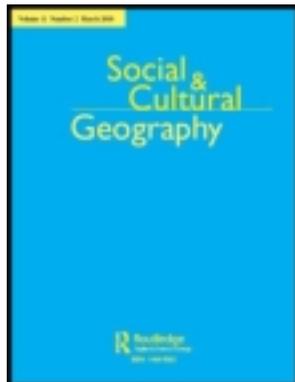


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Changing spaces: the role of the internet in shaping Deaf geographies

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While there is a burgeoning literature on the role of ICT in the creation of new forms of social networks, dubbed on-line communities, much less attention has been paid to the complex set of relationships which are emerging between some off-line communities and the internet, and in particular to some of the new spatialities that are emerging as a result of community-based ICT practices. This paper develops this work by focusing on the example of 'the Deaf community'. In reflecting on the implications of the communication possibilities offered by the internet for the production of Deaf space we begin by outlining the history of development of the off-line Deaf community in the UK and by reflecting on the concept of 'community'. The paper then goes on to explore how Deaf people are using the internet to communicate with each other and, in doing so, to reflect upon how the internet is contributing to the re-spatialisation and scaling-up of this community while also having other unanticipated effects on Deaf people's mobilities and the space of the Deaf club.

Key words: internet, community, spatiality, mobility, Deaf.

Introduction

The proportion of internet users has increased drastically over the last decade such that social differences between users in modern Western societies have narrowed so that the internet is now, in effect, a mass medium (Willis and Tranter 2006). Selwyn (2004) points out that questions about what people actually *do* with information and communication technologies (ICT) in Western societies are now more significant than questions of access to them.

The spread of new technologies has involved the gradual absorption of these artefacts into the life and practices of different social groups (e.g. Holloway and Valentine 2003; Silverstone and Hirsch 1992; Willis and Tranter 2006). Seymour (2005: 203) argues, for example, that it is important to look at ways that people shape and give meaning to their technological experiences and to understand the diverse ways that people experience, apply, interpret and represent technologies that have become part of their lives and how these

practices affect subjectivity, self-identity and social relations.

Much of the work to understand the role that the internet plays in everyday life has been concerned with how people rather than communities develop relationships with technology. While there is a burgeoning literature on the role of ICT in the creation of new forms of social networks, dubbed on-line communities (e.g. Rheingold 1994), much less attention has been paid to the complex set of relationships which are emerging between some off-line *communities* and the internet, and in particular to some of the new spatialities that are emerging as a result of *community-based* ICT practices.

This paper contributes to emerging debates about the relation between on-line and off-line spaces by focusing on the example of 'the Deaf community'. The Deaf community is a cultural and linguistic minority population with its own unique language—sign language—which has syntax and grammar that is distinct from spoken language. Here, the D of Deaf is capitalised to distinguish this minority group from others with a hearing impairment who identify as disabled (rather than as a linguistic minority), who communicate orally (e.g. lip-reading and speech) rather than through sign language and whose identities and behaviour (as deaf, written with a lowercase d) are not therefore consistent with the practices of Deaf culture (Padden and Humphries 1988). The term D/deaf is used to be inclusive of both forms of identification.

Sign language is a visual, gestural and therefore deeply embodied form of language and consequently face-to-face communication is the essence of Deaf culture. While, oral/aural-based technologies such as the radio and telephone have enabled hearing people to overcome the tyranny of distance, to commu-

nicate both one-to-one and one-to-many, and to develop stretched out social networks, D/deaf people have been historically isolated from such communication opportunities. This has had a profound impact on D/deaf people's educational and economic prospects, social welfare and well-being (Corker 1998; Valentine and Skelton 2003). However, the internet is now revolutionising the way that face-to-face interactions can take place because it supports visual forms of communication (e.g. the use of web cams¹) that, for the first time, make it possible for Deaf people to have synchronous, remote communication with each other in sign language. It also supports more conventional text-based forms of communication (e.g. email) that enable Deaf people to communicate with hearing people and with each other instantly, spontaneously and remotely without requiring these exchanges to be mediated by interpreters, relay services² or delayed by the wait for the postal service. In reflecting on the implications of the communication possibilities offered by the internet for the production of Deaf space we begin by outlining the history of development of the off-line Deaf community in the UK and by reflecting on the concept of 'community'. The paper then goes on to explore how Deaf people are using the internet to communicate with each other and, in doing so, to reflect upon how the internet is contributing to the re-spatialisation and scaling-up of this community while also having other unanticipated effects on Deaf people's mobilities and the space of the Deaf club.

In thinking about the relationship between a community, technology and space, we are influenced by Social Studies of Technology scholars such as John Law (1994) and Bruno Latour (1993). They have been influential in pointing out that we are inextricably entwined with our material surroundings in ways which we are only just beginning to realise. For these

writers, society is produced in and through patterned networks of heterogeneous materials in which neither the properties of humans or non-humans are self-evident, rather they emerge in practice. In other words, in approaching D/deaf people's use of the internet we understand technology and society, and therefore D/deaf people's on-line and off-line worlds, to be mutually constituted.

