Flickr Documentarians:
Presenting the Physical in the Virtual

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Abstract

New hardware such as mobile handheld devices and digital cameras, new online social venues such as social networking, microblogging, and online photo sharing sites, and new infrastructures such as the global position system (GPS) are coming together to promote new ways of thinking and acting. Use of location-based applications, particularly in social settings, is beginning to establish a new set of practices—what I refer to as 'socio-locative'—that combine data about a physical location, such as a geotag, with virtual social acts, such as sharing photographs online. In this paper, I present a selection of findings from a larger piece of research that investigates two emergent socio-locative broadcasting practices: microblogging and online photo sharing. These findings are based on a set of 50 qualitative interviews with North American and European subjects, as well as the analysis of over 5000 artifacts culled from subjects' Flickr (online photo sharing website), Twitter (microblogging website), and Jaiku (also a microblogging website) accounts.

I focus particularly on the phenomenon of documentary broadcasting, whereby individuals curate lasting descriptions and commentaries about a location for a public audience. Most of the examples of this practice come from subjects using Flickr, who, in addition to posting photographs, also add geotags and/or formal place names within descriptor fields and assign their photos to external pools. Pool assignment signifies that a photographer's oeuvre is not simply a random set of images, but a categorized collection put together purposively for public display. In this way, the broadcaster acts simultaneously as the curator for his own work.

Practitioners of documentary broadcasting referred to themselves as "eyes" and their broadcasts as "observations" or "shared perspectives" in interviews. Unlike many photographs shared online, the subject of a documentary post is always a place, such as a city street or a rural landscape, and not the activities nor identity of the broadcaster himself. Posted images are often meant to reveal aspects of a landscape or physical setting that might otherwise be unobserved or to preserve features of a location in a decayed state or possibly subject to demolition. When presented together as curated narratives—a form of physical/digital placemaking—documentary broadcasts use Flickr as a virtual public "gallery space" to capture, present and preserve aspects of a place that may last longer than the physical location itself.

This research offers an empirical lens through which an emergent socio-locative practice can be viewed as well as the opportunity to push the discourse surrounding locative technologies away from the oft-asked questions of synchronous coordination and privacy into a larger critical realm that includes the use of the Internet for long-term cultural preservation and amateur curation.

Introduction

Technological developments over the last twenty five years have readied the ground for a new set of online practices to flourish—practices such as conversing in chat forums, using email and instant messaging to support global collaboration, and social networking within virtual worlds. These new practices, which combine both social and technical elements—indeed are 'socio-technical'—emphasize the virtual: the computer and the Internet are mediating prisms through which individuals interact. Cyberspace has become the new place to meet and engage with other people. The newest instantiations within this area turn away from physical materiality toward an ever more comfortable participation with simulated representations of ourselves, our relationships and the worlds we inhabit.

Rapid technological development has also occurred within the area of mobile devices and ubiquitous computing infrastructures. Unlike the shifts mentioned above, developments here tightly interweave digital affordances with the realities of physical materiality. Instead of an emphasis on simulation and virtuality, socio-technical shifts centered on mobile devices emphasize an augmentation of reality. Short message service (SMS) on mobile phones enables the radical practice of flash mobbing (the rapid organization of groups in a specific geographical location), for example, whereas the near-constant connectivity of the BlackBerry is beginning to alter the traditional definitions of the workday and the workplace. The commercial popularization of the global positioning system (GPS) has generated the rise of geographically-organized information *in situ* that individuals, such as tourists, can access for a digital overlay of their current physical environs.

These two areas of socio-technical development both converge and oppose one another. Virtual developments seek to simulate 'real life' (RL) with rich, image and movement-driven environments and, as such, have successfully attracted masses who engage and interact with one another unabated by any shortcoming of the simulacrum (Bailenson, Yee, Brave, Merget, & Koslow,

2007). Physical-material developments, on the other hand, typically foster a logic of context-dependence: devices are programmed to pick up the clues and cues of real life to provide a seamless, information-rich experience as users traverse the various contexts of their daily lives (Barkhuus, 2003). In the most general terms, virtual developments appear to drive an agenda to replace physical materiality with the welcome affordances of virtuality, while physical-material developments seemingly seek to overlay reality with the conveniences of contextually-relevant information and seamless connectivity.

This paper explores one point of convergent tension between these two logics, a point where the virtual and the physical-material connect. I look to the recent rise of online forms of broadcasting, that is, using the Internet to fashion one-to-many communications, to understand how a practice from the virtual camp—virtual social communication—is coming together with a practices from the physical-material camp—the rising use of geospatial metadata. My investigation joins those already underway by social media scholars intent on exploring this increasingly porous virtual/physical-material boundary. In specific, I question why individuals engaged in computer-mediated broadcast practices would choose to augment these behaviors with the inclusion of information about their current or past location.

Socio-locative broadcasting practices are particularly complex for the way they interweave the broadcaster with place, time, and audience; they situate computer-mediated communication within both social and spatial contexts (Rudstrom, Hook, & Svensson, 2005). Broadcasts, while individually authored, are always witnessed and often commented on by audience members who are both known or unknown: they are simultaneously personal as well as social communicative acts (Donath & boyd, 2004). Moreover, socio-locative broadcasts are situated simultaneously within virtual and physical-material contexts. Whereas the *content* of socio-locative broadcasts includes some form of geographical representation, the *practice* of socio-locative broadcasting is also geographical—it both shapes and is shaped by perceptions of the type of social territory in which it

is occurring (Brown & Laurier, 2005). This tripartite emphasis of communication, community and context requires that we assess socio-locative broadcasting relative to a broad set of ideas—communicative, sociological, and geographical.

