

Workshop Position Paper: Understanding space, place and 'community'

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Introduction

"Locality and community are complex productions that occur at the intersections of translocal flows of people, technologies, media, and resources of various kinds..." (Mynatt, 1998)

"The design of community networks can support positive values in this complicated world, but only so long as the designers understand what they are getting into." (Agré, 1999)

This position paper is concerned with interdisciplinary notions of space and place and their nuanced interaction with ideas about 'community' and, in particular, the extent to which 'communities' might be supported by different kinds of technological intervention. In this paper we discuss the ongoing CASIDE Project (www.caside.lancs.ac.uk) and the interpolation of situated displays in the places inhabited by a particular community. The central aim of CASIDE is to understand the way in which the physical placement and design of networked displays in semi-wild settings influences and facilitates coordination and community. This understanding will inform the development of suitable guidelines and methods for the design of situated displays both within and beyond the lifetime of the project. This research is important because it is clear that nuanced understanding of place and its relationship to community and social practices is required in order to avoid inappropriate deployments of this 'situated' technology. Indeed, fundamental to this notion of 'situated' is the notion of 'place' that Harrison and Dourish (1992) define as "a space which is invested with understandings of behavioural appropriateness, cultural expectations, and so forth."

Undoubtedly the notion of community has a long, complicated and disputed history in social science and it is a commonplace observation that social and economic changes have altered the nature, importance and influence of 'community' (Wellman, 1999). New communications technologies allowing for the use and maintenance of a dispersed social network and 'community' may have little to do with the individual's geographical location, as an intriguing aspect of what has been termed 'time-space distantiating' (Urry, 1994). In this view community is an achieved social construct of mutual ties, orientations and obligations. Thus, while the spatial and temporal character of community may differ and change, small scale social groupings of various kinds remain crucial to social life in various ways. These social groupings have always been produced in the face of shifting and interconnected social, geographical and technical relations and remain a crucial instantiation of community.

Technology has always been involved in the production/maintenance etc of community. The notion of 'technosociality' developed by Bijker (1995) refers to this linkage of technical and social systems and the ability of technology to reshape and redefine how people see themselves. Technology can reshape notions of space and proximity and thus notions of the 'local'; community boundaries etc. Such 'spanning technologies' (Kern 1993) have led to reconceptualisations of time and space, and what it means to be local, connected, and so forth. However, there is no single, or obvious, outcome of these technologies in terms of community; they can encourage, fragment or reinforce community. The end product is emergent in the interaction between social practices and technology. It appears to be dependent on the interaction between the combination of technologies (and their affordances) and particular communities (and their dynamics).

One example of recent research to have focussed on the ways in which situated digital displays can be used to support and foster small communities is the Notification Collage (NC) system (Greenberg, 2000). This groupware system developed and evaluated by a small research group at the University of Calgary enables distributed and co-located colleagues to post media elements, e.g. sticky notes or video elements, onto a real-time collaborative surface in the form of a large display in a public setting. A similar system to NC is the 'Screen Saver' part of the "What's Happening" system (Qiang, 2002). This system also utilises a large screen display but to display collages of relevant web-pages in an aesthetically sensitive way in order to support a sense of community across a geographically dispersed college of computing at the Georgia Institute of Technology. As part of their work on the Dynamo multi-user situated display system (Brignull, 2003), Brignull and Rogers discuss the resistance of the public to participate in community activities supported by large displays situated in public areas due, in particular, to social embarrassment. The authors also consider how groups of people socialize around large public displays and enter into and out of engagement with such displays.

What emerges from the examination of such technology enhanced or facilitated communities (Mynatt, 1997) etc.) is a set of design recommendations for creating and sustaining such communities, based on how such communities exhibit a variety of interaction styles and rhythms; the importance of boundaries to sustain some notion of belonging or membership of the group and the strong relationship between the online community and real world activities. One

important finding (in terms of our understanding of such communities) was that these groups, and this form of interaction, were usually only *part* of someone's support network, for online interactions frequently produced face-to-face and telephone contact (Nardi's notion of 'outeraction'). Consequently the impact of technology on peoples' lives was not extreme and had not fundamentally changed their relationships with other people. Instead, what had happened was that people were *incorporating* the technology into their lives, rather than finding it fundamentally *changing* their lives. Although, even this appropriation depended on the specific character of both the technology and the context of its deployment to some extent. Indeed, other examples have demonstrated more fundamental transformations of social activity, such as people who manage online friendships with numbers of people far exceeding those we are capable of managing in face-to-face life. It is a commonplace understanding in design that the affordances of a physical setting and physical artefacts and a correspondingly technology-mediated setting and technical artefacts are drastically different and (may) require different actions from participants in order to accomplish the same goals. Because the affordances are different, social practices shift to accommodate the new technology and the technology is, in turn, modified, tailored, or used (often in unanticipated ways), to accommodate the social practice it is intended to support. Through these processes of appropriation and mutual adjustment, technology and social practices can be said to be co-produced.

