(Re)Negotiating Homeless Identity through Technology-Mediated Social Interaction

Research-in-Progress

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Abstract

Prior research has explored homelessness and barriers to accessing digital technology. Our study will build on this evidence base by moving beyond a discussion of what technology is used, to better understand how these technologies are used, and the content and nature of communicative practices within homeless communities. This will be done by drawing together two important streams of homelessness research. The first stream focuses on the importance of connectedness for homeless persons. The second stream concentrates on the importance of identity for homeless persons, recognizing the negative impact of homelessness on an individual’s self-concept. Through the lens of boundary objects theory, technology-mediated social interaction will be viewed as providing a safe environment where homeless persons and service providers can develop mutual respect. The insights gathered will inform future interventions that aim to facilitate better social interaction among homeless persons, non-homeless persons, and the formal institutions supporting the homeless.

Keywords: Technology-mediated social interaction, boundary objects, homelessness, non-profit

Introduction

Homelessness has emerged as an important social and political issue for governments around the world in recent years. The scale of this problem is illustrated by Homelessness Australia (2014), who assert that 1 in 200 people (or 0.5% of the population) in Australia are homeless on any given night. The Australian Bureau of Statistics defines homelessness as “when a person does not have suitable accommodation alternatives.” Within this context, a person would be homeless if they are living in a dwelling that is inadequate, have no tenure or their initial tenure is short and not extendable, or they do not have control or access to space for social relations (ABS 2012). From this definition, we can see that homelessness is more than the absence of a place to sleep.

Chamberlain and MacKenzie’s research (2008) supports this broad definition of homelessness, identifying three distinct classes of homelessness. They refer to primary homelessness as someone living without conventional accommodation (e.g., sleeping ‘rough’, in tents, in cars, or in makeshift temporary shelters). Secondary homelessness refers to those who move frequently from one form of accommodation to another (e.g., emergency accommodation and those living temporarily with other households, for a period of 12 weeks or less), and tertiary homelessness refers to those who live in boarding houses on a medium to long-term basis for a period of 13 weeks or more.

Using these classes, the National Centre for Social and Economic Modeling (NATSEM) recently undertook a national geographical study of homelessness risk in Australia. Their research revealed that,
despite above average income and low unemployment, homelessness in Canberra was the second highest in the country (D'Souza et al. 2013). The report suggests that the same factors contributing to economic prosperity also create a barrier for those at the fringe of society, contributing to a high cost of living and rents that are higher on average than either Sydney or Melbourne. In addition to established structural factors such as housing and employment, and well recognized personal factors such as family breakdown, substance abuse and mental health, the NATSEM report highlights the unique role that social networks play in both reducing the risk of homelessness and contributing to continued homelessness. However, even though the importance of this issue was recognized, it was not included within their modeling due to difficulties measuring the impact of social connectedness.

By studying the use of technology-mediated social interaction among homeless persons through the lens of boundary objects theory (Star and Griesemer 1989), we seek to better appreciate how homeless identify is negotiated, and importantly, how this identity influences engagement with support services. The study will proceed in partnership with Connections ACT, the peak provider of homeless support services in the Australian Capital Territory (ACT), the territory within which the Australian capital city of Canberra is located. Connections ACT currently operates First Point - a central intake service for homeless persons in the ACT, and CanFaCS - a service for fathers and children who are homeless or at risk of homelessness. The managers of Connections ACT have selected BitCloud as their trusted cloud provider, hosting applications such as a SQL database called DCR (Daily Capacity Report) for tracking accommodation and outreach availability for homeless clients. The Australian Federal Government has mandated Infoxchange to host a SQL database called SHIP (Specialist Homelessness Information Platform) for the regulatory collection and reporting of demographic homeless data by service providers. While these databases and applications support the work of Connections ACT staff, there has been minimal investigative penetration into the communicative practices of the homeless. Through Connections ACT, both First Point and CanFaCS will contribute to the research project and are expected to benefit significantly from the research findings while the researchers will produce results of a more theoretical nature for the research community.