A growing body of literature (Huberman, Romero, & Wu, 2009; Nov, Naaman, & Ye, 2008; Van House, 2007) seeks to explore the ways in which Web 2.0 tools—those for which social interaction is a substantial component of both the architecture and the intended experience—support communication across both physical and virtual sites of engagement. Much of this research tends to focus on aspects of communication that emphasize the identity of the individual broadcaster or the close relationship of the broadcaster and his/her proximate community. It is appealing for certain individuals, for example, to associate themselves with a physical place (often at a specific time): she may use Twitter to tweet to her followers that she is at a certain restaurant; he may use Flickr to post recent travel exploits to Paris. Much in the way that research on social networking and other online forms of interaction tend mildly to bias identity-making as the predominate rationale for amateur online production, so too has this analytical frame drifted over to tint the emergent case of geographical online communication.

My recent dissertation on socio-locative broadcasting proffers a pair of alternate motivations other than the desire to link place with identity. One important alternative is the desire to be a citizen broadcaster—to be the eyes and ears for a community that is distributed elsewhere in geographical space. Unfortunate incidents such as the wildfires in San Diego in 2007 and the Mumbai attacks in 2008 showcase exactly this usage model of socio-locative broadcasting, especially viable through mobile, microblogging applications such as Twitter (Stelter & Cohen, November 28, 2008).

In this paper, however, I focus on a second motivation for creating socio-locative posts online, namely the desire to create a lasting documentary of a place. Photographers, such as Ansel Adams or Robert Frank quite notably, have long used images to convey a sense of place or to

robustly preserve the details of a geographical location. What is noteworthy about Web 2.0 documentarians is their use of geographical and semantic tags to both intelligently archive these images within the online information environment of the Internet. I detail this practice in full after a brief description of the study design and methodology that directed the larger dissertation of which this finding is a part.

Research Study

My research followed a traditional qualitative, inductive path that couples interview and artifact data with a theoretical frame to establish an explanation of empirical phenomenon. For maximum comparative potential, I fashioned a 2x2 study design that compared broadcasting practices that were essentially non-locative (i.e., include no formal geographical elements) with those that were locative (i.e., inclusive of formal geographic elements such as geotagging). To represent the non-locative conditions, I chose the microblogging application, Twitter, and the online photo sharing application, Flickr. To represent the locative conditions, I chose the microblogging application, Jaiku, and the same online photo sharing application, Flickr, but with one vital difference: in the locative condition of photo sharing, users attach geotags to their shared photographs. I refer to the locative photo sharing condition throughout as 'GeoFlickr' to differentiate it from the non-locative condition, which I call simply 'Flickr.'

To review briefly, microblogging is an activity that allows a person to post brief messages—usually restricted to 140 textual characters or fewer—using one of many input mechanisms, including short messaging service (SMS), web browser, instant messaging application (i.e. GTalk), or dedicated third-party application (i.e., Twitterific). Jaiku, also a microblogging service, differs from Twitter by offering, particularly in conjunction with its mobile application, an ability to highlight a person's current location automatically based on cell tower ID. A physical location in

Twitter can be denoted by way of special syntax (i.e., 'L:'), but cannot be determined and published automatically.

Regarding Flickr—a popular online photo sharing site now owned by Yahoo!—subscribers can upload photos to a central server so that others can view them on their own web browsers. When subscribers voluntarily elect to affix geographic metadata to a picture in the form of longitude and latitude coordinates (a.k.a. a 'geotag'), viewers see both the digital image as well as its location on a map. (See Figure 1 for an example.)
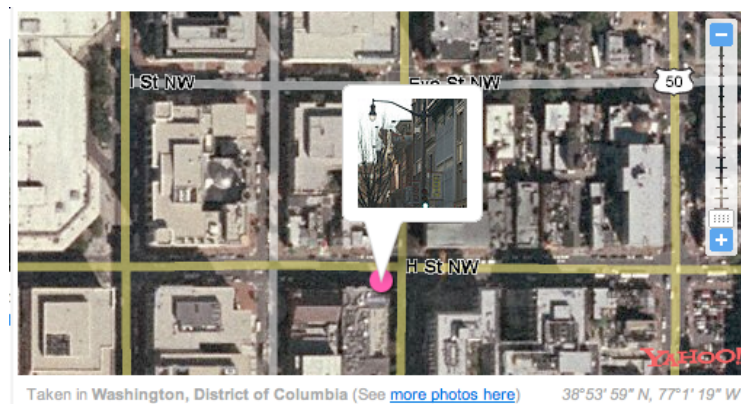

Figure 1. Geotagged Photograph Viewed Online on Flickr

At the time of my data collection (mid 2007-mid 2008), the affixation of geotags to uploaded digital images in Flickr was a fairly intentional act, meaning that people had to take pains to associate geographic metadata with the respective images (e.g., by way of external GPS devices or by dragging images in Flickr onto a map interface.) The introduction of smartphones such as the Nokia N95 and the iPhone 3G, both with GPS capabilities, as well as the increased popularity of GPS-enabled digital cameras, have increased the ease with which geotagged photographs can be created. As a consequence, the practice of geotagging likely no longer connotes a specific motivation on the

part of the photographer. Indeed, the capability to geotag is fast becoming as ubiquitous as affixing timestamps and other forms of metadata to digital files.

