Social media is increasingly becoming part of our everyday lives. From connecting with friends and sharing images to exploring cities through location-based applications, these new services have given us a different vantage point from which to understand, explore, navigate, and geographically record the places we live. Sites such as Foursquare and Facebook allow us to spatially mark our explorations in the city, creating rich databases that hold digital imprints of our interactions. What is perhaps surprising is social media app users register far more than what they are doing, they also show what they are feeling. The result creates a psychological map of the city, because the data registered reveals when and where social media users are going through an emotional crisis, experiencing their own personal heaven or hell, or observing an unusual phenomenon. The motivations of these broadcasts appear to be for very different reasons, yet both sites tell us how social media users explore the city or, more importantly, how they broadcast their exploits.

In the project Here Now! Social Media and the Psychological City, the Spatial Information Design Lab (SIDL) shows how users of two social media sites, Foursquare and Facebook, create economic and emotional map layers that operate in social media’s virtual city. The project was launched to determine whether there was a socio-spatial divide in the way social media users geo-register their locations. Focusing on New York, we set out to show whether certain civic applications of social media were failing to address the needs of the city’s marginalized populations. What we found was that all socio-economic classes in New York City use social media to broadcast information about the places they visit, and, when they do so, they tell us about the economy and emotions of the city itself. Visualizations of this data create a cognitive map of the city showing the collective psychology of social media users.

The act of geo-registering one’s emotional city is reminiscent of the practices used by members of the Situationist movement in 1950s and 1960s Paris to deconstruct traditional notions of territorialization. The Situationist movement, led by Guy Debord, responded to what he felt was oppression by the “top-down” strategies of the modernist movement and its use of data to employ strategies in the city. He created something he called Psychogeography, “the study of specific effects of the geographical environment, consciously organized or not, on the emotions and behavior of individuals” (quoted in Wollen, 1999, p. 30). The Situationists believed the city should be understood not through traditional modes of representation, such as land use and census information, but through citizens’ experiences. They postulated that only through understanding this experiential/emotional layer of the city could we begin to understand it as a system (Cosgrove, 2005).

The psychogeography of the Situationists is similar to strategies of cognitive mapping popularized by Kevin Lynch, an urban theorist practicing in the 1960s and 1970s. Cognitive mapping “is a process composed of a series of psychological transformations by which an individual acquires, stores, recalls, and decodes information about the relative locations and attributes of the phenomena in his everyday spatial environment” (Downs & Stea, 1973, p. 9). Lynch believed that allowing citizens to make maps this way could help us “better plan, design and manage the environment for and with people if we know how they image the world” (1976, p. xi). Central to the premise of cognitive mapping is this idea of collective image making through geo-registering citizen’s notions of place. In many ways, geo-registered social media applications like Foursquare and Facebook are tools for developing one’s own cognitive map; they allow users to express their personal experience in the city, thereby referencing the techniques employed by both Debord and Lynch.
Facebook and Foursquare are two popular social media sites that allow users to geographically check-in to locations using mobile devices. Both sites created this geo-based functionality so that users could locate their friends and vice versa. However, Foursquare’s application was also designed to be an urban game that allowed people to win prizes simply by checking-in to locations in the city. Users can win prizes, such as being designated the “Mayor” of their coffee shop, by accumulating the most check-ins. Or they can earn monetary-oriented awards, such as a discount at a local bar. While Facebook has promotional campaigns that are distributed by “checking-in,” the motivation for using it is less about winning. Foursquare and Facebook both save check-in information as latitude and longitude coordinates which can be retrieved using the programs’ Application Programming Interface (API). For this study, Foursquare and Facebook venue check-in locations were collected through accessing the API every two hours for a one-week period (July 5-11th, 2011). Both sites had roughly the same amount of check-ins during this time. Facebook had 552,215 check-ins across 55,961 venues and Foursquare had 548,598 check-ins across 59,376 venues.

The relationships between the physical and virtual economies of the city were exposed through analysis and visualization of Foursquare and Facebook venue check-in locations. Comparing both applications’ venue data with more traditional government data sets exposed the economic patterns inherent in the way these applications are used. For example, the majority of “check-ins” comes from areas in the city that have the highest proportions of land use dedicated to commercial use. This is not surprising, as both of these applications use the check-in mechanisms to help sell and promote products. It is clear that through the development of geo-based check-ins,
Foursquare and Facebook have created a new type of consumer that operates in the virtual city generated by these sites, thereby linking the virtual geography of the city to its physical economy.