The interest of the CASIDE project is in exactly how and in what ways the technology gets used and adapted – or 'innofused' and 'domesticated' (Fleck,1998). That is, how it is made "at home in the world that already has whatever organisation it has" (Sacks,1992). We are interested in identifying the important global properties or factors that shape general adoption and use; looking at issues of reliability (issues of trust and experience); explicitness (the tension between trust and privacy); and coordinating and reconciling information needs and resources. One overall thrust of CASIDE is then to think about how technological artefacts as situated displays can mesh and integrate with other devices. We are interested in the relationship between technology and community, and the extent to which the provision of various technologies or functionalities through a situated display may prove useful in promoting or 'affording' some sense of community. This goes beyond Schneiderman's software usability features of consistency, controllability and predictability to emphasise 'affordances' (Anderson,1993).

Understanding technological interventions into 'community'

What issues of 'space' and 'place' seem important for understanding technological interventions into 'community'. Mynatt *et al.* (1998) identify three simple 'defining features' of community, essential to design. Currently the following social and communal issues appear important for our research as a focus for design and technological intervention:

Boundaries: 'Community' is based on a bounded and relatively small-scale set of relationships. However, the boundaries of community are not just spatial but also relational, social, technological, institutional etc.. This therefore incorporates some notion of 'membership', (and of awareness of membership) of inclusion and exclusion as well as ideas about apprenticeship, of 'learning the ropes' to become a member (or a 'stronger' member) of the community.

We are currently working with the climbing community at Lancaster University and it is interesting to observe the different boundaries that occur there. For example, at one level, the 'climbing club' society has a set of paying members and technical facilities to support this community include a private bulletin board service etc. But the 'climbing' community at the University is certainly wider than the society membership and this wider community of climbers come together at various places such as the University Climbing wall and local climbing venues. Similarly, the wider community will coordinate actions, e.g. selling climbing gear, using, for example, the notice board situated just outside the University Climbing wall. To some extent the climbing wall functions for the climbing community rather like a church building does to a local (denominational) Christian community. Whilst members of the church community would be eager to point out that the church community is not defined by the building, it is still in some ways definitional and certainly symbolic of the community. Similarly the climbing community is not simply the collection of all people who do, or have visited the wall, and yet it is more than 'just' a meeting place. For those outside or at the edge of the community wall, like the church, is a clear point of contact with the community and hence the importance of the threshold nature of the notice board outside the wall facing passers-by and the tentative visitor rather than inside for members only.

Relationships: 'Community' is based on meaningful and multi-layered relationships that are significant and persistent for members. These relations become a mutual source of orientation and definition of appropriate and inappropriate behaviours and values. In this way the 'community' – co-located or online – establishes expectations and responsibilities. This will include notions of reciprocity and commitment as well as shared values and practices. So, for example, communities have a strong sense of periodicity that is established through a variety of communal rhythms and patterns that will vary according to the community. This in turn bounds how activity and time are recognised and made meaningful in the community e.g. - appropriate response times to communications. Such a characteristic allows for the perception of routine and exceptions and the development of trust.

Again with the climbing club, at one level the 'climbing year' is divided for many climbers into two halves: the 'wall' half (during which the climbing wall is where most climbing takes place because it is generally too cold/wet/dark to climb outside) and the 'outside' half (during which time the preference is for climbing outside). Interesting during this

latter period the community can alter due to the fact that (certainly around Lancaster) there is a wide choice of possible outside venues and therefore less chance of climbers bumping into each other compared with the winter period when many climbers tend to congregate at the climbing wall. Consequently, many climbers will only meet each other during the 'wall' half of the year and during the 'outside' half will only climb with their 'close' climbing partners. The relationship is also interesting here in terms of trust. At the climbing wall, the climbing that takes place is not perceived as dangerous (there are large crash mats and the climbing does not take place many feet above these). However, when climbing outside the risks are far greater and team work and skill are required to be done safely. As a result, climbers typically only climb outdoors with partners they know and trust. It is interesting that this pattern of winters gathered in a place and summers dispersed in small close knit groups mirrors tribal behaviour of semi-nomadic people with wintering gathering places and summer hunting parties, or even the mythic knights riding errant from the roundtable.

