



The Social Life of Wireless Urban Spaces

Internet Use, Social Networks,
and the Public Realm

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Problem

- Decline in exposure to diverse ideas, opinions, and beliefs in the public sphere.
 - Public sphere is a multistep process, which involves mass media and interpersonal communication within social networks (Katz et al 1998).
- A confluence of trends that constrain diversity:
 - 1) Homogeneity within the mass media.
 - Conglomeratization (Klinenberg 2007), global influences (Arsenault & Castells 2008), convergence (Jenkins 2006), intermedia surveillance (Boczkowski 2009), intermedia cooperation (Golan 2006).
 - 2) Privatism.
 - People's social networks are less diverse and more home-centered than in the past (Fischer 1982; Putnam 2001; McPherson et al 2006).
 - 3) Changes to the physical form and use of urban public spaces.
 - Privatized and "Disneyfied" urban public spaces (Sennett 1977; Zukin 1996), video surveillance, and mobile phone use (Katz 2006).
- Does the use of new mobile technologies advance or hinder the existing trend?

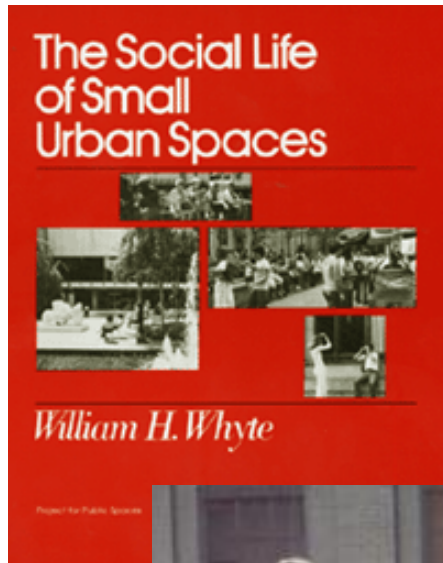
Social Networks and the Public Sphere

- Social networks in three “realms” of social interaction contribute to the public sphere:
 - Private realm:
 - The home. The most homogeneous source of information. Reinforces, generally does not broaden opinion or exposure.
 - Parochial realm:
 - Neighborhood and workplace. More diverse than the home, but the location of mostly familiar, similar others (includes many 3rd places and other “home territory” (Lofland 1973; Oldenburg 1989).
 - Public realm:
 - Urban public spaces that minimize the segregation of people based on “life-styles” (Strauss 1961). Favors the unfamiliar. Few barriers to entry, provides exposure across ethnic, social, behavioral, and ideological boundaries. Exposure is primitive and fleeting. While incomplete (Fishkin 1995), can be a provocative, disruptive, and contested setting that is an important component of public deliberation.

Mobile Media and the Public Realm

- Mobile phones:
 - Voice and SMS dominated by intimate close social ties (Ishii 2006; Ling 2008).
 - May lead to intense participation in closed networks at the expense of broader social participation (Gergen 2008) [*plus see Campbell and Kwak Session 4*].
 - Distracts from co-located strangers and companions (Humphreys 2005).
- Increasing ubiquity of mobile computing:
 - 3G networks/devices.
 - Wireless Internet (Hotspots, Wireless Community Networks, Muni WiFi).
- Until recently, in North America Internet use was primarily confined to home and work, it had not penetrated into public spaces. It is now increasingly possible for people to incorporate Internet use into their everyday experiences in urban public spaces.