Data Collection and Analysis

I operationalized a data collection plan based on interviews and artifact collection (i.e., individual broadcast posts) within each of the four conditions. Table 1 depicts this plan and provides an overview of the number of subjects per condition that I interviewed and from whom I collected artifacts. Given the important role that location plays within the study, the subject pools for both of the locative conditions are 50% higher than the non-locative conditions.

Table 1. Study Design Overview

	Microblogging		Online Photo Sharing	
Condition	Non-Locative	Locative	Non-Locative	Locative
Application	Twitter	Jaiku	Flickr	Flickr
Subjects	10 subjects	15	10	15

I identified viable subjects using a combination of approaches. In a modified form of snowball sampling (Granovetter, 1976), I contacted members of my own social network and asked them to send invitations to members of their social networks to join the study. I also solicited participation by placing several announcements on the discussion board of the public Flickr group 'GeoTagging Flickr.' Finally, I used a method of direct contact within each application under investigation to solicit the participation of particular individuals I thought well matched the criteria of my study. Recruitment via social network sampling represents 62% of the total subject pool,

followed by contact via direct address (30%) and identification via public calls for participation (8%).

Although I made every effort to collect a diverse set of individuals for this study, I did not purposively randomize on all possible demographic elements. The final subject pool was 34% female, 66% male. As noted in Table 2, subjects' ages were more widely distributed—and also somewhat higher than media-inspired conventional wisdom would imply.

	Flickr (N = 10)		GeoFlickr (N = 15)		Twitter (N = 10)		Jaiku (N = 15)	
Birth Year Range	1956	1976	1958	1981	1966	1981	1951	1984
Avg Age	39		37		37		35	
s.d.	6.80		6.26		5.10		9.54	

Table 2. Subject Age Distribution

Regarding nationality, with the exception of the ten Twitter users studied, who were all American, subject pools for each of the other three conditions included some number of non-Americans.

As is customary in inductive, qualitative research, I conducted interviews as open-ended question-and-answer sessions between interviewer and interviewee. The average interview length across all 50 interviews was 51 minutes. Interviews were also conducted in two different media: in person and over the phone. Of the fifty interviews, 23 (46%) were conducted in person and 27 (54%) were conducted via phone. All interviews were conducted in English and audio taped. Audio interview files were transcribed and analyzed over several iterations according to grounded theory (Glaser & Strauss, 1967; Strauss & Corbin, 1990) using the software application ATLAS.ti to affix conceptual codes to sections of the transcript text.

In addition to interviews, I also collected the artifacts produced by each subject (i.e., photos posted on Flickr and microblog posts made in Twitter and Jaiku). During 4 weeks in March 2008, I

collected 3941 artifacts from the 15 Jaiku subjects in the study and 1145 artifacts from the 10

Twitter subjects, for a total of 5086 microblog artifacts overall. The variance in the Twitter pool

ranges from one subject who produced 9 posts during the month and another who produced 272

during the same period. In the Jaiku camp, the range among broadcasters over the four-week

period was more dramatic: the low end saw a count of only 24 posts and the high end a count of

898 posts. To expedite my analysis I created a sample for each subject comprised of 50% of their

total output; where that number was greater than 100, I capped the sample size at 100 artifacts.

The Flickr artifacts (collected over the 24-week period between July 7 and December 21,

2007) were sampled as above and were preserved for analysis as PDF screen captures. One artifact

is equivalent to one Flickr webpage, which is organized around the digital image but includes

additional information such as date of posting on Flickr, added semantic tags, description, title,

make of camera used in taking the picture, name of sets or pool to which the photo has been added,

and any comments left by viewers. Overall the ten Flickr subjects produced 4935 unique artifacts

during the 24-week period, with the least prolific producer contributing only 56 posts and the most

prolific contributing 1686. The GeoFlickr subjects produced 12,340 artifacts over the 24-week

period, of which 5458 (44.2%) were geotagged. The largest number of photographs produced in

this time period by a subject was 5636 and the least was 22.

Documentarian Practices

As mentioned, my analysis revealed a practice on the part of certain broadcasters to make and often

explicitly curate documentary broadcasts primarily for a public audience. Quite understandably, the

bulk of these broadcasts used images and were therefore more frequently found within the Flickr

subject pools in my study.

Documentary broadcasts can be identified by their inclusion of geotags and formal place

names (per their locative nature), and, for those broadcasts made in Flickr, assignment to external

pools. Pools are collections of photographs that revolve around a theme—as broadly construed as 'black and white photographs' or as specific as 'Ron and Sally's Wedding, October 23, 2002'. Figure 2 provides an example of pool assignment; here, Subject BB has assigned one of his photographs to seven distinct pools.
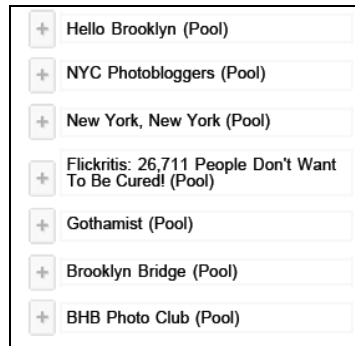

Figure 2. List of Pools from a Flickr Post

Assignment of photographs to multiple pools in Flickr is an indicator that the broadcaster seeks to have his photographs seen by as wide an audience as possible; pool assignments are, in effect, a form of publicity. As organizational elements, pool assignments also signify that a photographer's oeuvre is not simply a random set of images, but a categorized collection put together purposively for public display. In this way, the broadcaster acts simultaneously as the curator for his own work.