**Literature Review**

Our study integrates two important streams of homelessness research. The first stream builds on existing work which examines the important role that information technology plays in maintaining connections for homeless persons (Goodwin-Smith and Myatt 2013). This research emphasizes, among other things, the importance of electronic connectedness for homeless people in providing access to friends, family, employment, services, and housing options (Eyrich-Garg 2010; Rice et al. 2011). While prior research establishes that connectedness is vital to homeless persons, there are inconsistencies and a lack of clarification around how homeless persons connect electronically. Our study will build on this evidence base by moving beyond a discussion of what technology is used, to a better understanding of how these technologies are used, and in particular, the content and nature of communicative practices within homeless communities.

The second stream recognizes that homelessness involves much more than not having a place to live. Individuals often lose their sense of identity, self-worth through homelessness (Parsell 2011). According to Cohen and Wagner (1992), homeless persons are stereotypically portrayed as passive, lazy, disaffiliated, and disempowered. By extension, identity is a person's subjective sense of his or her situation, which can be quite different from another person's perceptions (Boydell et al. 2000). Erickson (1995) notes that homeless persons frequently face the dilemma of choosing between acting in accordance with their values or in accordance with the expectations of powerful others. Snow and Anderson's (1993) ethnographical work on homeless persons highlights this tension, arguing that we need to better support the homeless to negotiate new identities.

To integrate these research streams, our research will examine the role of technology-mediated social interaction as a boundary object in creating shared understanding, tolerance and empathy between homeless persons, non-homeless persons, and formal institutions engaged in the provision of services to homeless persons. Through the analytical framework of boundary objects theory (Star and Griesemer 1989), technology-mediated social interaction can be viewed as providing a common platform (a boundary object) where different stakeholders can come together in a safe, anonymous and non-
threatening environment to break down stigmatism, resolve misconceptions, and develop a lingua franca (common language and understanding) while maintaining identity across them. Furthermore, we will explore whether changes in technology-mediated social interaction as a boundary object facilitates changes in the identities of homeless persons.

**Technology-Mediated Social Interaction and Homeless Identity**

The world over, billions of people participate in online social activities. Already usage of social technologies exceeds predictions: YouTube, Wikipedia, FaceBook, Twitter, Instagram, LinkedIn, and other social networking sites are expected to continue to grow exponentially. Mobile phones, text messaging, and mobile versions of Web services will soon exceed three billion users across the world. Billions of people contribute knowledge and opinions through wikis, discussion forums, and blog communities, while others build collective intelligence by tagging photos, rating movies, reviewing hotels and restaurants, commenting on political events, tracking celebrities, and getting updates on emergency situations worldwide (Preece and Shneiderman 2009).

Within this socially-connected world, a mobile phone is fundamental to social participation, community inclusion and civic identity. A recent Australian study has shown that a high level of connectivity exists in the homeless community: a mobile phone with Internet access helps to keep homeless persons connected with family and friends, and facilitates access to support services and medical assistance (Humphry 2014). Yet for this group, staying connected is a constant struggle: the expense of a mobile phone, the affordability and availability of power and Internet services being a ‘sizable proportion of a user’s income’ (Humphry 2014, p. 47). Substantial difficulties are related to the circumstances of homelessness with some segments of the homeless community such as mature male adults, who are single and experiencing long-term homelessness, being the most likely to be without a mobile phone and the Internet. These problems are exacerbated by the lack of a secure and stable home (Humphry 2014).

Snow and Anderson (1993) report that homeless persons are often embedded within sophisticated social networks of other homeless persons, and that these networks provide a stable, supportive and non-stigmatizing environment that can act as a deterrent to reintegration. In a more recent Australian study, Parsell (2011) argues that while homeless persons are ascribed with a homeless identity, they do, in fact, have diverse aspects in the way elements of self and the experience of homelessness is enacted. We will explore the role of homeless identity, and examine the impact that technology-mediated social interaction plays in reinforcing this identity. To date, no comparative research has examined whether similar support structures exist within technology-mediated social networks, and consequently, whether these virtual social networks have a positive or negative impact on homelessness.