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Photos: © Project for Public Spaces

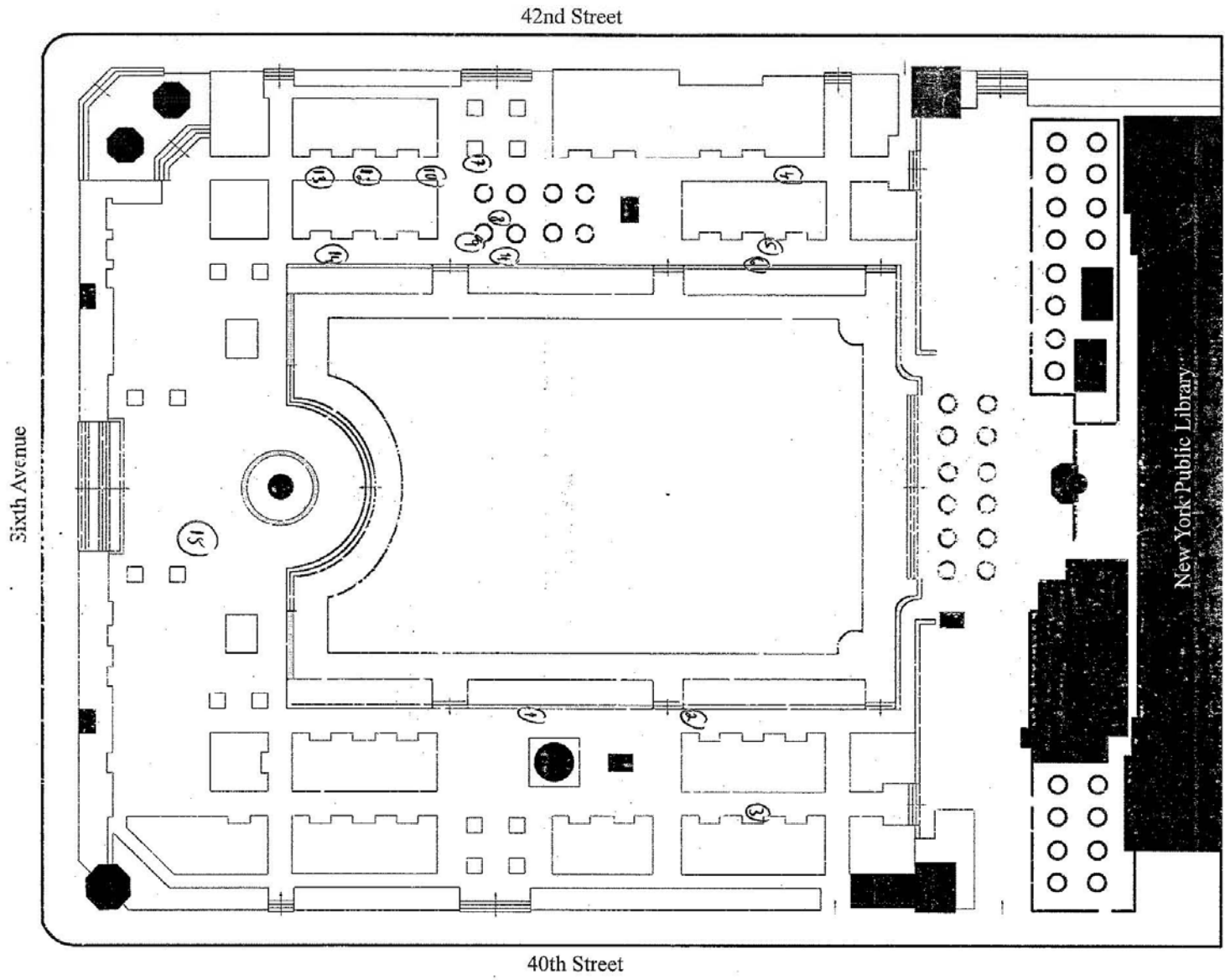
- How does mobile computing influence interactions in urban public spaces and the structure of people's social networks?
- 7 public parks, plazas, and markets with a wireless Internet infrastructure (WiFi networks) located in four cities in the United States and Canada:
 - Bryant Park (New York City)
 - Union Square (New York City)
 - Reading Terminal Market (Philadelphia)
 - Rittenhouse Square (Philadelphia)
 - Union Square (San Francisco)
 - Dundas Square (Toronto)
 - Nathan Phillips Square (Toronto)
- May-July 2007: Place and person centered behavioral mapping:
 - 151 combined visits to the project sites, each visit 1½-5 hours (350 hours in total).
 - Place-centered maps and worksheets apx every 30 min; observed 1,310 total laptop users.
 - 274 person-centered observations on laptop users, 164 on people using other media (e.g., books).
 - 5,000+ photographs.
- August-September 2007: Survey of WiFi users.
 - 15-20min survey; \$5 gift certificate for coffee chain.
 - 228 surveys; participation rate of 65%.