Annotating with geotags and cataloging via pool assignments makes sense because the locative information in documentary broadcasts is meant to have lasting effect. Some photographers indicated in interviews that their shots were meant to preserve features of a place or location that was in decaying state or subject to demolition; in turn, they referred to themselves as "eyes" and their broadcasts as "observations" or "shared perspectives." As in the case of citizen microbroadcasting, the subject of a documentary post is a place, such as a city street or a rural landscape, and not the activities or identity of the broadcaster himself.

Using the combination of above-average use of locative references and pool assignments within the artifact data as delimiting criteria, I identified four documentary broadcasters among the 25 Flickr broadcasters in the study: Subjects BB, LL, OO, and XX. Subjects LL, OO, and XX are all from the GeoFlickr condition, a not unexpected find given the comprehensive emphasis of this style of broadcast. Unexpectedly, Subject BB is one of the Flickr (non-locative) broadcasters; in his interview he even claimed distain for the likes of geotagging. However, his online photo sharing, as it is with the other three subjects, is geared toward presenting a locale replete with complex layers of meaning (i.e., high use of locative references) to a public audience (i.e., high number of pool assignments).

Subjects BB and OO both use *informal* location references to create their documentary socio-locative broadcasts, which means that proper place names are used as metadata within the post. In Figure 3 below, for example, Subject OO eschews the use of a formal geotag but nevertheless creates a locative post by affiliating his image with a set entitled 'Baltimore Null', a pool entitled 'Baltimore', and assigning the photo a semantic tag entitled 'Baltimore'. His behavior here exactly mimics the socio-locative broadcasting style of Subject BB, a Flickr (non-locative) subject.
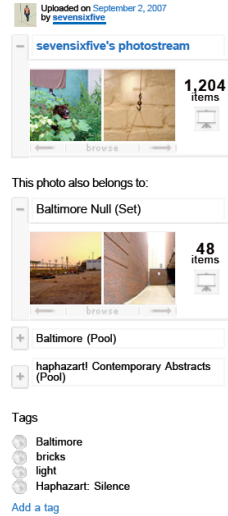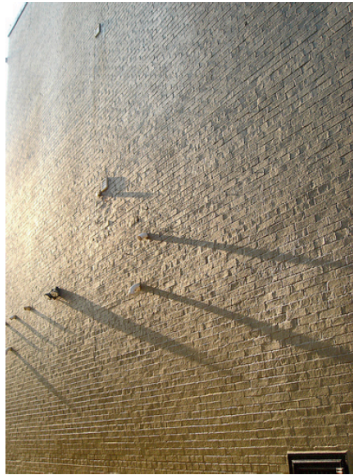
DSC09928

Figure 3. Posted Photograph from Subject OO

Subjects LL and XX, on the other hand, both from within the GeoFlickr subject group, also have high pool assignments, but instead of informal referencing of location, they primarily use *formal* geotags to convey the locative nature of their shared photographs. Interestingly, Subject XX places nearly all of her locative emphasis on the use of geotags—informal location references are only evident in 9.5% of her posts. However, Subject LL, although higher in his use of formal location references than informal, still has semantic locative references on about a quarter of his shared photographs. Figure 4 provides an example of the use of formal location referencing (i.e., geotagging) by Subject XX, though note the large number of informal references as well in the title field, description, set and pool names, and semantic tags.

Figure 4. Sample Photo from Subject XX

In addition to artifactual indications of documentary patterns, Subjects BB, LL, OO and XX spoke of their motivation for documentary broadcasting in their interviews. For subject BB, an avid photographer/web designer, the drive to document New York City was so passionate that it sometimes affected when he felt he could travel,

> *Flickr has affected how or when I leave New York for vacations. Like I don't like to*
> *leave New York now. I feel like I'll be missing out. Yeah, it'd have to be really amazing*
> *place that I was . . . Vermont, it'd have to be like ah, I'm definitely going, being*

engaged in this place too. New York's -yeah that's fine-but give me any other country.
But in the United States, it'd have to be really. . .

His love for the city stems from his practice of walking its streets. He continues,

> *I've always gone on long treks around New York. Because that's where. . . .it's*
> *converged where . . .I'm very peripatetic. I'll just walk around all day. I'll walk for six*
> *hours straight easy. I'll walk. You know, I probably walk the length of Manhattan in a*
> *day. It's 12 miles. . . . I love exploring; I like finding new things. I like…..I don't know.*
> *It's trained my eye too though. I think that's true.*

He is clear that his eye is trained on finding the treasures of the city, and not on presenting himself.

His subject is the place and he is the conduit in bringing its eccentricities to a public audience.

Occasionally his meanderings take him to events in progress, and he distinguishes these types of

photographs from the documentaries he otherwise produces. He says,

> *In general, I like to be very anonymous, and the photographs are about the city. About*
> *New York. And that's why I just keep going to different neighborhoods. Or I go to*
> *neighborhoods I feel that are under covered, or documented, that's the word. . .*
> *Sometimes I feel I'm just documenting it and it may not be newsworthy. And other*
> *times I'm definitely at an event because I know it'll be newsworthy. A couple of times a*
> *week I'll go somewhere because I know it's newsworthy. And then there's the*
> *walkabouts. I call them walkabouts, and that's where I'll just walk for six hours and*
> *I'll run into something.*

Subject OO also spoke about his motivation for documenting locations, particularly his home

town of Baltimore. He was particularly aware of how many of his photographs represented his

architectural and designerly viewpoint, or his expert's eye:

> *Having a background in design gives you the ability to kind of see an abstract*
> *viewpoint where others might not. Because you're walking around and thinking about*
> *things in analytical terms and you're trying to - like I constantly catch myself taking*
> *the kinds of photos that reference the conventions of architectural drawing. Like*
> *straight-on elevations especially. And things that, you know, images where the people*
> *who architecturally really walked into the frame. And symmetries and relationships*
> *become apparent when they're using those kinds of conventions I think that aren't*

*obvious and other ways of seeing, ways of like moving through the world and looking
at the built environment especially. . . . I made one whole group of photos like that
that looked like, you know, that were sort of everyday architecture but you could see
the kinds of formal relationships coming through that.*

Subject OO is also quite interested in showcasing interesting aspects of places through which he

frequently travels. At the time of our interview, he had been taking the train back and forth between

Baltimore and New York for a series of job interviews. This mobile state provided him an excellent

opportunity to document what he saw in various new locations. He describes this style of

photography, centered around a single street,

*I've been getting really involved with like certain places that I go back and forth
between. . . . I come back to a place like Calvert County in Southern Maryland where I
am right now that's like fairly rural, fairly suburban, and an hour, hour and a half
south of any city. . . . or a place like Baltimore where a lot of these more urban
abstract photos I've taken are from. I've taken a really - actually there's this one alley
in Baltimore . . . at the end of the block and the middle of the block there are these
streets that they don't allow parking on because they're really narrow but they're like
small houses fronting on these mid-block streets that go traditionally to mixed upper
income levels so that you have a floor house that the working class people could
afford and a bigger house that's on the edge. But just exploring this one mid-block
street . . . almost every time I find something new. And I've been tagging those with
the name of the streets. I haven't gone through and added them to the map yet but - I
haven't added a lot of them to the map yet. Some of them are still there. Some of
them are already, but it's just really interesting to me to watch this line on the map
get densified with all these dots, all these different things that ordinarily you wouldn't
put together are really just happening within a few feet of each other as you walk
down this street.*

Subject OO is not only keen to pass along what he sees to his Flickr audience, he himself is a

secondary audience, one that becomes fascinated by the meta record his wanderings make on a

map. Yet the desire for subsequent mapping appears to be ancillary to his desire for public

association of his photographs with their place of origin. Even the abstract image of a brick wall

depicted in Figure 3 is still ascribed to the Baltimore pool; this abstract image is not an a

immediately recognizable image of the city, but does make up part of its sense of place, according to

Subject OO, though perhaps not one that the everyday viewer would instantly recognize. As a

documentary broadcaster, Subject OO presents a set of his observations for a public audience that might otherwise never be seen—not only are his photographs taken in unsung corners of cities and towns, but they represent the viewpoint of a very sophisticated eye.

Subjects LL and XX use *formal* geotags in their documentary broadcasts and, as the interviews revealed, they regard geographical precision to be an elemental aspect of their public presentation. It is not surprising that Subject LL is a librarian cataloger and Subject XX is a geographer—both of these professions deal strongly with the association between an object and its metadata. For these two subjects, the purpose of these precise documents is to provide a record of something *in place*, not necessarily conveying a sense *of place*.

Subject LL's documentary subject is the surveillance infrastructure in Washington, DC, and as such, he considers his documentary broadcasts to be a political act—a form of broadcasting truth to power. In a somewhat rambling style, he told me about his motivations in outing hidden cameras and the like in the Flickr photos he shares online,

> *I usually get in my car and drive to work and drive home at the end of the day. I don't do a whole lot of walking around with my camera. Although I do often stop, park the car, get out with my camera and take some pictures, get back in my car and get on my way. Uh, so, but there have been ...there's been a number of blog entries that I could point you to if you're interested in pursuing that, of people being harassed by security officers. Because the idea of -I think it's the Fairfax County police have a terrorism training document that someone got for a FOIA request after being harassed for taking photographs. And it says that carrying a camera might be a possible indicator of terrorist activity. (laughs) Carrying a camera! It's insane. And so the idea that- that's where I get back to the idea of the power differential-it's . . .they're everywhere, the cameras that are owned by 'we-don't-know-who' are everywhere and they're becoming normalized. And there are some public policy choices that are made that include posting lists, like the Metropolitan Police Department has some crime emergency cameras that they put up. And they all have the city logo on them, and they have Metropolitan police department and there's a map on their website. So there's some . . at least some accountability there. But so many of them are just not marked and they're everywhere. They're hidden.*

For Subject LL, making these hidden cameras visible to the greater public is an act of responsible citizenship so it is quite important that the information he passes along be accurate and long-

standing. To promote wide-spread access, he has created a specific pool for his surveillance documentaries and liberally uses semantic tags to improve searchability. He comments about the role that these forms of metadata play for in his broadcast practices,

> *. . . I think it's all about the metadata. I think that a really crappy photograph that's got lots and lots of tags will do a whole lot more good than a beautiful photo with no tags. . . . I consider that [pools] another useful way of organizing things. So if people are interested in photographs of gas meters, you know, I want to be right there in with them. And I'm a cataloger. I came out of a cataloging environment so it satisfied that itch. . . putting lots and lots of tags in, helps kind of spread the word.*

Subject XX, the geographer, is in many ways the exemplar documentarian for her ability to articulate the connection between a photographic image, its associated metadata, and a recipient audience. Geographical precision, for her, is about archiving cultural history that has happened in a particular location. She speaks directly to Dourish's (Dourish, 2006) theoretical point about place having cumulative layers of meaning,

