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Collective and Network Sociality in an Urban Village

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ABSTRACT

Our ongoing research program explores the communicative ecology of urban residents and the way these findings can inform design innovation of interactive web, mobile and geospatial applications and local communication services. This paper presents results of a study within this program that seeks to develop a better understanding of the way residents choose different types of web and mobile technology to oscillate between collective and networked interaction paradigms. The analysis of this data draws out key distinctions between collective and network sociality in place-based settings. It points in the direction of design opportunities for global web services to be translated and appropriated for local use to support everyday connections, place making efforts and participatory urbanism and citizenship.

Categories and Subject Descriptors

H.5.1 [**Information Interfaces and Presentation**]: Group and Organization Interfaces – *collaborative computing, web-based interaction.* H.5.m [**Information Interfaces and Presentation**]: Miscellaneous.

General Terms

Design, Experimentation, Human Factors.

Keywords

Urban informatics, social networks, communicative ecology, collective interaction, network interaction, urban village.

1. INTRODUCTION

According to Kolbitsch & Maurer [14], the participatory qualities of what has been termed 'Web 2.0' encourage more users than before – and this includes not just the technically savvy – to bring their personal knowledge to bear and help a collective intelligence to develop. In an urban context, our previous work [8] indicates that such capabilities present diverse possibilities for a profound urban epistemology to evolve. Continuing this line of inquiry, this paper provides a theoretically and empirically grounded discussion of the patterns and interaction paradigms reported and observed in the communicative ecology of residents in a master-planned community – the Kelvin Grove Urban Village (www.kgurbanvillage.com.au) in Brisbane, Australia. We consider the notion of communicative ecology [7, 10] as a model

to analyse socio-cultural communication behaviour in a local context. We introduce the specific context of the Kelvin Grove Urban Village and the research methods employed within this context.

Our findings are discussed in three parts examining the different impacts of three concurrent trends related to the design of web and mobile applications and services: First, we look at technology use by residents living and working at the Kelvin Grove Urban Village and the affordances of functional and cross-platform convergence of pervasive technology and ubiquitous computing applications and devices in our everyday lives. Second, new opportunities given by locative web and mobile media and the use of geospatial data and information enable new conceptual bridges between physical proximity and social preference and compatibility. Third, there is an increasing number of novel examples around what is conventionally termed 'community activism' that demonstrate how the phenomenon of participatory culture online can benefit and impact on people and communities locally. Analysing the interrelationship between collective interaction and network interaction paradigms in the context of these activities draws attention to new urban informatics design interventions [5] that may reconcile the irony of urban connectivity, that is, cities that are the hubs of information and communication technology networks and transport infrastructure on the one hand, and places where residents lament feeling alienated and alone on the other.

2. METHODOLOGY

The primary case study selected for this research is the Kelvin Grove Urban Village (KGUV) – a master-planned residential development in inner Brisbane that offers a unique opportunity to theorise ways how local social networks evolve and operate around individual 'capillaries' [6]. It is a joint initiative by the Queensland Government Department of Housing and Queensland University of Technology to create a mixed-use development on 16 hectares of land at Kelvin Grove, a suburb just two kilometres from Brisbane's central business district. The KGUV is guided by a planning and design strategy aiming at a higher level of integration between residential, commercial, educational and cultural facilities. This AU$800M urban renewal project is expected to be fully developed and occupied by 2011 at which stage it will comprise more than 1000 residential units for more than 2000 residents.

The study reported here was conducted in conjunction with four other affiliated research projects that form a broader urban community research program. The research was conducted over two combined workshops in July 2007. Each workshop lasted for two hours, during which each project team (of two researchers) was given time to conduct their research data collection components. The reason for conducting combined workshops was to remedy the concern that frequent invitations for individual

research participation may appear intrusive and therefore negatively affect the willingness of residents to give their time and input to participate in research studies. The combined workshop strategy received positive responses from study participants.