This paper draws on a research project involving both a scoping survey and qualitative interviews. The first stage involved a national survey of D/deaf and hard-of-hearing people which explored their access to, and use of, the internet, and collected data about the informants' self-identifications and preferred modes of communication. Just under 9 million people in the UK are D/deaf or hard of hearing, of which approximately 50,000 are British Sign Language (BSL) users. In order to reach this diverse population the survey was made available on-line through the research project's website. Information about the survey and how to access it was posted on 20 D/deaf-related websites and this information, as well as hard copies of the survey for non-internet users, were distributed to 174 Deaf clubs/organisations in the UK. A researcher also visited specific Deaf clubs/societies in twelve different cities of the UK where she was able to introduce the survey face-to-face and answer queries about its completion. Given acknowledged low levels of literacy within D/deaf communities as a result of educational disadvantage (Watson, Gregory and Powers 1999) and research fatigue amongst this hard-to-reach group, the response rate of 419 (45 per cent of the respondents were men and 55 per cent women, their ages ranged from 18 to 80) represents a significant evidence base within the field of Deaf studies. Following the analysis of this survey forty-two respondents were recruited to take part in interviews. These interviewees

were purposively selected in relation to the patterns identified from the survey. Care was taken to ensure that low and non-users' views were captured in this process. The interviewees were recruited from across the UK including London (South), Manchester/Liverpool (North West), Bristol (South West), Nottingham/Derby (East Midlands), Walsall (West Midlands), Leeds/Bradford (North). At the time of the research twenty-six of the respondents defined themselves as internet users and sixteen as non-users. However, we recognise the fluidity of these categories: some non-users may become users, some users may abandon this technology, and individuals' actual levels and patterns of usage may vary considerably over time (Seymour 2005).

The interviews were conducted by a hearing researcher fluent in BSL and were audio or video recorded, transcribed and then analysed. Deaf people have often had to use a variety of forms of communication growing up in a hearing society. BSL is a complex gestural language. Rather than acting out words, it involves the three-dimensional use of space in which hand shapes and the speed, direction and type of movements, combined with facial and bodily expressions, are used to convey meanings. Unlike verbal languages that are essentially linear, visual languages can simultaneously convey different pieces of information and layers of meaning (Kyle and Woll 1985). Other sign languages are also used by people with hearing loss/impairments in various language contact situations, including Sign Supported English (SSE) (which was designed to represent English manually) and other forms of sign language which incorporate features of English and BSL. Some deaf people lip-read and speak. The interviews were therefore conducted in the communication mode of each informant's choice. Interpreters were also used to support further some interviewees'

communication needs. This process enabled the research project to capture the views of those with differing levels of confidence at engaging with the hearing world, although it is impossible to fully know how the hearing researcher's identity was read, by each individual informant and how this shaped their relational engagement in the interview process (Rose 1997; Valentine 2002).

Deaf clubs in the UK: spaces of communication and community

The Deaf community has always been a communication-based community. While 'the Deaf community is the first "community of relatedness" to emerge in the disability sphere (Corker 1998: 135)', it is not Deaf people's impairment but rather their shared language—sign language—that provides the powerful affective bond of belonging and collective identity that binds the community together. For people born into Deaf families the Deaf community is commonly part of their heritage but for those born into hearing families they usually find their own way into the Deaf community by learning sign language.

The Deaf community has traditionally been based around a strong network of Deaf clubs which were established in most major UK towns in the nineteenth century. Outlining the history of Deaf clubs, Ladd (2003) describes how many were developed by Missions, and others by Deaf people that were often then taken over by Missions. As such the clubs functioned as Deaf social venues but were commonly run by a hearing management committee. The 'Missioner for the Deaf' [*sic*] was the powerful go-between. By the 1980s the Missioners had all but disappeared, although in some clubs they had evolved into what are variously known as Welfare Officers

or social workers (Ladd 2003). Deaf clubs were traditionally open two or three times a week (for social activities and religious worship) as well as hosting special nights for activities such as trade workshops or drama groups. Most contemporary Deaf clubs now have licensed bars, as well as still supporting various sports (e.g. football teams etc.), leisure and political activities. In addition, they commonly provide space for specialist groups such as women, young people and in some cases hard-of-hearing people to meet, and some run sign language classes (Ladd 2003).

These spaces have historically been important for the transmission of Deaf culture and values (Ladd 1998, 2003). Deaf clubs created space where people could escape the oppressive oralism of hearing society (Stevens 2001) and develop an active sense of identity, culture and belonging predicated on their shared language—sign language (Padden and Humphries 1988). In this sense, Deaf clubs might be conceptualised as sites of resistance (cf. hooks 1990) which provide spaces of withdrawal from hearing mainstream society (Valentine and Skelton 2007). They have traditionally been multi-generational and socially mixed (in terms of class, and gender) spaces akin to those produced by other minority groups such as lesbians and gay men (e.g. Valentine and Skelton 2003). Despite evident social differences, and indeed sometimes tensions, between different groups of members, nonetheless (Taylor and Meherali 1991) Deaf clubs represent important spaces for information exchange, co-operation and mutual support between Deaf people as well as spaces of emotional acceptance where a Deaf identity is a positive and valued identity (Kelly 2003). As such the discourse of 'family' is often used to evoke Deaf clubs in a similar vein to the way that lesbians and gay men describe their communities as 'families of choice' (Corker

1996). Indeed, Ladd (1998, 2000) developed the notion of 'Deafhood' to describe the process by which Deaf people actualise their Deaf identity, which has some parallels with the lesbian and gay notion of 'coming out'.