> *So I think it fits into that compulsion to just get everything, sort of all the data documented, associated with this place. Because I'm also someone who's really interested in place, and landscape, and the meanings that places have, to be able to locate something that specifically. To be like, this isn't just any old farming landscape. This is a point raised when very specific things are happening. That's where I do my research from. That's really specific to me. This is this building. It's not just a building. It's a building that the Park Service is refusing to fix and they kick the tenants out. It has all these extra meanings to me so having the location for some of those is actually very important to me to have that association. When I don't tag, it's usually because I can't.*

Clearly it is important for Subject XX to create a research archive that is accurately tagged and precisely located. But she also wants others to know about the history that is embedded in places. She explained to me a bit more about her work in Point Reyes and her efforts to publicize the working history that this place had before it was taken over by the Park Service.

Right, and that's why I think I study landscapes. It's exactly that sort of layeredness, and in my case it's the layeredness of the natural and the cultural. I have written a lot about wilderness areas and how I don't like how the tendency is to make them very ahistorical. Like oh, they've just been natural forever, and nothing's ever happened here, and it's just about the nature. And I'm like that seems to be taking those layers away, and making it flatter, and making it less interesting. So a few published articles I have is about the wilderness area at Point Reyes which is hilarious. This place was a dairy farming landscape for 150 years and they just said, "Oh, no, no. We're taking the buildings down and now it's a wilderness." . . . The Park Service doesn't tell you that there was anything that ever happened there. The walk-in campgrounds that they have are all old ranch sites. The historic ranch started 18 whatever, but in those days they didn't have any ____. There's no letting you know that this was something, that a lot of those trails that are out there used to be roads and actually used to be paved roads. They just peeled the pavement off. And they just pretend it never happened and it just drives me nuts. Come on. Let those layers be there even if – I have no problem with taking the pavement off. I think it's great, but let the layeredness stay. Let that be part of the knowledge of this place. . . . Another cultural geographer, Pierce Lewis, he described landscapes as unwitting autobiographies, and it's just such a perfect phrase. But I think in some ways the Flickr thing has become those, also. We are telling our stories through these images, and through the places that we go, and everything else in the same way, and I like those stories. I think those are interesting. . . . I always think of those things as very much a reaction to the omnipresent homogeneity in the world, and it's increasing, and increasing, and so a lot of us are reacting to that by saying, no, I want the depth. I want it to be specific. I want it to be – to not just be anywhere.

It is clear from Subject XX's comments that she believes in the power of Flickr as a platform for showcasing cultural geographic narratives. Indeed, in all four of these documentarians' broadcasts, there is some form of narrative present. For Subject BB, the narrative is the quotidian life of New York City—a photographic equivalent to Frank O'Hara's <u>Lunch Poems</u>. For Subject OO, the narrative is the cit and its forms. He showcases architecture and ways of seeing its abstractions. For Subject LL, the narrative is the unmasking of corporate and government power in urban infrastructure, and for Subject XX, the narrative is the preservation of historical layers in certain geographical places. These narratives use the socio-locative broadcast genre to curate enduring public presentations that use Flickr as a digital gallery space.

Scouting

Microblogging provides another forum for documentary broadcasting, although, given the

medium's textual nature, these documentaries are far more spare than their photographic

counterparts in Flickr. I label this broadcast activity, scouting, because broadcasters use their

distributed positions to make 'shout outs' regarding places that appeal to them and whose lasting

features they wish to share on a wide, public scale. Indeed, several new commercial location-based

applications, such as PlaceShout, Socialight, and Whrrl[1], have all been developed recently to

encourage (and commercialize) this type of socio-locative communication. Microblog

documentaries, as with all socio-locative broadcasts, must include reference to a specific place; their

directedness toward a public audience, however, is an assumption that must be inferred for lack of

an obvious indicator such as a pool assignment.

Among the Twitter and Jaiku groups, there are no standout documentarians according to

data analysis. Instead, nearly all of the Twitter subjects created one or more documentary

broadcasts over the course of the observed period. By way of contrast, I provide a few examples of

textual documentaries to showcase their spare nature, as compared with the photographic

broadcasts previously detailed:

> *@seanodmvp it's about a 25-30 minute drive DTW to Ann Arbor*
> (Subject A, 7:39PM March 20, 2008)
>
> *resenting that the caribou coffee is closing around me 20 minutes before the doors*
> *shut. smelly floor mops and all. bleh*
> (Subject A, 10:43PM April 1, 2008)
>
> *sea like creaking floorboards above the brickyard, saxophone and wandering bass fill*
> *the courtyard outside our door. 306 main is up at night.*
> (Subject B, 6:58PM, March 7, 2008)
>
> *The patrons of Plum Market seem to be unruly children & their self-entitlement-loving*
> *parents plus a smattering of ironic hipsters. Shudder.* (Subject C, 6:43PM March 15,
> 2008)

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[1] See http://placeshout.com/, http://socialight.com/, and http://www.whrrl.com/ respectively.