Four focus groups with the average size of eight participants were conducted, audio-recorded, and summarised during two workshops each. According to the KGUV marketing slogan, *Learn, Live, Work, Play*, we recruited participants from various backgrounds – including students and staff members of the adjacent university and residents. The recruitment process involved notifications at the Community Hub (the official community space where regular meetings occur) and emails, which resulted in a total of 32 participants including some stakeholders involved in the KGUV development. Apart from two participants, all were competent English speakers; however, the two non-English speakers were assisted by an interpreter to provide increased freedom with communicating their ideas. Although the format remained identical for both of the workshops, the participant groups showed some fundamental demographic differences, especially in terms of age and thus lifestyle. This presented nuanced results between two broadly defined demographics – older (40+) and younger (20's). However, our objective for this research was not to conduct a comprehensive survey that could claim a demographically representational image of the site and its residents. Rather, the purpose of the study was to enter into an open dialogue with a selection of KGUV residents to help identify a number of emerging socio-cultural trends and technological opportunities. We value this step as a key strategy to guide our thinking and analysis and to formulate appropriate research questions and design related technology interventions and prototypes.

3. USES OF TECHNOLOGY

We observed two main aspects of social communication amongst the participants, first of which is the prevalence of a place-to-place approach – for example, knocking on the door to initiate communication with one's neighbours – and secondly, extensive mobile phone use amongst younger participants to connect with their close social ties. Most of our participants, regardless of their age group or any observable demographic characteristics, were found to prefer direct physical communication with their neighbours. In light of a lot more convenient means of communication that especially young people stated they use excessively (such as mobile phone text messaging), the preference for face-to-face interaction reinforces our interpretation of the duality of collective and network sociality in place-based settings insofar as there is an emerging trend for seamless transitions between mediated and unmediated communication that challenges the dichotomy between notions of cyberspace and reality. The following comments were made in response to the question of how they initiate communication with other residents:

> P9: Oh, we just yell out.

> P10: [I shout] through my kitchen window.

> P11: Or we just knock on the door.

One of the younger participants, however, did make a comment on the unusualness of simple 'knocking on the door' approach, although that is her preferred mode, too:

> P2: I knocked on the door, and I thought, "They probably don't know who it is," because no one knocks on the door here. We all buzz instead.

Another important aspect to this is that there is a great difference between how people, especially if they are younger and more savvy using mobile phones, integrate the mobile phone into their social and everyday communication and how they communicate with their neighbours (i.e. knocking on the door). As Ito and Okabe maintain, mobile phones are 'closely tied to the everyday, personal, and street-level visions of its users' [12]; our results confirm this view. The average number of text messages sent varied from 60 per month to 60 per day, which are mainly used for social purposes through such activities as small talk and organising face-to-face meetings with social contacts that live nearby. Our question about why they preferred text messages over voice calls revealed two main factors influencing the extensive use of text messaging: firstly, established social norms and regulations make the act of initiating and receiving voice calls highly inappropriate in public spaces, especially classrooms; secondly and on the contrary, established social norms within younger generations demand the practice of text messaging to be part of everyday communication. The followings are statements made by younger participants:

> P4: [The reason for not calling is that] you (the receiver) might be on the bus where you can't talk or in class...

> P2: It's just convenient. [It's normal in] our generation. You don't know where they are. They might be in a class, driving, etc.

Additionally, the asynchronous nature of text messaging allows mobile mediated exchanges to occur at any time enabling users to save real-time interactions for face-to-face get-togethers [20].

Another vital dimension of communication amongst today's youth – who have access to the Internet, mostly in urban environments – is conducted online, particularly via social networking sites such as *Facebook*, *MySpace*, and *Cyworld* [3, 4, 13] and instant messengers. Network technologies – especially the Internet and wireless – are inherently embedded and well-established in everyday (sub)urban life. Wellman and Haythornthwaite correctly observe, 'It has become clear that the Internet is a very important thing, but not a special thing' [24]. It is precisely in this respect that design, development, and access to new communication and media technology need to be vigilantly deliberated, particularly within a context of urban community such as the KGUV.