As one might expect, the economic operations of both social media sites provide a clue as to what motivates people to use them. Facebook and Foursquare users check-in to locations for very different reasons. While the analysis of venues from both sites reveals some locational similarities, such as airports, train stations and large public spaces, check-ins from Foursquare users generally tell us more about the mundane nuances of life. They tell us where their bed is, where they get their morning coffee or where they work. Facebook users tend to use the site to brag about the iconic places they have been, such as Times Square, Little Italy or the Empire State Building. In essence, Foursquare is based on making a game out of the mundane, thereby adding a “game layer” onto the processes of everyday life. This translates into the cultivation of check-ins that tells much more about the personal experiences of social media users.

What was not anticipated in the study was finding the ability to use social media data traces to understand this personalized city. Foursquare users appropriated the technology to record emotions, phenomena, and locations of special interest. They did this by creating new venues that represented their individual experiences in the city located at the places they had them. The result was a geo-registered dataset of Foursquare users’ cognitive city, which, once visualized, expressed the collective emotions of New York City's social media users.
Exploring what could be called New York City’s “Psychological City Map,” we see the geographic personality of social media users. According to the map, “HELL” must exist just north of the United Nations Building on New York’s Upper East Side, due to the prevalence of “HELL” venues. The visualization also highlights a fascination with the word “apocalypse” to express overhyped phenomena in the city. For example, zooming in to Union Square reveals several “Heatapocalypses,” a “Fluapocalypse,” “Thesispocalypse,” “Oprahpocalypse,” “Freekingfreezingpocalypse,” “TRONpocalypse,” “Nicedaypocalypse,” “Le Andre-pocalypse,” “Gossipgirlapocalypse,” “Overthesnowpocalypse,” “Bernankepocalypse,” among others. North and west of Times Square shows a concentration of XXX-rated check-ins including, among other places “Obama’s Condoms.” “Where Dreams Die” is just north of Grand Central Station and the Cemetery of the Evergreens in Bushwick. “Where the Magic Happens” appears in the West Village. JFK is a hot-bed of activities, as a nearby venue shows a user “watching a drug deal going down” while another passenger checks-in to “Kill Me Now This Delay Is Effing Retarded.” There appears to be a “Web of Lies” in Stuvesant Town, which also happens to hold “NYUpocalypse.” Emotions can get raw, as one user in Dyker Heights checked-in to “My Husband left me on my birthday” and another checked-in to “Sadness” on Governor’s Island. Then there are the check-ins that play on the fact that they are check-ins themselves, such as “It’s creepy that you’re in my apartment” in Williamsburg. Staten Island is not left out of the phenomenological map, with check-ins at “Over the river and through the woods.” Emotional check-ins can describe neighborhoods through the eyes of the people experiencing
them, for example, one user checked into a venue titled “Laughing at train wreck of a bunch of hot messes stumbling in high heels” on the Lower East Side. It’s clear that social media can be used to see the city through the eyes of the people experiencing it on the ground.

Geo-locative social media sites can be used to explore and understand the city in ways never before achieved, by providing a way to connect the virtual city with the real city. This virtual city can be very personalized, as it expresses people’s individual encounters with the places they mark. The economic drivers of social media sites are expressed in these personal maps, as users disproportionally use the sites to check-in to business promotions. Yet at the same time, Foursquare users have been able to re-appropriate the tools to develop an emotional city, by telling us about extraordinary feelings and phenomena they encounter. This story of a place which is not guided by any predetermined survey or governmental dataset allows us to explore the city through the eyes of its citizens when they are experiencing it—creating a psychological map of the city—akin to the practices of the Situationists.

References


Images developed for this paper are part of the “Here Now! Social Media and the Psychological City” Exhibition at Columbia University’s Graduate School of Architecture Planning and Preservation, November 2011. Developed by Sarah Williams, with research associates Georgia Bullen, Francis Tan, Juan Francisco Saldarriaga (Project Manager), and Noa Younse. Visualizations by Sarah Williams and Juan Francisco Saldarriaga.