Great Lakes Chocolate & Coffee has the best take-away coffee lids of ever. (Subject C, 1:33PM March 28, 2008)

@StarGazr – Agreed – Lake Michigan reminded me much more of the ocean than the "lakes" I grew up with in Iowa. (Hubby calls them ponds :-) (Subject D, 10:17PM, March 9, 2008)

Café Habana is a fun place for morning meetings – upbeat music, good coffee and basically undiscovered.
(Subject D, 8:12AM March 24, 2008)

@industrygirl – its not quite angel funding, but Michigan has a ton of tax credits for films shot here. http://snurl.com/22dph
(Subject D, 5:23PM March 22, 2008)

Welcoming @govgranholm to Twitter, and loving the feeling that Michigan is getting more techie by the minute!
(Subject D, 7:36PM March 27, 2008)

The interesting Michigan flare to these posts is an unintended outcome of the fact that many of my Twitter subjects were from Michigan; to my knowledge, there is nothing unusual about this place that makes it the subject of avid documentation. Nevertheless, it is evident from this sample that microblog broadcasters use the medium to make mini-documentaries about particular locations, often businesses, that they hope will affect the opinions of a broad base of recipients. Language in these posts is often slightly more descriptive, proper names are spelled out in full, and a proffered opinion may be augmented with a link to more information. While often lightweight in effect, these mini-documentaries do not have as much of a throw-away feel about them as the citizen microbroadcasts with their chatter about the weather or upcoming events. Instead, these posts seem to be the digital equivalent to neighborly advice or a even a type of recommender system, in which broadcasts paint small, lasting pictures of certain locales for the benefit of anyone and everyone listening.

Jaiku subjects also broadcast scouting documentaries, often leveraging Jaiku's ability to import image-based feeds like Flickr photographs into their microblog posts. In essence, Jaiku combines the immediacy of the microblog post and the stability of the Flickr's photographic gallery

format to fashion a haiku-like narrative for the receiving audience. Subjects R and O provide a few examples of this combination Flickr/Jaiku mini-documentary in Figures 5 and 6. In the case of Figure 5, the microblog post shows an image of a named location and nothing more, whereas, in Figure 6, the post details the first in a series of photographs that can be accessed by hyperlinking.
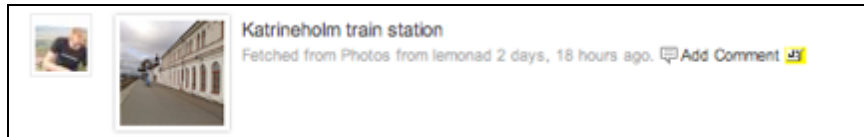

Figure 5. External Flickr Feed in Subject R Jaiku Post (March 15, 2008)
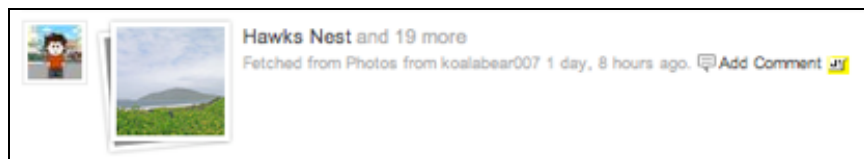

Figure 6. Flickr Photo Series within Subject O Jaiku post (March 27, 2008)

Certainly scouting broadcasts are nowhere near as sophisticated as those documentary posts made by Flickr broadcasters—the metadata possibilities for organization so fundamental to reaching a broad public audience are missing in Twitter and Jaiku for starters—yet they do succeed in a small way in making a lasting document of a specific location.

In sum, this review of documentary socio-locative broadcasting suggests a quite distinct motivation for the inclusion of geographical information. Documentary posts strive to reach a broad, public audience in an effort to present a picture or description of a place that is stable and layered with meaning. This form of placemaking, built primarily on the shared photo form, suggests a nascent genre of communication, one that seeks to capture and, where possible, curate lasting locative narratives for a public audience.

Documentary Broadcasts and the Hybrid Database

Socio-locative documentary broadcasters seek to convey a durable impression of a specific location for a public audience. They achieve this goal at the level of content, but also by using semantic and organizational metadata to enable greater searchability and leverage publicity. As broadcasters, documentarians surface unknown facts about or images of a place and then curate them for presentation on Flickr, which acts like a gallery or a museum by providing a persistent venue for interaction.

For the moment, Flickr acts as the primary access method for geocoded documentary broadcasts, but as GPS-enabled mobile devices such as the iPhone or the BlackBerry continue to be adopted, the possibilities for accessing these documentary presentations *in situ* also rises. As this begins to happen, physical space will literally take on place-related layers described by Dourish (Dourish, 2006). Instead of the cognitive memory layer he describes, however, this conception of place lays a technological database atop a physical infrastructure or landscape to create yet another type of hybrid space. As such, physical space is conceived of as containing access points, or portholes, to an ancillary database of information that an individual can access or contribute to via a mobile device. In short, the physical world serves as the interface for accessing the digital database.

In my analysis, individuals did not speculate much regarding the hybrid spatial potentialities of their practices, but one informant did express a precursor to the notion of a hybrid database when she shared her thoughts regarding the idea of place,

> *. . . it's like a set of understandings and knowledge that you have that's like connected with a geographical area. And those understandings can be anything from, you know, these are the physical resources available here, this is where the ATM is, this is where the bathroom is to, you know, my best friend once lived here to the sky is always so blue when it's blue here. And, you know, any of those things that you have, the minute they become associated with a spot on earth or an area on earth, that's a place. . . . Its past and its present, your past there and your present there.* (Subject PP)