Preliminary findings suggest important contributions to practice and theory. In terms of practical outcomes, the proposed research is expected to contribute to the Federal Government objective to "build the research evidence base for effective policy response to homelessness" and to develop "the best practice models which can be promoted and replicated to enhance existing homelessness policies and programs" (Australian Government Department of Social Services 2014, p.2). This includes design principles associated with social media technology appropriate for use by homeless persons. Theoretical contribution will include extending existing knowledge, especially in the domain of boundary objects theory and homeless identity.

**Boundary Objects Theory**

Star and Griesemer (1989, p.393) define boundary objects as

... objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual-site use. They may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation. The creation and management of boundary objects is key in developing and maintaining coherence across intersecting social worlds.
The seminal paper by Star and Griesemer (1989) draws on scientific study in the natural history world, classifying boundary objects as repositories (library or museum), ideal types (diagram or map or atlas), coincident boundaries (maps within which different internal features may be represented), and standardized forms (methods of communications across dispersed work groups). The boundary nature of objects is reflected by the fact that they are simultaneously abstract or concrete (Star and Griesemer 1989, p.408). As Star and Griesemer (1989, p. 411-412) explain

... people who inhabit more than one social world – marginal people – face an analogous situation [to non-local natural science specimens]. The strategies employed by marginal people to manage their identities provide a provocative source of metaphors for understanding objects with multiple memberships. People resolve problems of marginality in a variety of ways: by passing on one side or another, denying one side, oscillating between worlds, or by forming a new social world composed of others like themselves. The objects thus come to form a common boundary between worlds by inhabiting them both simultaneously.

Several information systems studies have expanded insights into boundary objects, especially in an organizational setting. Gasson (2006) applied boundary objects theory to IS development projects while Gal et al. (2008) used boundary objects theory in the context of 3D modelling technologies in the architecture, engineering and construction industry. The study by Gal et al. (2008) found that boundary objects such as conceptual or physical artefacts facilitate cross-organizational communication and organizational identities, and that changes in boundary objects enable respective changes (in cross-organizational communication and organizational identities). The processes of organizational change and its implication, specifically, “changing identities and infrastructures associated with dynamic boundary objects” have been alluded to but not been well explored (Gal et al. 2008, p. 293).

Much is to be gleaned from the following literature on the nature of boundaries of organization and groups and their relationships. Lamont and Molnár (2002) contend that the study of boundaries as relational processes is important for understanding (a) social and collective identity, (b) class, ethnic/racial, and gender/sex inequality, (c) professions, knowledge, and science, and (d) communities, national identities, and spatial boundaries. By focusing on the relationship between social and symbolic boundaries, cultural mechanisms for the production of boundaries, difference and hybridity, cultural membership and group classification, Lamont and Molnár (2002) are able to conceptualize boundaries as symbolic borders that have conceptual distinctions. Social actors construct, deconstruct and negotiate the boundaries of the community and understand these symbolic and cultural distinctions through categorizing groups of people, practices, time and space. By examining these it is possible to “capture the dynamic dimensions of social relations, as groups compete in the production, diffusion, and institutionalization of alternative systems and principles of classifications” (Lamont and Molnár 2002, p. 168).

Hernes (2004) propose a two-dimensional framework for analyzing boundaries. Dimension one focuses on the kinds of processes that a boundary represents (i.e., physical, social and mental boundaries). Physical boundaries are explicit processes and include buildings and formal rules; social boundaries are manifested through personal identity and community norms that tie social groups together; and mental boundaries reflect core ideas and beliefs central to organizations and social groups. Dimension two considers the effects that these different kinds of boundaries have on the organization or social group (boundaries as ordering agents, distinctions and thresholds).

Levina and Vaast (2005) contend that boundary objects-in-use have a common identity in practice with three possible conditions for their emergence: (1) For artefacts to acquire a local usefulness, agents must use and make sense of them in the context of each field of practice; (2) To acquire a common identity, they have to stem from a shared symbolic capital coming from a joint field within which agents jointly recognize and value the artefact; and (3) To establish the local usefulness of boundary objects-in-use and to establish their common identity, organizations rely on boundary spanners-in-practice.

