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Reconsidering sound and the city: asserting the right to the Deaf-friendly city

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Abstract. The sensory turn has made a pronounced attempt to broaden the focus in social and cultural geography to encompass the entire sensory spectrum, with the aim of counterbalancing what is perceived to have been the disproportionate attention granted to visual geographies and the act of seeing. In respect of critically understanding the geographies of difference that characterise Deaf citizens' experience in the contemporary city, this paper calls for a moment in geography to take stock of the signature that visual awareness bears in the social life of the Deaf city, and also to consider the hearingness implicit in geographical commentary on the role of sound in the reproduction of place. Reading urban and public spaces from a Deaf-centred perspective, I draw on parallel discussions from social geography and Deaf Studies to critically deconstruct the phenomena underpinning the aural bias that is deeply embedded in the social fabric, and which finds continuous expression in the intangible aural architectures of modern life. Dispositions and attitudes towards the 'normal' hearing body and towards hearing ontological engagements with sound and speech serve to maintain the city's audist and phonocentric inclinations. Here, the manner in which the right to the Deaf-friendly city is jeopardised is made explicit through empirical accounts from Deaf people in Ireland and England whose everyday geographies are characterised by the negotiation of urban spaces that were designed according to the needs of an assumed homogenous hearing public.

Keywords: Deafness, sound, audism, phonocentrism, hearingness

Introduction: the sensory turn and geographies of sound

The sensory turn has invigorated geographical thought with discussions around the sensorial production, perception, and experience of place. Its work has addressed the traditional bias towards the 'visual' in geographical enquiry, with Smith (2000, page 615) among those arguing "the importance of imagining—of creating, of engaging with—a world in the doing, shaped by senses other than sight". Several commentators have alluded to the unfeasibility of an ocular-centric disposition in the discipline (see, for example, Crary, 2001; Pocock, 1989; Valentine, 2001), with Erlmann (2004, page 3) positing that "to assert that modernity is essentially a visual age (Levin, 1993) or that bourgeois society rests on technologies of seeing, observation, and surveillance (Lowe, 1982) is no longer of much heuristic value".

The role of sound in the production of place has achieved critical attention from geographers seeking to engage with Rodaway's (1994, page 96) view that "auditory experience—or sound—plays a key role in anticipation, encounter and memory of places". Of particular interest to this paper is the attention garnered around sound and the city. Amin and Thrift (2002) suggest that "sound is becoming one of the new landscapes of urban governance", and urge us to "think only of the hum of conversation on telephone lines or mobiles as the city is constantly *talked* into being" (pages 121–122, emphasis in original). Tonkiss (2003, page 303) is similarly convinced of the pertinence of sound in cities, asserting that "sound gives us the city as matter and as memory. In this register, the double life of cities—the way they slide between the material and the perceptual, the hard and the soft—is spoken out loud,

made audible." Atkinson (2007, page 1905) considers "the constituent and shifting bundles of noise, sound and music emanating from shifting patterns of industry, traffic, leisure, talk and other sound sources in the city to create a sensory departure-point" and in doing so, conceives of a sonic ecology of the city:

> "The ambient soundscape of the street is made up of a shifting aural terrain, a resonant metropolitan fabric, which may exclude or subtly guide us in our experience of the city, thus highlighting an invisible yet highly affecting and socially relevant area of urban enquiry."

Atkinson's work resonates with what Blesser and Salter (2007) term "aural architectures", and signifies that, although these may be intangible, their significance in the reproduction of spaces is undeniable.

It is significant that the body of work on sonic geographies has been dominated by contributions which are rooted in hearing ontology. In this paper I identify the need to look towards Deaf-centred scholarship on sound, and to acknowledge that there is a hearingness implicit in the production of geographical commentary on sound, which to date remains unquestioned, and which has had a marked impact on the conceptualisation of sound and its role in the reproduction of spaces. Querying the popular conception of Deaf people living in a world without sound, I draw on empirical accounts from Deaf people living in urban areas in Ireland and England to illuminate the issues encountered in their everyday urban geographies when negotiating architectures of sound in public spaces which are underwritten by hearing-centred values.