There is very little evidence for actual levels of attendance at Deaf clubs, however, Ladd (2003) reports studies conducted in the 1980s by Kyle and Allsop (1982) which found that 58 per cent of their respondents attended the Deaf club once a week or more, and Jackson (1986) who found 86 per cent of those interviewed were current or former members of a Deaf club. Not surprisingly, at the very beginning of the 1990s Kyle (1991) defined the Deaf club as 'absolutely vital to community life'. Part of the strength of Deaf clubs has traditionally lain in the lack of fully equivalent alternatives. While Deaf people have always socialised in other spaces too, Deaf clubs were pivotal in enabling Deaf people to initiate contact with each other in sign language for the first time, to escape discrimination in hearing society, and to communicate information between Deaf people through regional and national Deaf publications which disseminate updates on local club activities. In many senses the Deaf community epitomises many of the characteristics of the traditional, or what Tonnies (1955) termed *gemeinschaft*, community. This is typified by dense webs of social interaction, and an ethos of commonality and mutuality which are founded on regular face-to-face interactions forged through place (i.e. Deaf clubs).

Of course, all of the critiques of the concept of 'community' (e.g. Young 1990) apply to the space of Deaf clubs too. They privilege the ideal of unity—in this case around a Deaf cultural identity and sign language—over difference and therefore, however unintentionally, can generate exclusions. Corker (1996), for example, describes a lack of tolerance

towards some elements of the wider deaf community such as hard-of-hearing and deaf people who are oral communicators and cannot sign. She describes how a Deaf identity is not one that can be just self-ascribed, rather it also requires that a person's behaviour and practices be recognised as consistent with Deaf practices by others as well. She explains: 'The [Deaf] community does not easily tolerate coexistence of diverse elements in the wider deaf community, as evidenced by the difficulty of gaining access to the Deaf community when in a state of transition or ambivalence about Deafness' (Corker 1996: 200). Moreover, the bounded nature of Deaf clubs means that they also fall into another common trap of communities in that they tend to become insular because everyone knows everyone else. This is particularly problematic in Deaf spaces because sign language is a visual language which means that conversations in public places are less private than spoken conversations because they can be seen at a distance and so are more open than those conducted orally (Kelly 2003). Indeed, sign language has strong regional dialects which are in part attributed to the bounded and insular tendencies of Deaf communities.

The internet however has, for the first time, offered Deaf people an alternative way to access Deaf and generic information³ and to communicate with each other in sign language without the necessity to be in the same space at the same time. In this sense it is one of the first technologies (compare for example: hearing aids, cochlear implants) that has not been aimed at normalising Deaf people by 'enabling' them to communicate orally. For example, web pages enable Deaf people to produce an alternative to mainstream on-line content; web cams support remote signing; while email offers Deaf people the advantage of convenience, and control in managing their

own communication. As such, the internet provides a potential opportunity for D/deaf people to escape from some of the limitations of Deaf community space off-line. In the following section we explore the production of new Deaf space on-line and the implications of this for Deaf communities and geographies.

A networked community?

Rheingold (1994) was the first to recognise the potential relationship-creating capacity of the internet. It is now widely acknowledged that ICTs can create novel types of networked relationships which bring together different social groups to form 'new' communities (Kitchin 1998). In particular, this technology has been credited with giving its users greater autonomy to choose their social contacts rather than relying on the co-occurrence of proximity, to bridge multiple social worlds; as well as the ability to maintain dispersed social relationships over distance (Boase, Horrigan, Wellman and Rainie 2006). While Wellman (1999, 2001) has argued that actually this shift from traditional place-based communities towards spatially dispersed networks began amongst the general population before the internet (thanks to other technologies, such as the telephone), and was accelerated by ICT, this was not the case for D/deaf people. As the last section explained, the Deaf community has been relatively spatially determined because of the necessity of face-to-face contact for communication in sign language or lip-reading to take place. As such, the internet has particular meaning for the Deaf community.

For Deaf ICT users the internet has had a profound effect on their ability to develop and maintain 'stretched-out communities'. These new social networks have been realised through the complex intersection of

relationships developed in both off-line and on-line space. In the first instance, the internet facilitates the ability of Deaf people to meet in off-line space by disseminating information about Deaf off-line events (cf. Rheingold 1994). In particular, it has enabled Deaf clubs to promote their activities and events beyond their own local networks and to reach out to those who are geographically isolated from Deaf venues. This has encouraged Deaf people to travel further afield to attend events. Perhaps more importantly, the internet enables Deaf people to sustain the social relationships developed in these off-line spaces beyond these events in ways that were not possible when sign language required physical co-presence and the telephone was the dominant form of remote communication, as these interviewees explain:

It's [internet] allowed Deaf clubs to share information. It makes people more aware of what goes on at the Club, like events. They don't have to make posters and things like that they can just put it on the internet. Maybe people who don't go to the Deaf Club ... they might find events over the internet that they are interested in and they might think 'yeah I'll go to that'. Whereas, if the Deaf Club didn't put its events on the internet people who don't come to the Deaf Club would miss out. (Samuel, 39, Deaf, internet user)