Lee (2007, p. 308) argues that artefacts can be used to “push boundaries rather than merely sailing across them”. Through advanced conceptualization of boundary objects, Lee (2007) identifies five types of boundary negotiation artefacts: (1) Self-explanation artefacts used privately to support for learning, recording, organizing, recall, and reflection (e.g., notes, sketches, and journals); (2) Inclusion artefacts used for developing alliances with relevant communities of practice; (3) Compilation artefacts applied to
cultivating shared meaning; (4) structuring artefacts employed to coordinate media and understand particularly when conflicts arise between two communities of practice; and (5) borrowed artefacts that are appropriated from one community to the other.

Through multiple conceptual lenses of boundary objects theory, we will view technology-mediated social interaction as providing a platform (boundary object) where homeless persons, non-homeless persons and service providers can come together in a safe, anonymous and non-threatening environment to breakdown stigmatism, resolve misconceptions, and develop mutual respect.

**Proposed Research Approach**

The homelessness problem in Canberra remains despite substantial investments by the Federal and ACT Governments. Internal data available from *Connections ACT* suggests that persistent homelessness is isolated to a very small proportion of the ACT homeless population (around 14%). *Connections ACT* embraces the principle that homelessness is a social justice issue: social systems are failing to support and sustain an individual’s choice of independent living. For example, even when accommodation is made available, some homeless persons choose to continue to sleep ‘rough’. This suggests, despite best efforts, the existence of a possible misalignment between services provided and the needs of homeless persons.

**Stage 1: Pilot Phase**

To provide an informed foundation for the proposed research, a pilot study was undertaken in partnership with *Connections ACT* in order to understand how service providers operating in the homelessness sector use information systems to service the needs of homeless persons.

<table>
<thead>
<tr>
<th><strong>Homeless Persons</strong></th>
<th>Task-oriented</th>
<th>Information-oriented</th>
<th><strong>Service Providers</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visual design:</strong></td>
<td><a href="#">appropriate graphics, tailored to needs of individuals and community.</a></td>
<td><strong>Visual Design</strong></td>
<td><a href="#">Visual design:</a> interface needs to comply with organizational and government styles.</td>
</tr>
<tr>
<td><strong>Interface design:</strong></td>
<td><a href="#">interactive, experiential, task driven, journey focused.</a></td>
<td><strong>Interface</strong></td>
<td><a href="#">Navigation design:</a> standard menus, search, and footer.</td>
</tr>
<tr>
<td><strong>Information design:</strong></td>
<td><a href="#">less text, appropriate literacy/numeracy.</a></td>
<td><strong>Navigation</strong></td>
<td><em><a href="#">Information design:</a> HTML and CSS need to comply with organizational and government standards.]</em></td>
</tr>
<tr>
<td><strong>Interaction design:</strong></td>
<td><a href="#">users involved in the design process, patterns used to codify design options and enhance understanding among stakeholders.</a></td>
<td><strong>Information Design</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Functional specification:</strong></td>
<td><a href="#">accommodation search tools, health/support services, networking.</a></td>
<td><strong>Information Architecture</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Application objective:</strong></td>
<td><a href="#">access support services, facilitate communication.</a></td>
<td><strong>Content Requirement</strong></td>
<td></td>
</tr>
<tr>
<td><strong>User needs:</strong></td>
<td><a href="#">meet daily obligations, enhance social networking, improve access to housing.</a></td>
<td><strong>Application Objectives</strong></td>
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</tr>
</tbody>
</table>

Table 1. Summary of information system requirements (adapted from Garrett 2003)
The pilot work included a comprehensive review of the academic and practitioner literature in the areas of homelessness and information technology usage. The key findings of this pilot research are presented above (see Table 1). This synthesis uses Garrett’s (2003) user-centered information systems framework to highlight the task-orientation of users and the information-orientation of service providers, and to emphasize the key considerations of stakeholders regarding information system design and usage in the homelessness service setting.

