,[3] twenty-six, a system analyst from Pittsburgh describes:

> There have been several bars and such in the neighborhood that I created a location for. . . . I think it's a slippery slope though. I get annoyed when I see people add their house[4] or some made up location to the list. I am not part of it and it feels like it's diluting the system.

As we can see, Michael does not like seeing made-up venues in his app. In a way, these places represent a local surrounding that he is not part of and therefore he feels he is alienated. He would rather prefer to see all the venues he knows and has connection to in his neighborhood. Similarly, John, thirty-one, a graphic designer from New York City, explains his logic behind creating venues on *Foursquare*:

> I don't create locations unless I am connected to them. . . . I prefer to be a tastemaker in my habits on *Foursquare*, to give constructive tips that would be helpful to someone and inspire them to visit.

John's comment offers us a way to better understand the venue creation and labeling process as one that embeds the user's personal connection and history in it. Each venue created by John reflects his personal taste, his past interactions with and within the place and also with the people there. In this way, John utilizes the application to spread his local knowledge and promote others to visit and experience the places he likes most. Moreover, John uses the tips options provided by the application to leave notes of his experiences in the places he visits. By adding tips and photos to check-ins, users like John augment their

check-in action and supplement additional information layers to it. These layers of content include photos taken at certain places and automatically uploaded, as well as a textual layer that includes the tips, likes, and lists in which the place appears.

In other words, when a user checks-in to a local bake shop in their neighborhood, they see not only the tips that other users left there but also pictures, the number of lists this place appears in, and personal information such as the last time they visited there, which of their friends was also there, how many times they have been there this week, etc. As a result, users' check-in actions create large metadata that are added to the different venues, data that are constructed of both visual and textual information based on people's history of visitation.

Ownership

When a user visits and checks in to a certain place frequently, they will ultimately receive the mayor title of that venue. The title itself sometimes offers rewards in chain stores, bars, etc. but normally it is deprived of any physical meaning. Despite that, the users I interviewed who got to be mayors felt a special connection to the place of their mayorship. As Sean, twenty-five, a computer programmer from Pittsburgh, puts it:

> I know that the baristas at Starbucks are trained to interact with their customers so I knew them before but then being the *Foursquare* mayor of the place, it is ridiculous, but it still adds a bit of a status to the relationship I have with the venue and the people in it. So we joke about that a lot that I am the *Foursquare* mayor and any time there is a new employee I'm like "yeah, I am the *Foursquare* mayor." So it is something that does, although it has no meaning, set me apart from everyone else.

As we can see, the feeling of ownership and the status of the title creates a unique tie between the user and the place—a link that separates them from everyone else. As Sean points out, his mayorship distinguishes him from the general public that frequents this Starbucks. Everyone should know he is the mayor and as he notes his connection to the place and the people that work and socialize there is stronger. For another example, take Patrick, thirty-four, an artist from San Francisco, who describes his feelings about being the mayor of the local bar:

> I feel like I have some type of ownership to that mayorship. I probably go there more than most people. It may simply be because my boyfriend works there and it's the closest bar to my house but I still got a little pissed when someone took my mayorship there for like a day. I reclaimed it quickly. I didn't know who this new mayor was and I didn't feel like he deserved to be mayor.

As Patrick shows us, being the *Foursquare* mayor of that specific bar promoted him to take special action when he felt the place was falling to the wrong mayorship hands. His special connection to the place made him go out and reclaim the title, as the new mayor was not deserving of it.

The game mechanics embedded in the service often lead to "mayorship battles" between avid users (Oliver 2010). The political mess that is *Foursquare* mayorships scaled to completely new levels in the case of the Delicatessen, a trendy restaurant on the corner of Lafayette and Prince Streets in New York City. On July 14, 2010, Jennifer Magnolfi checked in to the restaurant and used the "shout" option of the application to call for the dethroning of her fellow *Foursquare* user, Baratunde Thurston, from his current mayorship of the place. The mayor was not amused by the challenge, as he put it:

> I was aghast at the boldness, rudeness and crassness of the move. It was literally a slap in the face, insofar as *iPhone* pop-up notifications can be interpreted as physical assaults.
>
> (Covington 2011)

The duo decided to take the challenge and compete over the mayorship during a period of thirty days. In this time frame, if Jennifer became mayor, she would be the entitled mayor. During this month, they both ran a real political campaign, with live-tweeting, blogging, support rallies and endorsements from the restaurant's owners. In addition, the restaurant itself created a cocktail for both competitors and hosted a victory party on August 16 for the winner.

Figure 5.2 Mayorship change message (© 2014, Foursquare Labs, Inc).

At the end, due to Baratunde's business trip, Jennifer claimed the mayor title as she checked-in more times than he did. Shortly after, Baratunde gave his concession speech and congratulated Jennifer for her achievement (see Figure 5.2).

This example shows us how the social interactions created by the application and more specifically, the mayorship game mechanism, provides its users with ways to interact with the place as well as to display their strong feelings toward it. The campaign not only included the people that visit and work at the restaurant, but it was also covered by the press and presented later on in several social media conferences (Covington 2011).