If there's a Deaf event then maybe some people who I meet because they live quite a long way away then we'll ... contact each other via the internet ... and then if there's another Deaf event then we'll kind of see each other and catch up ... So it's kind of like we only meet at Deaf events and our main way of communicating would be through the internet. (Matthew, 22, Deaf, internet user)

D/deaf people are also taking advantage of the potential of ICT to create new on-line

friendship networks in the same way as other internet users (cf. Madge and O'Connor 2006; Mitra 2001; Valentine and Holloway 2002). The internet facilitates the development of social networks without the fixed locations and events provided by Deaf clubs. It offers its own, what Axhausen (2007: 26) has termed 'structures of encounterability', because who is likely to be on-line where, when and with whom can be anticipated with knowledge of the sub-cultural community. For example, the establishment of the 'Deaf UK' website has been particularly important in facilitating the development of on-line friendships between Deaf people geographically dispersed across the UK. As other studies (e.g. Rheingold 1994) have demonstrated these on-line social networks are commonly taken off-line too, materialising in regular but transitory or fluid D/deaf time-spaces (cf. Valentine 1993) as the first of these quotations demonstrates.

I find out about any activity concerning hard of hearing, deaf people. For example, I was emailing a hard of hearing email discussion group ... and occasionally they'll organise social evenings or days where we'll all travel to a certain place ... meet up, it's brilliant for socialising, meeting new people. (Samantha, 47, hard of hearing, internet user)

I can talk to Deaf people ... and we can get a conversation going and it's great, it's fantastic. I've met somebody, a Scottish person ... called Alex and we have a great conversation, he's Deaf as well, so it's great, we can have a good old natter ...

Interviewer: How did you meet him?

I clicked on his photo, I thought oh looks interesting person, so clicked on the photo, sent an email. (Deborah, 37, Deaf, internet user).

This access to wider networks offers D/deaf people the opportunity to sidestep some of the

cultures of surveillance and regulation that can characterise traditional place-based Deaf communities centred on Deaf clubs. In particular, the internet is creating a space on-line for the articulation of identities and differences which are marginalised within Deaf off-line community spaces (Mitra 2001). As this last quotation hinted, with a wider range of social contacts available deaf people are able to escape some of the pressures to conform to some of the Deaf cultural 'norms' described above and to develop more specialised networks. In particular, self-help and support groups have emerged, for example, for deaf people with Usher's syndrome, those who are lesbian and gay, or have a particular faith, as well as hard-of-hearing people. Some of these provide therapeutic roles (cf. Madge and O'Connor 2006; Nettleton et al. 2001), creating a space where people can deal with their anger and frustration at the off-line hearing world and can share negative emotions about being deaf which it is not possible to express in the Deaf community. Such processes also enable some people to become more comfortable identifying as hard of hearing or deaf and in some cases to access Deaf culture without having to risk being rejected at a Deaf club. In this way, the internet is enlarging 'community' for D/deaf and hard-of-hearing people as both a concept and practice as Neil explains in these two extracts from his interview:

There are times when actually all of us [people who have lost their hearing] are monstrously pissed off about that [going deaf and encountering discrimination] ... and it is incredibly fantastic to have someone you can vent at, who is actually not just going to say 'oh I'm so sorry'. But who's actually going to kind of kick you out of it and, but still you know kind of, kind of understand like actually nobody else can ... you know finding people who kind of lost their hearing ... they've

also got a kind of level of shared experience ... kind of empathy, understanding whatever you want to call it. And, and so that kind of self-support type thing is, I think a big issue out on the web ... we kind of inspire each other back into a state of feeling actually quite, quite content about all of this and not being kind of pissed off and angry with the world ... You know there's the kind of hard line Deaf culture people ... there's also ... these much more kind of fluid, flexible communities of people who happen to be deaf or hard of hearing who can now connect very much more easily.

[Later in the interview he went on to explain how connecting with an on-line hard of hearing and deaf community has changed his self-identity] ...

from an identity point of view, I much more readily identify as a severely hard of hearing person ... it's actually made me much more comfortable about identifying as that outside of the on-line community ... I mean there's undoubtedly a huge kind of semi-hidden part of the deaf community of people who ... just don't think of it as part of their identity, they happen to have you know some hearing issue or other, but it's not something they think of as part of what makes them ... Now actually the internet has done quite a lot for making me personally ... feel very much happier about identifying as a deaf person, and because there's so many other people out there who, who do too, and who kind of are giving each other a lot of encouragement to just be who they are ... I think this is very possibly something that's true of a huge number of people, I mean of the ones certainly I've talked to ... we feel a hell of a lot better and you know genuinely, oh pride is a difficult word. I mean it's a very emotive word, but there's, certainly a kind of confidence in, in identifying as, as a deaf person. (Neil, 48, hard of hearing, internet user)

Changing space: ICT and the Deaf club

While the internet is facilitating D/deaf identities and communities on-line at the same time it is perceived to be threatening Deaf community off-line. There is growing evidence that attendance at Deaf clubs in the UK and elsewhere is in decline (e.g. Ladd 2003; Stevens 2001). Prior to the emergence of the internet, Deaf communities were socially embedded in Deaf clubs. The rhythms of the Deaf club dominated Deaf people's weekly routines because this was the main (and for some the only) space where they could communicate in sign language with other Deaf people and access information in their own language. Now both functions can be fulfilled by the internet Deaf ICT users have been liberated from the fixed time/spaces of Deaf clubs as these interviewees explain:

... in the old days ... if there was an event happening ... you'd have to go to the Deaf Club to get your information, which means you'd have to make the effort to go ... you didn't miss Deaf Club much because if you missed Deaf Club it means you missed out on information, and that's why Deaf Club in the olden days was so popular ... However, people now are getting all the information they need through the Net ... and it's affecting Deaf clubs because the number of Deaf clubs have now dramatically decreased. (Jennifer, 26, Deaf, internet user)

I think it has definitely changed the way the community works. I think that the dynamics of the Deaf club is declining because of not having to meet face-to-face to communicate and find out what's been going on. You can just text and email. It's like we are not so separate now from other communities, I suppose. You know, we can go to any pub and we say which one. It doesn't just have to be the Deaf club. (Lisa, 20, Deaf, non-user)

This is not to suggest, however, that the notion of Deaf space *per se* is declining. Rather, the production and nature of Deaf space is changing. First, the space of the Deaf club is evolving. Whereas these have traditionally been multi-generational and socially mixed venues, the advent of the internet is enabling Deaf ICT users to be more socially selective by facilitating their ability to meet and develop affinities with others like themselves on-line and to take these friendships off-line in a range of other spaces (e.g. pubs, homes etc.) (cf. McPherson, Smith-Lovin and Cook 2001). Abandoned by younger ICT-literate Deaf people, Deaf clubs are emerging in practice as more homogenous spaces primarily frequented by the older generation, who for the most part, remain non-users of the internet because they lack the resources, skills or interest to access the technology.

I mean there's not as many young people that meet in my Deaf club nowadays. It's more just the older people which is, you know it's nice in a way because it's a bit like *our* club, but it's a bit sad also because I mean after our—I always think after our generation is the Deaf club going to carry on? Because there's less people coming to the Deaf club nowadays I think because they can meet somewhere else, for example on a Saturday night they will all go to the pub, the young people, as opposed to come to the Deaf club. (Janet, 79, Deaf, non-user)

Second, new forms of Deaf space are being produced. Notably, as the above quotations from both Lisa and Janet hint, Deaf people are materialising their relationships with other sign language users in mainstream everyday spaces such as bars and sports venues. Here, the internet has facilitated D/deaf people's use of the pub in particular, enabling them to arrange face-to-face meetings at these venues, and thus giving individuals the confidence to enter this space

which might otherwise be regarded as an intimidating hearing environment. By performing their identities in these spaces through the use of sign language Deaf people in effect produce parts of these venues as Deaf space, in a similar vein to the way geographers have described lesbians and gay men as 'queering' public space through the public performance of their sexual identities (Bell, Binnie, Cream and Valentine 1994; Valentine 1995). As such, the internet, rather than being set in opposition to, and threatening the vitality of Deaf space, is actually providing a new way to re-vitalise Deaf people's engagement with everyday public space.

Through such practices, ICT is facilitating the growth of Deaf people's action spaces, defined as the 'geography of locations known to a person' (Axhausen 2007: 27). As quotations in the section above have illustrated, the internet is extending Deaf people's networks by enabling them to meet new contacts, many of whom live further afield than their local community. Personal meetings remain essential to the development of social networks (Urry 2000, 2003), particularly for sign language users for whom co-present encounters remain fundamentally crucial for effective embodied and gestural communication. Axhausen (2007) argues that as our on-line social networks expand so too does our awareness of, and visits to, other off-line locations. In other words, our mobilities and our activity spaces grow in line with the geographies of our social networks.

I mean I feel I'm more involved with the Deaf community now than I've ever been in the past. I think well because you know you have lots of Deaf websites you know, so it kind of brought the community more together I would say. You know people were worried that ... it would kind of wipe out Deaf community because we don't need to

meet anymore but it's the same as anything you still need face to face, you still need friends don't you? I mean some people ... they've used the internet and realised there is a Deaf community out there ... so I think sometimes it's encouraged people to join the Deaf community. (Raymond, 59, Deaf, internet user)

I don't think ... that Deaf people are meeting less ... I think a lot of young people obviously they go to the pub. So you know kind of lots of people, older people went to Deaf clubs and things but now it's tend to be more of a kind of pub culture but I think maybe if anything the internet has helped people meet each other even more ... I think it's actually encouraged more face to face communication. (Jacob, 27, Deaf, internet user)

In the case of Deaf people their social networks, mobilities, and activity spaces are being scaled up from a national to an international scale as the internet enables the Deaf community to establish new levels of global connectivity. Sign languages have an advantage over oral languages when it comes to international communication because there are strong grammatical similarities between the 200 sign languages of the world. Gestural languages are also more easily adapted to enable cross-lingual communication than oral languages. This process of blending signs online, alongside email, is facilitating Deaf people to communicate with transnational family members, and to initiate contact and develop friendships with new people in other countries as these interviewees explain:

We've got web cams now and we can use this to communicate by sign and of course if that person's got a different language, we get used to using gesture, a gestural form of language. It's important to learn for us how to communicate like that. I've learnt a bit of international sign language like doing the alphabet on one hand and things like that. And

in the UK at the moment, there's a lot of people coming and living in London that have all these different sign languages from abroad and we're able to pick up and learn from each other and so this is what we can then use on the web cam ... I've met people from France, Sri Lanka, Bangladesh, America, Australia ... a variety of different sign languages involved there, but it hasn't been a problem, because most Deaf people can communicate via a Deaf [web] cam. (Jennifer, 26, Deaf, internet user)

I think the internet is brilliant for Deaf people because [Deaf] people couldn't use the telephone ... like most of my relatives are in America or in India—the only way to contact them was by telephone. That is impossible for me but now [with] the internet they email, they instant messaging. It's made my life a whole lot easier ... it's made us closer because we can communicate ... especially with the ones in America ... I mean, before, you had to write letters and nobody liked writing letters, putting them in the post and waiting a month before you get a reply! (Ahmed, 25, deaf, internet user)

The internet also enables Deaf clubs/groups to develop relationships with their counterparts overseas. This process resonates with Appadurai's (1996) notion of translocality which he used to describe the ways in which emplaced communities become extended as a result of the mobility of their members between particular locations. As such Deaf communities that were once relatively localised are becoming internationalised, developing a sense of communion with other places without geographical propinquity. Ladd (2003) suggests that Deaf clubs might harness enthusiasm for the internet further by developing video-conferencing technology to link up Deaf clubs nation and worldwide. Below, Jennifer describes the international exchange networks that have been set up between Deaf

club football teams, while Samuel describes the more general pattern of Deaf community connectivity.

My partner plays football [for a Deaf team] ... and since the internet has set up, it's meant that they've been able to contact the international Deaf community and go to Denmark and visit Finland and meet other Deaf people and become you know, we do like exchanges, and this is good for the Deaf community. It's much more international than it was before. Thirty or forty years ago, Deaf people rarely visited abroad. (Jennifer, 26, Deaf, internet user)

We can find Deaf communities in other countries, whereas before it was possible you know of a Deaf community but you didn't know where or what it was like, so its developed in that way. It's now open to different Deaf communities to contact each other. (Samuel, 39, Deaf, internet user)

Prior, to becoming internet users many Deaf people's social networks were not as fully extended over long distances as hearing people's networks. This was not just because they did not have the technology to communicate over distance but also because of the communication barriers they encounter with hearing people in everyday public spaces. Hearing people rarely have any signing skills and often lack the patience to try to communicate with non-speaking Deaf people through gesture or other improvised communication. As such Deaf people are often ignored in or estranged from, public places with many choosing to avoid or withdraw from encounters with hearing people where possible (Valentine and Skelton 2007). Such experiences serve as a deterrent to Deaf people's mobility because, for example, the process of buying a travel ticket face-to-face at a station or even using a telephone relay service to make an airline or hotel reservation

is stressful and can result in misunderstandings. However, the internet has not just given Deaf people access to more information about other places and other Deaf communities and events (described above), it has also changed the form and structure of D/deaf people's connectivity with hearing people. Now, Deaf people can research their travel plans (including locating Deaf clubs/communities at their proposed destination), book their tickets online, and use community contacts to make arrangements to be met by, or stay with, Deaf people on arrival, thus avoiding the necessity to communicate directly with hearing people, with all its associated risks of discrimination. Such applications of the internet have greatly increased D/deaf people's confidence to travel overseas, with some of the interviewees (below) describing their first international visits in terms of a personal as well as a physical journey. Not surprisingly, despite the reported declining importance of Deaf clubs over 85 per cent of the internet users who responded to our survey said that the internet supports Deaf community.

I've phoned [using a relay service] to book trains before and lots of communication breakdowns. Like I phone through type-talk [name of the UK relay service] and then there seems to be a problem with, the number's wrong or my number's, my account number's wrong so it's a bit frustrating. The words are all jumbly so it wastes my bill, my bill goes up. So the internet's really straightforward for like booking trains ... (Danielle, 23, Deaf, internet user)

About 5 years ago I went to Orlando in America. There was four of us, Deaf lads who wanted to know if there were any Deaf people there, so we went on-line and met a Deaf guy from Costa Rica. When we arrived [in Orlando] he offered to take us to his house that night for something to eat, so that was a nice experience—to experience a different

culture. It was a good night because the Deaf guy from Costa Rica knew all these Deaf Russians and Deaf Americans all came round to his house. (Samuel, 39, Deaf, internet user)

To be able to sign on-line ... and then we had chat rooms and then we could have international where people from China, people from America, German people were coming on-line ... so it meant we could all communicate and I thought that was absolutely fantastic ... when we're thinking about like kind of travelling ... you could sign to somebody and they said 'why not come and stay at my flat?' And they could give you information then and they could give it through BSL or through international sign language. You know usually you'd spend hours and hours trying to research that information and there it was, you had it straight away. Then when you arrive you could meet [Deaf] people. I think through international signing ... that has changed my life. (Jacob, 27, Deaf, internet user)

Paradoxically, however, while the internet is extending Deaf people's mobility within the hearing world it does not appear to be increasing the integration of the Deaf community into mainstream society. Deaf people—as both individuals and communities—are using the internet to access information about, and communicate with, the hearing world in instrumental ways (e.g. to make travel arrangements or shop etc.) but they are not using the technology to initiate new relationships with hearing people/communities that are taken off-line. Rather, many Deaf people are 'passing' as hearing on-line because the internet, as a disembodied form of communication, enables users to manage if, when, and how they want to disclose their identities (cf. Seymour and Lupton 2004). Of the respondents to our survey, 40 per cent of those who use the internet reported that they deliberately conceal their D/deaf identity on-line.