Sound, 'silence', and the Deaf Way[(1)]

Gulliver (2008, page 89) explains how "the idea of silence is somewhat iconic of deafness … [and how] the images of deaf people living in a world of silence are familiar to us hearing people because the deafness that they describe is closely akin to notions of silence that we all recognise and perhaps even fear." The roots of the fear to which Gulliver alludes can be traced to the empiricist philosophical tradition which emerged strongly in the 17th century, as identified by Branson and Miller (2002, page 25):

> "Through Locke, the five senses came to dominate not only the conceptualization of human nature and human ability but also the conceptualization of society itself and of the place that those who were judged 'sensible' or in some way 'senseless' should occupy in society."

This philosophical position resonates with the concept of phonocentrism; explicated in a postmodern context by the philosopher Derrida, phonocentrism is understood to maintain "the historical assumption that speech is the most fully human form of language" (Bauman, 2004, page 243). Ultimately, the view supported by phonocentrism is that "language is human; speech is language; therefore deaf people are inhuman and deafness is a problem" (Brueggeman, 1999, cited in Bauman, 2004, page 242). Upholding the centrality of sound and noise, phonocentrism dictates that the individual who hears and speaks is perceived socially as more intelligible than the person who uses Sign Language and draws primarily on visual cues in their engagement with place.

[(1)] While acknowledging the heterogeneity and diversity of Deaf people's experiences, I follow the concepts of the 'Deaf World' and the 'Deaf Way' as explicated by Senghas and Monaghan (2002, page 80, emphasis in original):

> "Some Deaf people have proposed the terms DEAF-WORLD (Lane et al 1996) and DEAF-WAY (Erting et al 1994) as abstractions for imagining a social identity and cultural milieu that d/Deaf people can share, so long as a pluralistic cultural environment is established."

Because "for most of us, hearing is a 'normal' thing" (Evans and Falk, 1986, page 9), D/deafness has come to be equated with difference. The construction of D/deaf[(2)] citizens as embodying an atypical 'other' is inflected with negative connotations which suggest that "deafness could well be about a sensory 'deprivation', life in a world marked by an absence" (Wrigley, 1996, page 3). Commentary on D/deafness in the social sciences has largely been subsumed under umbrella discourses of disability, and there has been an inherent disregard of the theoretical contributions from within Deaf Studies. Obasi (2008, page 458) argues as follows:

> "disability-oriented perspective presents a construction of Deaf people within a very narrow frame, one which is totally focused on audiology. The myopia of this perspective prevents us from looking beyond audiology to see the fuller picture of visual and linguistic plenitude identified from within Deaf cultural theorizing."

Departing from medical models of deafness which have focused on the *loss* of hearing and the *absence* of a sense, Senghas and Monaghan (2002, page 78) discuss a sociocultural model in which "deafness is identified as one range within the larger spectrum of human variations, and this view assumes that deafness allows for an alternate constellation of very human adaptations, among the most central being sign language." Similarly, Mathews and Foley-Cave (2004, page 67) assert that "the culturally Deaf person's experience of being 'Deaf' is not that of one who cannot hear, but that of one who is 'Deaf Proud'. This signifies a celebration of deafness, not as a person lacking ability, but as a positive state of being and a marker of in-group identity."

Deaf citizens negotiate space in a manner that is sensorially distinct from that of hearing citizens and Wrigley (1996, page 3) depicts the Deaf World as follows:

> "a world built around the valence of visual rather than aural channels for processing languages—not just semiotic signs, but languages of a visual modality. … in a political framing this shift rejects the site of the body and relocates meaning and its production onto the social. This re-valence of a visual modality means not a loss but an entry into a richly textured visual world of languages not dependent on sound. … It is a world not necessarily better or worse, just distinct and different."

A central characteristic of the Deaf World is a visuo-gestural ontology as explicated by Ladd (2005, page 13) who states that "deaf peoples, as uniquely visuo-gesturo-tactile biological entities, believe they offer a different and positive perspective on what it means to be human." Bahan (2008, page 83) has put forth the idea of a visual variety of the human race, and suggests that Deaf people "inhabit a highly visual world. They use a visual language to communicate and have developed a visual system of adaptation to orient them in the world that defines their way of being." Becoming aware of the visual inclination implicit in the Deaf Way prompts us to revisit how we tend to think about spaces and spatiality from exclusively hearing-centred positions.