Bryant Park
New York, NY

Date: 7/6/07
Time: 11:45

Observer Open Lixie

 low wall
 high structure



Oren Livio

Bryant Park,

Laptop users 7/6/07
from group #5

12:55 Two people - male female in late twenties early thirties sitting side by side at table near northeast corner of Park

He is using the computer, she is now watching (before she was using it alone)

He has brown pants, blue long-sleeved collared shirt, black flip flops, slightly built

She has short black pants, brown flip flops, white shirt with black spots on it.

1:00 man opens a hotmail window and starts typing a message.

She is looking as he types. They are sitting side by side.

He is typing, she is watching.

Laptop on table, slightly tilted back.

1:02 He looks at her and says something - maybe asking to confirm if email is ok. She nods and he sends it.

back to inbox screen. Most messages are unread.

She leans over to computer and types something.

1:04 Now they are both looking at a web page. But not for long.

They appear to be talking (I am behind and can't hear).

She is leaning toward computer to see

She puts hand and arm on chair that he is sitting on, on back, tapping on top part of chair as they are talking. She has her leg onto bottom part of his chair.



Wireless Urban Public Spaces

- Mean age of public wireless Internet user: 31.4 years.
- Male users outnumbered females 3:1.
- 68% were not married or living with a partner.
- 25% had not visited the public space before wireless Internet was available (does this mean WiFi attracts people?).
- 70% of those who previously visited said they visited more often due to availability of wireless Internet.
- The average laptop user made two 60 minute visits per week.
- Highest number of users:
 1. Bryant Park (New York)
 2. Union Sq. (New York)
 3. Union Sq. (San Francisco)
 4. Reading Terminal (Philadelphia)
 5. Rittenhouse Sq. (Philadelphia)
 - 6,7. Toronto locations.
- Canada/US cultural differences in use of public space?
 - In over 40 site visits totaling 100 hours, found fewer than two dozen laptop users at our two Toronto sites, despite well known community and municipal WiFi networks.

The Co-Located and the Copresent

- Low density of co-located acquaintanceships.
 - 78.5% were alone, 18.1% dyads, 3.4% three or more.
 - Minority of groups contained kinship relations (23.9%)
- High density of copresent acquaintanceships.
 - 66% interacted with others using wireless Internet.
 - 51% exchanged with kin, 99% had contact with non-kin.

	<i>Co-Located</i> (N=71)	<i>Sent Email</i> (N=147)	<i>Read Email</i> (N=147)	<i>IM</i> (N=38)	<i>Chat</i> (N=9)	<i>IP Phone</i> (N=6)
Spouse	14.1	7.5	7.5	2.6	0	100.0
Parent	4.2	21.1	23.1	21.1	0	16.7
Sibling	2.8	12.2	13.6	7.9	0	16.7
Child	0	1.4	2.0	2.6	11.1	16.7
Other Family	4.2	19.7	21.8	7.9	11.1	16.7
Co-worker	11.3	51.0	47.6	10.5	22.2	16.7
Group	8.5	17.7	22.4	2.6	11.1	0
Neighbor	4.2	2.7	3.4	0	0	0
Friend	71.8	67.3	72.8	81.6	55.6	33.3
Advisor	5.6	9.5	8.2	2.6	0	0
Other	15.5	17.0	20.4	5.3	0	0

Activities in Urban Public Spaces

- Wireless Internet users:
 - 29% visited a social networking website, 8% contributed to a blog, 43% consumed online news or political information.
 - 10% were observed in an extended interaction with a stranger, 12% participated in a more modest social exchange.
 - 28% reported meeting someone new in the public space where they were interviewed. 1 in 6 maintained contact over time, but only 4 respondents attributed serendipity to their use of a mobile device.
- Users of other mobile media:
 - Book/print media users more likely to be observed in extended (13%), and more modest interactions (13%) with strangers.
 - Mobile phone users less likely to participate in serendipitous social exchanges of any type (5%).
 - No one using a portable music device was observed interacting with a stranger.