Our findings show that two emerging patterns of communication that are different to each other are practiced to connect with two different groups of people within the community. In other words, the social category of neighbours or community members do exist and people use a different communicative approach – more direct and traditional (e.g. knocking on the door) – to contact this group as compared to the 'friends' category, which is sustained and enhanced via more diverse methods of communication involving both mediated and face-to-face interactions. Forming of friendship amongst community members has been traditionally encouraged socially and politically for strong collective community connection. In an environment like KGUV, it appears to be crucial to broaden the scope of what constitutes and nourishes that connection not only at a local level (immediate geographical proximity), but also at wider and higher levels across geographical and socio-cultural distances to encompass constantly shifting techno-social contexts of individuals with the increasingly conspicuous convergence between the public and private, and the collective and networked. These types of convergences can also help to transform the technical connectivity of the KGUV into a

mediated smart social environment. Residents can actively upload information about their present context, time and location coordinates attached to a note describing e.g. their personal experiences, opinions or environmental measurements at their current position. This information can then inform the decision making of other users relevant to activities, time-planning or navigation right at the point of interest [2]. Residents could easily capture and digitise whatever they have experienced at the very point of inspiration, using text, video, audio recordings [11] or measurements from attached sensors describing their current environment, such as air quality for example [18].

4. PHYSICAL AND SOCIAL PROXIMITY

Although some studies endeavoured to find the connection between physical (or geographical) and social proximities [e.g., 15, 17, 22], not many examined such a connection within a local community or neighbourhood. In contrary to Mason's findings that 'proximity or distance do not correlate straightforwardly with how emotionally close relatives feel to one another, nor indeed how far relatives will provide support or care for each other' [17], in the neighbourhood context of KGUV, the majority of the participants expressed that they were in fact closer to their immediate neighbours (i.e. next-door or immediately downstairs or upstairs). This can simply be interpreted as a direct result of unavoidable frequent encounters amongst closely located neighbours as compared to those who are in different apartment buildings, for example. Moreover, this type of 'unavoidable necessity of interaction' – not to greet one's neighbours may be considered socially unacceptable in Australian culture – is also evident in many participants expressing their familiarity with shopkeepers within KGUV.

Would it be plausible then to conclude that enforced necessity-based interactions would increase interaction and thus 'closeness' amongst community members? This is not necessarily the case. On the contrary, it affirms that it is 'necessary to examine occasional socialising and caring at-a-distance to redefine conventional notions of what it is to be close' [15]. One participant states:

> P1: [My close ties do not live in the KGUV.] They live all over the place... suburbia and all sorts of places.

Considering these continued ties that are sustained with the help of media and communication technology and travelling for necessary 'meetingness' as in Urry's [22] term. Therefore, the concept of 'closeless' seems to differ in two distinct social contexts of neighbours and friends. Thus meaningful communicative and physical interactions occur differently in these two domains. For example, one may become close to their neighbours, and remain in a close neighbourly proximity with them until they subsequently become neighbours *and* friends. One party may depart the neighbourhood, but they may stay close, especially with increased possibility for connectedness across various geographical and social distances at an individual level. Accordingly, it can be said that strong 'community spirit' that enriches the members' lives in the contemporary urban settings is only possible when it takes account of both domains of social ties that are both intra- and extra-social connections of each individual members.

All of the study participants who have only recently moved to KGUV expressed their willingness to expand their social groups to include other members of the community, and at the same time

lamented the lack of opportunities to do so. The following statements by three participants clearly illustrate this:

> P2: There's just not enough opportunity. I thought there would be a lot more. It just seems random. You talk to everyone in places like the car park and then you don't see them for another three to six months. You don't hear your neighbours.

> P3: Unless you're getting coffee [from one of the shops in KGUV], there's still nowhere to meet people.

> P4: Unfortunately, the greatest way to meet people here is fire alarm. [laughs]

However, what was noticeable about making social connections was that the participants did not simply want to know *anyone* in the community, but they would confine their social openness only to those who are within their own age group and with similar lifestyle. One participant comments:

> P5: Your age group determines [who I befriend], I think, to some extend. On the other hand, if you have relatives and grand children, that's different. You react differently to them.