Subject PP's mention of "a spot on earth or an area on earth" being associated with past and present information about physical resources, available services, history of inhabitation, and aspects of weather and/or landscape (depending on how one classifies a blue sky) appears to tie spatial coordinates ("spots") or place names ("areas") with a whole host of possible forms of information that could be associated with them. This is precisely what a database is—a record of associations keyed to a unique identifier. A hybrid database, as an aggregating technology, brings together multiple perspectives—both an individual's own as well as perspectives on that individual—into a whole, which provides a meta perspective on a particular place. Subject YY provides a good example of what this might look like in practice:

> *I think there are a lot of interesting things happening in San Francisco and it's good to document them. I also think it's really interesting when there are a bunch of photographers at an event to see the different [perspectives] . . . . I was able to look after I'd uploaded photos and find other people who had . . . and so I was able to find photos of me taking photos.*

Such a form of synchronous, convergent place-related information has never existed previously. Documentary socio-locative broadcasters are certainly driven by complex motivations when presenting their place-related posts before a public audience, but many do contend that they are contributing expert views or restoring lost knowledge about a place for public benefit. For the moment, Flickr serves as the database that holds these objective and subjective narratives in place; however, the rapid integration of technology platforms with one another (i.e., Flickr posts in Jaiku, Facebook, Wikipedia, etc.) suggests that the future will trend increasingly away from proprietary databases toward one where artifacts can be accessed across federated databases via unique geographical identifiers.

The recent appearance of new projects such as City of Memory[2] confirm my supposition that there is trajectory toward socio-locative hybrid databases emerging on the scene. The City of Memory project, a online database of locative narratives run by the design studio Local Projects, allows individuals to upload stories (Figure 7) tagged to a particular location (Figure 8), in this case New York City as can be seen in Figure 9. The content of the project is both personal narratives and curated cultural histories, and stories can be augmented with images or audio, if desired. Together the collected narratives create a pointillistic map, which acts as the access interface for the hybrid space database online.
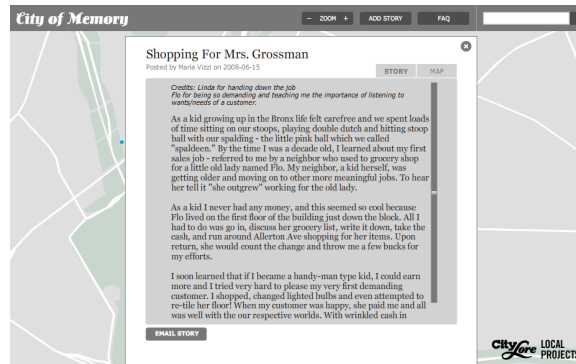

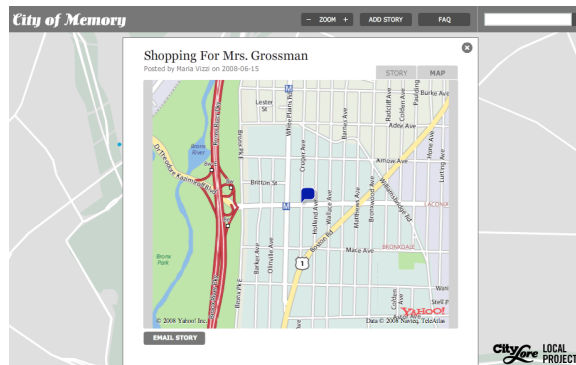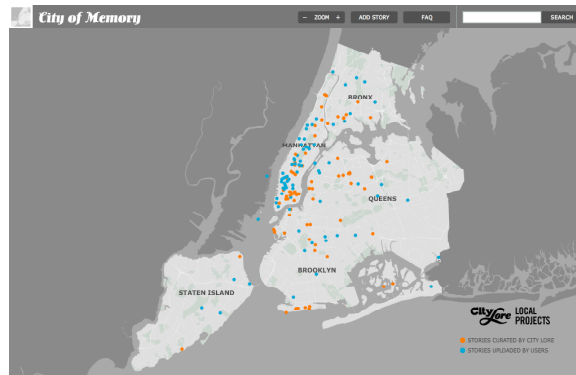**Figure 7. Story View in City of Memory Project**

Figure 8. Map View in City of Memory Project

**Figure 9. Homepage of City of Memory Project—
A Map of the Five Boroughs of New York City**

Documentary socio-locative broadcasting fortifies the notion that certain corners of physical space can and soon will be overlaid with a digital layer of information. For the subjects in my study, Flickr currently stands in as the database. However, we occupy a liminal moment in time when data is increasing moving away from the desktop and out into the field. Space as a database is a conception not too far off, and one that will portend a new set of spatial logics and spatial legibilities.

Conclusion

Documentary broadcasts, in their emphasis on durable and accurate information, envisage a database of space and place organized by unique spatial coordinates and place names that will increasingly be accessed *in situ*, resulting in an increased perception of a digital layer of information overlaying physical structures, or a geospatial database. At a public level, the socio-locative genre of documentary broadcasting establishes a template for photo sharing, for metadata documentation, and for online organization and presentation within Flickr. It also appears to influence the behavior of the broadcaster prior to any broadcasting directing him to focus on certain elements in his surroundings. Many documentary broadcasters told me that they wanted to share what they saw in the world and this emergent form of Web 2.0 communication provides a template for social

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interaction between a broadcaster and her audience. Simultaneously, this genre serves as frame for seeing one's surroundings for the eventual purpose of social interaction.

From the evidence presented herein, I infer a trend in mediated communication in the future that will continue to emphasize not only the connection between identity and place (e.g., synchronous self-in-place broadcasting), but will also create new digital platforms for documenting and archiving history and stories about specific places and for bringing people together and informing them about what is salient in their community or in the world at large.

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