Events

In addition to mayorships, a big part of the *Foursquare* game mechanics includes the badges system. Using the application in various scenarios rewards the user with virtual badges. For example, if a user takes ten trips to the gym in thirty days, she will receive the "Gym Rat" badge. If a user checks in at twenty different pizza places, she will be rewarded with the "Pizzaiolo" badge.

Some badges are harder to get than others. One of the more sought-after badges is the "Swarm" badge. A virtual medal saying that a user checked in to a place with more than fifty other people checked in there at the same time. As *Foursquare* adoption rate grew, it became easy to get it in the big cities, and users started planning special gatherings to unlock the "Super Swarm" badge that requires 250 people checked-in at the same time.

One of the first special "Super Swarm" badge parties took place on Thursday, October 7, 2010, at the Jewel Bar in London. A group of avid British *Foursquare* users decided to plan and hold a special event meant to unlock this special badge. The word about the festivity was spread around through *Facebook*, *Twitter*, and blog postings that encouraged users to join the organizers at the bar on the chosen date between 6 P.M. and 9 P.M. The event was a huge success and, as a result, the badge was unlocked and was indeed awarded to the cheering and celebrating group at 7:08 P.M. Bottles of champagne, courtesy of the bar, were then popped open and the celebrations kept going for several more hours.

As a result of the event, many users uploaded their pictures and shared them among themselves and the group activity was later extended to future events that also took place in the Jewel bar, all documented through users' check-ins, blog posts and photo galleries on *Flickr* which served as memorabilia of the event.[5]

Thirteen of my twenty-five informants remembered exactly when and where they got their first swarm badge. For example, Simon, twenty-five, a graduate student from Pittsburgh, noted:

> I got the swarm badge when I was at a Pirates game at PNC Park. I was one among the first to check in there and I had to keep logging back in to see if it got over 50 and by the time it was over 50, my check-in already expired

> so I had to check in again to receive the badge. When I got the badge I showed all my friends there I got the badge. I looked through all the people that checked in there but I didn't recognize any of them.

Just like for Simon, for many of my interviewees, getting this badge was part of attending a music or sport venue but for several it was during special meetings such as 4SQDay celebrations.[6] These events create a special meeting venue for avid users of the service to celebrate their joint enthusiasm for the application and in many of these gatherings the users receive special badges.

Discussion

Place-naming, ownership, and events serve as ways in which *Foursquare* users interact and explore their ties to the physical places they visit. To better understand these interactions I suggest applying the theoretical framework of "Place Attachment" by which we can study the factors that connect people to places and how they come about in our daily life. More specifically, I focus on three of the factors Low (1992: 166) identified in her work in relation to their representation in *Foursquare* interactions. These three factors include the vehicles of storytelling and place-naming, ownership, and, finally, celebratory events. As we can see from the results, each one of these ideas is articulated in social practices that combine both online and offline activity.

First, practices such as creating venues, leaving tips, and formulating lists adhere to the place-naming factor identified by Place Attachment theory and therefore can be regarded as a tool for the creation of a more elaborated narrative of the physical place. As labeling or tagging the places we visit becomes a common practice, location-based services like *Foursquare* promote users to create new relationships as well as maintain personal connections to the places they visit. Second, as Low notices, ownership of a place creates a strong attachment to it. In *Foursquare* we see that by negotiating in political acts such as mayorship battles, its users create and maintain an emotional relationship both with the physical place and the people who visit it, be they friends, strangers, or familiar strangers (Schwartz 2013).[7] Finally, taking part in events such as swarm badge and 4SQDay parties, participants are encouraged to expand their local social connections as well as have the venue itself take a central role in their memory as the place of the festivity.

Following these findings, I argue that these type of interactions and the resulting personal attachment they create can be best described as "Online Place Attachment," online–offline interactions that carry the same characteristics that create people's connection to places, but at the same time represent sets of factors that result from their simultaneous online existence: *extensive documentation*, *collective attachment*, and *mutual connection*.

Online place attachment is paired with *extensive documentation* of the places we visit. Location-based services like *Foursquare* encourage us to document our

daily lives. In this way, the actual action of checking in to a place is documented but it is also accompanied in many instances by other metadata such as photographs and tips that result in a rich documentation of our daily interactions. One might call it a documentation of our relationship with the places with which we have special ties. This kind of detailed documentation was indeed present before (like in the documentations made by the *flâneur*, or the psychogeography drawings of the city by the Situationist International movement members) but not in the scale we are seeing today.

Online place attachment is also tending to promote a *collective attachment* to a place as the interactions that take place on *Foursquare* are automatically shared with the user's friends. More specifically, when we check in to a location, all my friends that use the application see my check-in, and they can comment and "like" my action. Consequently, other users are becoming aware of the places I frequent and my experiences there.