Here, what they are looking for is obviously not only a simple neighbourly connection, but a connection that can be morphed into *friends who live nearby*. It is worth noting then, participants' definition of 'friends.' This is the statement that was made in one of the focus groups and received much agreement from the other participants:

> P6: People you can count on. People who want to help you and you want to help them. And someone you have a relationship with as well, who have a common ground with you.

Once again, as evident in one participant's excited response, 'Absolutely!' at another's question of whether she would like to socialise with university staff members who do not live in KGUV but work around the area, a broader consideration towards people's communicative ecology rather than focusing on the issues of bringing neighbours together within a particular geographical proximity is crucial. It is *friendship* people seek and would benefit from, rather than mere *neighbourly association*.

These findings point to the timeliness of taking advantage of multimedia and high-speed internet mobile phones that are frequently equipped with location-awareness and positioning capabilities, such as GPS (Global Positioning System). Consequently, mobile phone users turn into in-situ journalist or, as Paulos *et al.* [19] argue, *citizen scientists*, who can measure, upload and compare information and sensor data about their immediate environment on a shared community platform. The uploaded data is annotated with the user's current geographic identifiers, and can be put into geospatial contexts when other users request to download it. Expanding the scope of geospatial tags from environmental sensor data to information providing social clues may create a (voluntary) pathway for residents to move from physical proximity to social compatibility, and from neighbours to friends who live nearby.

5. COLLECTIVES AND NETWORKS

The pertinent patterns and preferences we observed in relation to the participants' social activities were content and network oriented. To illustrate this in more detail, we present the main findings of the residents' feelings towards some of the previous, collective events that are open to all KGUV residents.

One of the main reasons behind collective community activities seems to be the content of the activity; more specifically, the likelihood of participation is based on how relevant and beneficial each activity proves to be for individuals. A case of a community activity, *Movie in the Park*, depicts this well. As the name suggests, this outdoor event took place in the parkland area of KGUV where a film was projected on a large screen for public viewing outdoors. Residents had been well advised of the event prior to its date, and most of the participants were in fact aware of its happening. However, the responses showed a stark difference between those who live with their family members or had already established a circle of friends with other residents and those who did not have such connections. Whereas the former expressed their enthusiasm and appreciation for the event as a great picnic-like event – many with an exclamation of 'it was fantastic!' – the latter expressed general hesitance and scepticism. For instance, one participant said:

> P2: I think I had somewhere to go, but even so, I wouldn't go down there by myself when I could just watch it on my couch. But if I knew more people, say there were ten of us then [I'd come]. And a lot of people here live by themselves ... so [they wouldn't come].

The sentiments expressed here second Hampton and Wellman who found in the *Netville* study that, "Connectivity seems to go to the connected: greater social benefit from the Internet accrues to those already well situated socially" [9]. Another example is participation in – or refusal of – exercise classes offered at the KGUV. Many, especially those who are in their twenties, have expressed that they undertake social activities on a fairly regular basis. One of them was taking a yoga class six times per week. When another participant asked whether they were aware of the yoga classes offered for the residents, the following response came:

> P2: It's probably very different. Mine's professional. She does that full time.

In the above two examples, it is clear that the residents place more importance on the actual content – or the experiential content on an individual level – than on the idealised, nostalgic concept of collective community involvement.

The examples above demonstrate that just as what Anderson explained about imagined political identity of a nation, local urban communities, like nations, can also be considered 'imagined because the members of even the smallest nation [or neighbourhood] will never know most of their fellow-members [or neighbours], meet them, or even hear of them, yet in the minds of each lives the image of their communion' [1]. What needs to be emphasised here is that the 'image' varies from one resident to another, and the construction of the 'image of their communion' occurs through communication, which also extensively differs in terms of its modes, increasingly more than ever before with the rapid advancement of media and communication technology.

It is evident that community members do not wish to befriend or socialise with anyone simply because of their common status as KGUV residents. Therefore, it is crucial to understand that the traditional concept of collective community needs to be re-examined and re-conceptualised particularly with considerations to techno-social contexts of the urban village and of each resident. In this regard, Wellman aptly argues, contemporary social life needs to be understood in terms of 'networked individualism,' that is, 'complex dances of face-to-face encounters, scheduled meetings, two-person telephone calls, emails to one person or several, and broader online discussion among those sharing interests' [23].