[The internet has] made communication easier. It's helped Deaf people find information first hand as opposed to waiting maybe three months for people to get back to them ... I don't have to go out shopping, I can order things ... over the internet. The internet has allowed me to communicate with [hearing] people better. I don't have to tell them that I am Deaf. They then treat me like a normal [*sic*] person because they don't know I am Deaf. (Samuel, 39, Deaf, internet user)

I think there is more discrimination in the real world rather than online because in the real world ... if I can't understand someone they [hearing people] will either give up ... I have to ask them to write things down ... and it can make me very frustrated ... Using the internet makes it easy because of the non-verbal communication. (Ahmed, 25, deaf, internet user)

As such, the internet gives Deaf people more capability and therefore agency to function independently in hearing society, precisely because it allows them to access everyday goods and services in the hearing world without the necessity to have face-to-face contact with hearing people in off-line space where they encounter marginalisation and discrimination. Indeed, some informants suggested that they were so reliant on email to communicate with the hearing world that they were losing the skills and confidence to engage with hearing people face-to-face. Likewise, while the extension of Deaf social networks beyond the space of the Deaf club into everyday public spaces is bringing Deaf and hearing people into closer proximity with each other, there is little evidence that this co-presence is actually leading to meaningful contact between the communities. Rather, as the quotes below suggest, the internet is paradoxically facilitating D/deaf people's existence in, but continued separatism within

their own communities from, the off-line hearing world.

...to really get to know a hearing person on the internet, I don't really think that's possible. I think that would be very rare, like when you know, we kind of maybe, you know we're saying about like Lottery or something like that. (Jacob, 27, Deaf, internet user)

I don't think it's [the internet] brought me closer to the hearing world, but I think its enabled me to cope better in the hearing world. (Boris, 55, deaf, internet user)

Deaf people are more likely to communicate with other Deaf people on the internet rather than the outside [hearing] world ... because they have their own worlds. They have the hearing world and the Deaf world and they don't like crossing the barrier very much. (Ahmed, 25, deaf, internet user)

As these quotations hint, Deaf people's ability to participate in mainstream society on-line does not necessarily translate into social inclusion in the off-line hearing community because they are mainly using the internet to communicate with hearing people in ways that do not challenge hearing normativities. In doing so, their use of the internet is contributing to the maintenance and normalisation of hearing hegemony, leaving the discrimination D/deaf people encounter in off-line space unchallenged. At the same time Deaf people's ICT use is also reinforcing some of the separatist patterns and practices of the Deaf community, stimulating the rise of separate 'critically exclusive spaces' (Hubbard 2001: 66) on-line that share many of the characteristics of Deaf off-line community spaces (i.e. they provide a space away from the oppressive oralism of mainstream society and generate a sense of identity and belonging), albeit on a national and international

scale and increasingly differentiated by sub-cultural identities.

Conclusion

Early academic work on the social implications of the internet tended to approach technology from the perspective that it either impacts negatively or positively on society. For example, some of the first debates about what was then dubbed 'virtual' community were polarised in this way. On the one hand, some proponents saw on-line social relationships as a threat to off-line communities because they were deemed to encourage people to withdraw from 'real' life and become isolated computer addicts. On the other hand, others argued that on-line networks would rejuvenate 'community' as a traditional form of social relations that was perceived to be disintegrating (Wellman and Gulia 1999). While it is now widely recognised that the relationships between on-line and off-line worlds are more nuanced, complex and mutually interdependent than these early polar characterisations suggested (e.g. Crang, Crang and May 1999; Valentine and Holloway 2002) nonetheless there have been few attempts to trace out how these relationships emerge in practice for specific off-line communities. This paper has addressed this absence through a case study of the complex relationships between Deaf people's off-line communities—which are embedded in a network of local Deaf clubs and produced through normative cultural and linguistic codes of behaviour and identification—and their on-line activities.

This paper has shown that the internet has enlarged 'community' as a concept and a practice for Deaf people. Specifically, the internet has liberated the UK Deaf community

from the emplaced, fixed time/spaces of Deaf clubs. In doing so it has enabled more fluid and flexible forms of communities to emerge on-line that are less rigidly policed according to the norms of behaviour and identification associated with Deaf clubs, and for these practices to be taken off-line through, for example, the establishment of specialist support groups with different temporal and spatial registers. The internet is also enabling other new Deaf spatialities to emerge through off-line practices. For example, on-line information and communication resources are facilitating Deaf people to meet in spaces beyond Deaf clubs thereby producing pockets of Deaf space within everyday environments such as the pub. At the same time, the space of the Deaf Club is evolving too, becoming a more homogenous environment, dominated by older rather than multi-generational users.

Through such processes the internet has also facilitated the UK Deaf community to develop new levels of global connectivity. In particular, on-line social networks are providing Deaf people with the information, resources, support and confidence to travel nationally and internationally to new places and to meet new people. As such, rather than acting as a substitute for embodied travel the internet is actually extending Deaf people's off-line movements and activity spaces, providing a clear demonstration of the direct relationship between on-line connectivity and physical mobility. Through this process 'community' is being scaled up for Deaf ICT users from a local to global concept, and in many cases, practice as well.