Attentiveness and Availability

- 40% of WiFi users sat in areas that were less densely populated than the public space as a whole, 50% in areas as dense, 10% in areas with a more concentrated population.
- **Attentiveness:** 24% described by observers as infrequently attentive to surroundings, compared with 15% of book readers, 10% using a portable music device, 7% using portable gaming devices, and 3% of mobile phone users.
- **External stimuli:** In response to a loud noise, 12% of WiFi users looked around their environment, compared with 55% of those listening to portable music players, 21% of portable gaming users, 16% of book readers, and 3% of mobile phone users.

Contextual Effects

- The influence of wireless Internet use on sociability is not only felt by individual users, but may be felt by the collective population of a space.
 - A 'context' or 'neighborhood effect' reduces the overall likelihood for sociability – serendipitous and planned – as a result of the presence of a dominant proportion of people disengaged from co-present interaction.



Limited evidence of a context effect

- Only in Bryant Park was there a sufficient density of users to observe the influence of clustering.
- Observed less interaction in areas around a cluster of users.
- Attribute to population self-selection and urban design, not directly to mobile computing.
 - 51% of Bryant Park users label their activities as “primarily work.” Twice the rate as other sites. “Workers” had less sociability with both strangers and co-located companions than other users of public spaces.
 - Urban design further encourage this behavior.
 - Abundance of small tables and chairs with desk attachments; provided limited opportunity for physical contact and for companions to casually share a laptop display.
 - More interaction was observed where shared seating was provided, such as benches, steps, picnic tables, and low walls.
 - For wireless Internet users, Bryant Park functions primarily as a workers’ park – workers typically seek empty tables and desks.

The Personal Networks of WiFi Users

- A lack of public, co-located sociability does not negatively impact WiFi users' social networks.
 - Discussion networks are larger and more diverse.
 - The average American's core network of strong ties, the number of people with whom they "discuss important matters", consists of 2.08 people, and 24.6% of people have no discussion ties (McPherson et al 2006) .
 - WiFi users in public spaces had a mean 3.82 discussion ties, and only 3.5% had no ties.
 - 42.8% of Americans' core networks are highly homophilous (low in diversity), consisting of only kinship relations
 - Only 10.1% of WiFi users did not have at least one person in their network not connected to them through kinship.
- Largely excludes the possibility that wireless Internet use in public does significant harm to personal discussion networks.
- Social isolation does not characterize the behavior of WiFi users found in urban public spaces.

Mobile Computing and the Public Sphere

- Not a public realm for wireless Internet users.
 - Number of co-located ties low, but high copresence. Intimacy of acquaintances mixed, but broader than the private “bubbles” of mobile phone use. Resembles a parochial realm.
 - Less approachable and less attentive than other users of urban public spaces (but not as bad as mobile phone users!).
- Will not reshape and repopulate urban public spaces.
 - Cannot definitively conclude that wireless Internet attracts new participants to urban public spaces [*also see Boase Session 4*].
 - Wireless infrastructure by itself will not populate an urban public space, nor revitalize urban public spaces in decline.
- New opportunities for engagement in the public sphere.
 - Users tend to be imbedded in large, diverse social networks. Online activities in public spaces are directed at maintaining those networks.
 - Online activities may provide more opportunity for deliberation and broader discursive participation than the fleeting exposure of the public realm.
 - For some (younger users?) may better balance opposition and like-mindedness to maximize tolerance, deliberation, and discursive participation than exposure to provocative and contested public settings.