Our data analysis led to one possible interpretation of the patterns and forms of sociality that we observed in the KGUV. This view distinguishes between collective and network modes of communication and interaction. Almost all activities sway on a scale between the extremes of collectives and networks, and almost no activity can be strictly categorised as either the one or the other. Table 1 lists some possible qualities on the extreme ends of the scale, so as an example, we could say that activities that resemble collective interaction are *more likely to be* 'public' rather than 'private,' etc. It is the gray matter between the black and white that makes up the majority of activities in the communicative ecology of the KGUV.

Table 1: Collective vs. network interaction

Community as collective	Community as network
focus on the collective	focus on the individual
public	private
one/many-to-many broadcast	peer-to-peer switchboard
formal discussion	informal chat
asynchronous	synchronous
permanent	transitory
hierarchically structured	meshwork of networks

Let's look at the *Movie in the Park* series as an example. Notices on the community board or broadcast via email by the Community Hub announce the event and invite every recipient to attend. The event is formally organised, endorsed and supported by the KGUV Community Association. All these attributes point towards a collective form of activity. In addition, there are – less obvious and less externally visible – network qualities of this event: Residents chat to their friends about the event to consider whether they will attend with them as a group. People arrive with their friends, chat, are introduced to new acquaintances, and socialise in an informal way. These social interactions are synchronous and transitory. Photos may be taken and uploaded online, but formal meeting minutes are not kept.

In our design work we found this distinction between community as collective vs. network useful, as it draws attention to the way different types of communication technology are used for different purposes. Interest-based discussion boards or mailing lists mainly serve a collective purpose, but also enable users to follow up one-on-one and pursue what Wellman calls, 'personalized networking' [23]. Social networking sites such as Facebook are primarily based on a network paradigm of interaction, but the 'Groups' feature enables collectives to form. Exploring the transitions between collectives and networks, our research is interested in ways that global web applications and services can be appropriated for local use so they can serve a hybrid purpose that combines collective interaction for discussion *about* place, and networked interaction for sociability *in* place [7].

6. CONCLUSION

Residents, as nodes within the network of the urban village, have the power and means to more easily and actively contribute to

developing the community than before. Considering each individual has unique ways of understanding and communicating their understanding of the world, a convenient but homogeneous one-size-fits-all approach to designing web applications for communities of place is unlikely to succeed. The evidence provided by our study highlights a need to design for fluid oscillations between collective and network sociality in the urban village. Design solutions that are limited to operate on either end of the scale are less likely to enter the greater communicative ecology of each resident that encompasses both local and global social frameworks. We propose to consider designs that enable users to move between collective features supporting community activism and place making efforts, and network features that raise awareness of and seize the opportunities given by everyday encounters and connections.

This may be the time for a different, a new communitarian agenda. Rather than emphasising the interest believed to be emerging from conventional understandings of community formation over those of the individual, we argue that it is time to acknowledge, appreciate and reap the benefits of the *network* qualities inherent in networked individualism. Paulos *et al.* [19] explore how new mobile technology and Web 2.0 services and applications enable a new paradigm they call *citizen science*. They see this form of participatory urbanism is "empowering collective action through everyday grassroots citizen science across blocks, neighborhoods, cities, and nations." These and other observations provided by social commentators [13, 16, 21] as well as our own observations and analysis let us postulate that both participatory culture and networked individualism are becoming the draught horses of what we call 'neo-communitarianism.' This notion recognises the social utility of web and mobile technology for the benefit of civic engagement, social change and community action.