The expansion of community as a concept and a practice for Deaf ICT users in these ways hints at the possibility that the internet might, in doing so, also facilitate greater integration between Deaf, hard-of-hearing and hearing worlds. However, while ICT facilitates the

ability of Deaf people to negotiate hearing society in instrumental ways (e.g. to make airplane or hotel reservations) it is not actually promoting the development of social relationships, and in particular off-line contact, between Deaf and hearing communities in ways which challenges hearing hegemony. Few mainstream websites demonstrate awareness of D/deaf people's information and communication needs/preferences (e.g. by incorporating sign language video clips). Rather than producing new normativities, most mainstream websites actually reproduce hearing hegemony through their emphasis on written text, and increasingly also, audio-content or multi-media formats which provide a growing threat to D/deaf people's access to mainstream information. As such Deaf communities are using the internet to maintain critically exclusive on-line and off-line spaces for different groups of D/deaf people, only engaging with hearing people when necessary. Thus, rather than creating a more inclusive public sphere (on-line and off-line), the internet appears to be contributing to the reproduction of separatist patterns and practices between Deaf and hearing communities. At the same time, ICT may in the longer term open up divisions within D/deaf worlds between those who have the skills and/or other resources to use new technologies, and those who do not. If the internet is to fulfil its potential to bring Deaf and hearing people closer together there needs to be an integrated and comprehensive national response to the technology that genuinely incorporates the needs/preferences of sign language users into universal and affordable service. This would necessitate hearing people acknowledging the information and communication needs of Deaf people not only on-line but also off-line. Only then might ICT truly change the Deaf community's place in the world.

Notes

- 1 Some informants also acknowledged, however, that there are still some limitations to the use of web cam technology for signing, which can sometimes be slow or shaky, disrupting fluent signed exchanges. It is also worth noting that while sign language can be delivered on-line via video clips of human signers, computer-generated signing animation (e.g. with avatars) is a long way from widespread commercial application.
- 2 Teletypewriter relay services have different names in different countries (e.g. Type Talk in the UK). This is a system where a D/deaf person can make or receive a telephone call using a hearing telephonist as a medium. The D/deaf person types the information they wish to communicate, a hearing telephonist then calls the hearing person and verbalises the information to them, and then in turn types the response back to the D/deaf person.
- 3 The issue of the implication of access to on-line information sources for D/deaf people's literacy is explored in Valentine and Skelton (2008).

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Abstract translations

Les espaces en mutation: le rôle de l'Internet dans la formation des géographies de la surdit 

Alors que le nombre de documents publi s sur le r le des TIC dans la cr ation de nouvelles formes de r seaux sociaux, aussi connus sous le nom de communaut s en ligne, est en croissance, par contraste, peu d'attention a  t  port e sur cet ensemble complexe de relations qui se constituent dans le cadre des rencontres entre certaines communaut s hors ligne et le monde de l'Internet et, en particulier, sur les nouvelles formes de spatialit  qui surgissent des pratiques communautaires des TIC. Cet article s'inscrit dans le prolongement de ces travaux et apporte une contribution en utilisant «la communaut  Sourde» comme exemple. Les r flexions sur les implications d'Internet sur les possibilit s de communication en mati re de production d'un espace Sourd nous am nent d'abord   tracer les contours historiques du d veloppement de la communaut  Sourde hors ligne au Royaume-Uni et    lucider le concept de «communaut ». L'article poursuit en explorant comment les personnes Sourdes utilisent l'Internet pour communiquer entre elles et, ce faisant, apporte un  clairage sur la contribution d'Internet   la respatialisation et la progression de cette communaut , ainsi que ses effets impr vus sur les mobilit s

des personnes Sourdes et sur l'espace du club des Sourds.

Mots-clefs: Internet, communauté, spatialité, mobilité, Sourd.

Cambiando los espacios: el papel del Internet en la formación de geografías sordas

Aunque hay una creciente literatura sobre el papel de los TIC en la creación de nuevas formas de redes sociales, llamadas comunidades en línea, no ha recibido mucha atención el complejo entramado de relaciones nacientes entre algunas comunidades que no están en línea y el Internet; en particular, algunas de las nuevas espacialidades que van surgiendo como resultado de las prácticas en el uso de las TIC en la comunidad. Este trabajo lo desarrollamos aquí

mediante un estudio de la 'Comunidad Sorda', como ejemplo. Haciendo una reflexión sobre las consecuencias de las posibilidades comunicativas que el Internet ofrece para la producción de espacio sordo, empezamos por describir resumidamente la evolución de la Comunidad Sorda 'off-line' en el Reino Unido y por reflexionar sobre el concepto de 'comunidad'. Luego el papel examina cómo las personas sordas hacen uso del Internet para comunicarse entre sí, y reflexiona sobre cómo el Internet contribuye a la re-espacialización y la ampliación de esta comunidad mientras tiene también otros efectos no previstos sobre las moviidades de las personas Sordas y sobre el espacio del club de Sordos.

Palabras claves: Internet, comunidad, espacialidad, movilidad, Sordo.