We have yet to understand fully the role of the notice board at the wall in the 'outside' season. Although the wall is not the place to meet people do members visit it for the notice board itself? That is, is the notice board more important during the 'outside' half when there are fewer opportunities for unplanned face-to-face meetings, or less important because it is not visited? If, as we suspect, it is the latter, this may be a point for technical aids, simply replicating notice board electronically via the web, or more radically perhaps using some form of 'geo-notes' so that climbers at a particular outside location can see notes left by other community members at the same location. A common problem with such systems is that too few people visit the same location to create critical mass. However, popular climbing locations are places where those with similar interests and skill levels visit and revisit but not necessarily at the same time. There are already often physical signs of past visitors, the scratching of a rock or protection left on the face, but technological approaches may be able to excite further feelings and glimpses of the 'absent presence' (Dix et al., 2004) of those who have been in the same place in the past.

Change: Communities are dynamic and are always under development – as Woody Allen comments in the film 'Annie Hall', like the shark they must move on or die – and similarly the community is expected to endure. This might, for example, incorporate the provision of some sense of history through an archive as well as an orientation towards development and change. This includes the ability to keep records of various interactions where text or pictures or video are preserved and made available as a resource.

With the climbing community the sense of history is certainly a key factor. Climbing guidebooks typically spend many pages describing which climbers made the first ascents of particular climbs and many also recite the antics that took place during the first ascent. Similarly guidebooks used by the community include pictures of climbers on climbs often to mark/record historical events such as the route's first ascent. In addition, climbers will annotate these guidebooks to reflect when they climbed one of the routes and which climber they climbed the routes with.

Effectively, the affordances of the paper guidebook coupled with the values held by the climbing community enable guidebooks to become over time highly personalised and cherished artefacts.

A more subtle affordance of the paper guidebook is the fact that it can reflect the climbers experience due to the guide's physical appearance - the more climbers use a guidebook the more physically damaged the guidebook is likely to become (especially given the likelihood of the guide being exposed to the elements) but this will only serve to make the guidebook more cherished - and can in effect strengthen the climbers status in a community (certainly by those new to the community who are likely to 'look up to' and even view as heroes or heroines members with a wide climbing experience).

Climbers will also use guidebooks as a kind of prop to be passed round during social activities (e.g. at the pub or cafe after a climb) enabling (often exaggerated) climbing tales to be recounted and exchanged. It will be interesting to explore the extent to which technological approaches such as 'blogs' are able to support or complement the same functions as the guidebook; can a wall display or shared images on phones or PDAs can act as props for reminiscence in the same way? It may be that electronic technologies can never have the same sense of emotional 'past' as the physical guidebook. However, previous experience with virtual Christmas crackers, which similarly may seem to have their affective impact tied to their physical form, have shown that people do have strong emotional responses to simple web pages (Dix 2003).

One would certainly expect to see a certain generational gap here; the University Climbing Club has both staff and student members and student both vary in age and technical background. Many of the older climbers have 'grown up' with the paper guidebook and the change to more 'modern' approaches for recording route history etc. can be seen as something dangerous to 'their' community.

Our work with the University climbing club will be to try to capture the patterns with which they maintain community and to develop situated display based technologies that allow the 'new technologies' owned by many of this fairly young climbing community, e.g. video phones etc., to be used in a way that helps the community function, i.e. supporting fun, coordination, competitiveness, aspirations etc. Will the more physical nature of a situated wall display be 'open' to the older or less technically-orientated members of the community?

Concluding Remarks

But what *specific* aspects of the technology are important? – why might they work in developing and facilitating ‘community’? This, of course, is the central research question for the CASIDE and other projects but at present, and prior to the research, the following merit some attention:

- membership - recognisable members and membership categories, allied with recognisable boundaries
- identity and representation - how people can represent themselves and manage their 'identities'
- managing spatial relations - need to manage spatial relations to integrate the real and the virtual
- rhythms - the highly predictable rhythm of everyday activity sets the grounds for shared expectations and comprehension of behaviour - successful communities carry intelligible rhythms of interaction and awareness - which vary according to the community and is linked to issues of awareness and 'sense of place'.
- community development - the community should be able to reflect and learn from experience, to develop 'robust sociality'
- history and change - the ability to develop a history through recording and archiving various interactions

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