7. ACKNOWLEDGEMENTS

8. REFERENCES

1. Anderson, B. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso, London, 2006.
2. Bilandzic, M., Foth, M. and De Luca, A. CityFlocks: Designing Social Navigation for Urban Mobile Information Systems. in Marsden, G., Ladeira, I. and Kotzé, P. eds. *Proceedings ACM SIGCHI Designing Interactive Systems (DIS)*, Cape Town, South Africa, 2008, 174-183.
3. Boyd, D.M. and Ellison, N. (eds.). *Social Network Sites. Special issue of the Journal of Computer-Mediated Communication, 13(1)*. Blackwell, Malden, MA, 2007.
4. Choi, J.H.-j. Living in Cyworld: Contextualising Cy-Ties in South Korea. in Bruns, A. and Jacobs, J. eds. *Uses of Blogs*, Peter Lang, New York, 2006.
5. Foth, M. (ed.), *Handbook of Research on Urban Informatics: The Practice and Promise of the Real-Time City*. Information Science Reference, IGI Global, Hershey, PA, 2008, in press.
6. Foth, M. and Adkins, B. A Research Design to Build Effective Partnerships between City Planners, Developers, Government and Urban Neighbourhood Communities. *Journal of Community Informatics*, *2* (2).
7. Foth, M. and Hearn, G. Networked Individualism of Urban Residents: Discovering the communicative ecology in inner-city apartment buildings. *Information, Communication & Society*, *10* (5). 749-772.
8. Foth, M., Odendaal, N. and Hearn, G., The View from Everywhere: Towards an Epistemology for Urbanites. in *4th International Conference on Intellectual Capital, Knowledge Management and Organisational Learning (ICICKM)*, (Cape Town, South Africa, 2007).
9. Hampton, K.N. and Wellman, B. Neighboring in Netville: How the Internet Supports Community and Social Capital in a Wired Suburb. *City and Community*, *2* (4). 277-311.
10. Hearn, G. and Foth, M. (eds.). *Communicative Ecologies. Special issue of the Electronic Journal of Communication, 17(1-2)*. Communication Institute for Online Scholarship, New York, 2007.
11. Heyer, C., Brereton, M. and Viller, S., Cross-channel mobile social software: An empirical study. in *CHI conference*, (Florence, Italy, 2008).
12. Ito, M. and Okabe, D. Everyday Contexts of Camera Phone Use: Steps Towards Technosocial Ethnographic Framework, 2005.
13. Jenkins, H. *Fans, Bloggers, and Gamers: Exploring Participatory Culture*. New York University Press, 2006.
14. Kolbitsch, J. and Maurer, H. The Transformation of the Web: How Emerging Communities Shape the Information we Consume. *Journal of Universal Computer Science*, *12* (2). 187-213.
15. Larsen, J., Axhausen, K.W. and Urry, J. Geographies of Social Networks: Meetings, Travel and Communications. *Mobilities*, *1* (2). 261-283.
16. Leadbeater, C. *We-think: The Power of Mass Creativity*. Profile, London, 2008.
17. Mason, J. Managing kinship over long distances: the significance of 'the visit'. *Social Policy & Society*, *3* (4). 421-429.
18. Paulos, E., Honicky, R. and Hooker, B. Citizen Science: Enabling Participatory Urbanism. in Foth, M. ed. *Handbook of Research on Urban Informatics: The Practice and Promise of the Real-Time City*, IGI Global., Hershey, PA, 2008.
19. Paulos, E., Honicky, R.J. and Hooker, B. Citizen Science: Enabling Participatory Urbanism. in Foth, M. ed. *Urban Informatics: Community Integration and Implementation*, IGI Global, Hershey, PA, 2008.
20. Satchell, C. and Singh, S., The Mobile Phone as a Globalising Artefact. in *HCI International conference*, (Las Vegas, 2005).
21. Shirky, C. *Here Comes Everybody: How digital networks transform our ability to gather and cooperate*. Penguin, 2008.
22. Urry, J. Social networks, travel and talk. *The British Journal of Sociology*, *54* (2). 155-175.
23. Wellman, B. Physical Place and Cyberplace: The Rise of Personalized Networking. *International Journal of Urban and Regional Research*, *25* (2). 227-252.
24. Wellman, B. and Haythornthwaite, C.A. (eds.). *The Internet in Everyday Life*. Blackwell, Oxford, UK, 2002.