Many studies consider the length of residence in a place to be an important factor in the creation of place attachment (Kasarda and Janowitz 1974; Ahlbrandt 1984; Taylor 1996). Our personal connection to a physical place is built over a period of time and through reoccurring visits. This factor is similarly important in the use of *Foursquare* as mayorships or badges are awarded only to users who regularly frequent the places. But still, it seems that the usage of the application creates a more rapid connection to the place since we can interact with the place not only when we are there but also later when we see our friends check in there, when we add it to a favorite places list, or when we are reminded by the application that we are near the place and we should check in there.

The "Radar" option on *Foursquare* is a fairly new feature that was made to encourage users to open up the application and check in to places they frequent. This programmed reminder can also be read as the representation of the place as an entity. *Foursquare* acts on behalf of the place to remind us of our relationship and that we should maintain it by checking in there. As a result, the place itself has its own wishes in our *mutual connection*.

It is however important to be aware of the interactions that do not play out in these online circumstances and both the users and places that are missing from the game. In other words, due to the demographics of geosocial applications (a higher percentage of Hispanic than whites or blacks, and of suburban adults than rural adults[8]), the interactions that take place over the application can be seen as promoting and strengthening the ties of only specific type of places that are frequented by a specific demographic that uses the platform. The affordance of the technology limits this type of Online Place Attachment to only a small group of people who are technologically savvy and who are usually located in urban areas, resulting in social exclusion.

Although this kind of interaction is still in its primary stages, I identify Online Place Attachment as a technological way to reinforce and maintain our relationship with the places we visit both through online and offline interactions. This form of attachment uses the same ways we know from previous forms of place

attachment, which listed the offline experiences of individuals, but also adds to it the specific characteristics of online connectivity with all of the abovementioned naturally derived special characteristics. In this way, our use of the application reorders our daily life and affects our definition of relationships with physical places.

Conclusion

As the results show us, @IAmAru's emotional tweet is hardly a rare example; it portrays a growing tendency of intimate connection between people and places mediated by location-based technology. More specifically, the spread of mobile devices and the growing adoption of location-based social networks such as *Foursquare* play a significant role in the way we conceptualize and interact with the places around us. These special places are now invested with both our online and offline personal memories and therefore play a significant role in both our local identity as well as the shaping of our local interactions.

This work contributes to the existing literature by expanding the tool kit of theoretical frameworks we can use when we examine location-based technology, as well as offering a new term to identify the hybrid online–offline tie to physical places. Applying existing theoretical frameworks such as Place Attachment to the study of location-based technology offers a new lens through which we can articulate the ways these services may contribute to the formation, maintenance, and preservation of the interactions between a person or a group of people with the physical place.

I utilized this theory in order to study how *Foursquare* allows its users to create personal attachment to a specific venue. More specifically, I showed how *Foursquare* users' actions align with earlier identified practices of place-naming, ownership, and celebratory events.

Further research should examine how Online Place Attachment is materialized on other technological platforms and the significance this kind of attachment has over the activity of local social groups such as urban neighborhoods. Moreover, the study of the places that do not appear on the venue list as well as the most checked-in venues could provide meaningful insights to the study of the nature of places that maintain Online Place Attachment interactions with their patrons.

Studying these emerging virtual-local relationships of people and places in light of Online Place Attachment enables us to better understand users' actions and explore how, in turn, these practices promote the assimilation and participation of users in their local community, enhance relations with other users, and fortify the existence of our local identity.

Notes

1 https://twitter.com/IAmAru/statuses/27539654790.
2 https://foursquare.com/about.

3 All the participants' names that appear in this work are fictitious in order to conceal the users' identity. This study is approved with IRB number HS11663.
4 In September 2011, mostly due to the launch of websites like www.pleaserobme.com that warned users to the dangers of disclosing their home location, *Foursquare* changed their policy in regard to check-ins to private homes. As a result, only the person who created the "home" location and their friends can now see the home address on the app. Venues that are categorized as "homes" only show up in the "nearby places" list if a user is friends with the creator of the venue. The original blogpost at: http://blog.foursquare.com/2011/09/29/making-your-house-into-a-home/ has been taken down, but it is preserved in part on *Facebook*: www.facebook.com/foursquare/posts/287135594636079.
5 Photo Gallery available at: http://londonist.com/2010/09/foursquare_londonist_ cohosts_event.php; superswarm.posterous.com.
6 4SQDAY (*Foursquare* day), a numerical pun, celebrated on April 16 of every year, was conceived in 2010 by Nate Bonilla-Warford, an optometrist from Tampa. Nate circulated the idea on *Foursquare*'s Getsatisfaction.com forum and as a result he started getting help and support from many other *Foursquare* users who felt they wanted to take part in this celebration. Word spread via *Twitter* and *Facebook* and eventually *Foursquare* joined the flock and officially announced it on March 26. Since then, the day has continued to be celebrated, and in 2011 there were more than 1,200 *Foursquare* events around the world. Nineteen mayors declared official 4SQDay in their cities and *Foursquare* had more than three million check-ins in one day.
7 This type of territorialization work through location-based technology can also be seen in previous research of Japanese mobile gaming (Licoppe and Inada 2008).
8 According to Pew Internet Research Report: www.pewinternet.org/Reports/2013/Location/Main-Report/LocationBased-Services.aspx.

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