Chapter 88

A Theoretical Model for Digital Reverberations of City Spaces and Public Places

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ABSTRACT

The increasing pervasiveness of Internet connected devices and services is altering the perception and practice of public spaces through the provisioning of location-specific digital information. Location-aware technologies allow people to access, annotate, address and attach information to locations, which transforms the space for other people who use the same services. Such locations acquire relevance and reshape social and spatial interactions through increased use on social media as people 'check-in' to places, photograph or 'like' them. Collectively the authors are marking-up the city around them. The popularization of location-aware technologies thus contributes to the changing meaning of locations in cities. In contrast to the technological focus in the emerging discourses on smart cities and big data, this paper offers an alternative view of the three lenses of Social, Local and Mobile technologies that describe and explain crowd-sourced socio-technical layers on the city landscape. The proposed integrated theoretical model describes the relevant information linkages between people and places in the online and offline worlds and introduces a new evaluation method for the evaluation of city places: affinity spectrum of social endorsements. The authors conclude with a discussion of the new opportunities for governments to better understand socially emergent 'urban qualities' and how citizens construct and appreciate them in order better convert city places into public spaces.

INTRODUCTION

The evolution of touchscreen smartphones with high-speed mobile broadband, wireless Internet access, and mobile apps is resulting in a "concomitant convergence" (Vatrapu, 2013) of technologies, terminals, and services. This is further evidenced by the slogan "there's an app for that" with regard to erstwhile services. Social Media leads to new social sphere. Public space and public place constitutes physical arenas of public sphere. This research-in-progress paper seeks to outline issues in and aspects of how the mobility turn and participatory turn are changing perceptions and use of public places and how it affects the City's opportunity to govern such spaces and places

In his monumental book "The Production of Space," Henri Lefebvre(1991) explicitly maps the human experiential realms of perceived, conceived, and lived onto their spatial counterparts in spatial practice, representations of space and representational space. According to Lefebvre, spatial practice, under neocapiltalism, is constituted by the close association between daily reality and urban reality. Spatial practice as such permits empirical analysis of the social members' specific competencies and performances (a distinction Lefebvre acknowledges as borrowing from Noam Chomsky). Representations of space refer to the abstract conceived spaces of the technocrats and bureaucrats of the state and the social sciences professionals. The representational spaces are directly experienced and such are lived by users and inhabitants.

Countries such as Portugal, Switzerland and those in Scandinavia are noticeably developed in social landscaping, (See Figure 1) making them prime candidates for listening to their urban citizens.

Cartography by Crowd

We are now living in the age of maps. According to Dennis Wood, 99.99% of maps have been made this century from vast quantities of television, magazines, weather and Internet mapmakers.[1] But perhaps an even more significant development in cartography is that the new maps of world are made by ordinary people via mapping platforms and technologies such as social media or online maps, to both curate their own set of locations and identify uncharted places. Indeed, the map above shows the world being constructed online in terms of the numbers of user generated places indexed (per 1000 people).

City governments are therefore afforded a new opportunity to contrast the social grids of interaction within city spaces by mapping the ongoing data exhausts that are being broadcast online as a digital reflection of physical spaces. Decision-makers can leverage new forms of public feedback about the design and usage of city spaces via the geolocated mapping of social data. While ordinary maps are impressive for their meticulous precision, solid facts, and dizzying catalogue street names, they are also completely static in nature. New layers that focus on online human interaction can instead venture into real-time layering of data, not unlike the weather reports heatmapping for real-time precipitation, but now with *human participation*. This is necessary to shed the spotlight on the human individuals who are the characters in a city's plotline. Their opinions, behavior and notions of relevance shift over time and space in an ever-changing fashion, which is why our research pays special attention to measurements of interaction, appreciation and affinity for which social media interaction with real world places in cities can be visualized in a dynamic geographical fashion. Herein lies a curiosity for the convergence of the digital and physical realms. Why, for example, does one person after another take photos in a given alley, intersection or public space to capture a collective "somewhereness" that exists on the cityscape? How does this compare to other similar locations with a different mirror of public online endorsements and appreciation for the physical world?

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