The next stages of the project will gather insights to guide homeless service providers on how technology-mediated social interaction can be used to better engage with homeless persons, inform more appropriate information systems design, and enrich service delivery programs for the homeless.

**Stage 2: Exploratory Phase**

To better appreciate technology-mediated social interaction, this project will examine communicative patterns within existing social media, and conduct an ethnographical study of homeless persons’ engagement with such technological devices. Little effort has been made to date, to understand the role that technology-mediated social interaction plays in relation to homeless identity. Our study will address this by moving beyond a simple examination of homeless persons’ use of mobile technologies, to uncover the communicative patterns embedded within social exchanges that frame discourse and reinforce identity. Campbell and Cecez-Kecmanovic’s (2011) communicative practices framework will be used to interrogate social data, such as Twitter and Facebook, produced by homeless persons to understand the way that they interact, exchange ideas, and construct identity in technology-mediated contexts.

The ethnographic study will necessitate in-depth interviewing and observation of a sample of homeless persons identified by Connections ACT as suitable participants for the study. Guideline questions will be developed in consultation with Connections ACT. Ethics approval will be sought from the university and the approval of each participant will be obtained prior to each interview. All interviews will be recorded and transcribed verbatim. Participants will be de-identified and the information obtained will be treated confidentially and sensitively. Weick et al.’s (2005) sense-making framework will guide our interpretation of interview and observational data collected. This framework advocates that sensemaking occurs at the inter-subjective level (social), extra-subjective level (cultural), intra-subjective level (individual), and generic-subjective level (collective). It is at this point that boundary objects theory will be utilized to most effect, providing a high-level theory within which to frame the study. This approach to technology as a tool for sensemaking rather than information sharing distinguishes our work from prior studies examining the role of ICT use within homeless populations. Holistically, this approach will provide a detailed case study of how technology-mediated social interaction within the ACT homeless community can be used to inform more effective service delivery.

**Stage 3: Collaborative Tool Development Phase**

Analysis of the data from Stage 2 will inform the design and development of a new collaborative social networking tool. Guided by Jones and Gregor’s (2007) principles for information systems design and Keating’s work on complex open service systems and service design (Keating et al. 2013), this phase proposes to design and build a Web-based tool for promoting social connectedness among homeless persons, non-homeless persons, and formal institutions which deliver services to homeless persons. Evaluative processes will be embedded in this phase to ensure stakeholders’ needs are being met. This stage of the project will be influenced by action design research (ADR), a contemporary approach from Sein et al. (2011) that draws on action research and design science. ADR aims at designing and building innovative technical artefacts interactively in an organizational setting, valuing both organizational relevance and technological rigor. This socio-technical approach takes place through a predefined reflexive process to address a problem-solving situation while stakeholders learn from the intervention. Underlying ADR is a strong reliance on review through a cycle of building, intervention and evaluation with the intention of extending design knowledge (Sein et al. 2011). Furthermore, in this final stage, the researchers will contemplate the inclusion of a suite of Web-based analytic and dashboard visualization tools to facilitate the interpretation of data collected using the new collaborative tool.
Conclusion

Through the examination of discourse within existing technology-mediated social interactions, and an ethnographic study of how homeless persons in Canberra use social technologies, our research will seek to build new knowledge about how communicative practices of homeless persons are influenced by social, cultural, individual and collective actions within these technology-mediated environments, and importantly, how these interactions impact on homeless identity and engagement with support services.

The insights gathered will inform future interventions that aim to facilitate better social interaction among homeless persons, non-homeless persons, and the formal institutions supporting the homeless. Our study responds to a recent observation by MacKrell and van den Boogaard (2012) in the homelessness setting that highlight the difficulty that not-for-profit based service providers have in responding to emerging evidence and new technology, and the call by Richard et al. (2012) for managers to develop better insight around the potential of technology to drive service delivery improvement for the homeless.

References


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