Arguably, recent commentary on the geographies of sound that is largely rooted in hearing ontology could inadvertently compound the view that D/deaf experience is essentially characterised by an absence. For example, Tonkiss (2003, page 304) suggests that sound is a highly desirable and essential aspect of urban experience, a suggestion which arguably implies that engagements with space which do not entail the acts of hearing or listening can

[(2)] I use the rhetorical construction 'D/deaf' to acknowledge the distinction between the use of small 'd' deaf to denote deafness as a physical characteristic based on levels of audiological ability, and capital 'D' Deaf which represents an understanding of the Deaf community as a cultural and linguistic group. While many of the issues addressed in this paper may also be pertinent to hard of hearing persons, or to other deaf people who do not identify with a Deaf cultural affiliation, they are represented here as being significant to members of the Deaf community who participated in the research.

only and ever be inadequate or disconcerting:

> "As in the cinema when the sound tape doesn't come in and the reel unwinds silently, there is a thinness, a lightness, a kind of estrangement about seeing without sound. It offers surface without depth, appearance without resonance. Where the visual is action and spectacle, sound is atmosphere. But the modern city, for all that there is to see, is not only spectacular: it is sonic."

Corroborating this view, Simpson (2009, page 2568) posits that "the air that surrounds and permeates us finds its life in sound", and goes on to invoke the work of French philosopher Nancy who states that "animal bodies, in general—the human body, in particular—are not constructed to interrupt at their leisure the sonorous arrival … . The ears don't have eyelids [even if they do have ipods]" (cited in Simpson, 2009, page 2568, brackets in original). Such discourse certainly succeeds in addressing the disproportionate amount of attention traditionally afforded to 'the visual' in geographical thought. However, with closer consideration it can reasonably be inferred that the link being made between the acts of hearing and being human is reminiscent of Bauman's (2004, page 242) concerns around the power of phonocentrism to render D/deaf people somehow less than fully human on the basis of their ability to engage with sound as hearing people do.

Perceiving D/deaf people as lacking the ability to hear sustains the preconception that they lead silent lives. Critically, the idea that Deaf experiences amount to a set of geographies without sound is a misconception given that "sound is a constant in cities ... providing all manner of often unnoticed lines and intensities" (Amin and Thrift, 2002, page 121). While sound may not have the same resonance for Deaf citizens as it does for their hearing counterparts, its role in the production of urban space is always significant. As we will see in the empirical accounts from Deaf participants in the second part of this paper, a significant aspect of the performance of Deaf identities is the negotiation of spaces which have been designed with the hearing body in mind. The discourse on sound which has emerged within geographical literature arguably reinforces the idea that an ontological presence not exhibiting a typical hearing engagement with place must be in some way problematic, and that the social worlds of Deaf citizens are soundless and, by extension, deficient. Such thinking is born of hearing-centred discourses on sound which suggest that it is of paramount importance for full and complete human existence, which in turn incites a fear of silence that is projected onto those who do not engage with aural architectures in a manner which, from a hearing perspective, is deemed 'normal'. However, the popular conflation of D/deafness with silence is a misconception. Davis (1995, pages 118–119) references the work of Baynton in Deaf Studies which "adds the philosophical point that silence is a meaningless concept to anyone who is born deaf. Silence is a relational concept, not an absolute category. Consequently, dumbness reveals the arbitrariness of voice communication." The idea that spaces lose an essential quality when sonic architectures are not engaged with in the same manner as they would be by hearing persons clearly lacks critical insight when regarded from the perspective of Deaf sensibilities.

Like geographers, scholars working within the field of Deaf Studies have also reflected on the role of sound in the construction and experience of place, and have considered the relevance this has for Deaf people whose primary engagement with spaces is based on the act of seeing, fundamentally couched in a set of visuo-gestural ontological perspectives. Such discourse offers fresh insights into questions around sound, belonging, and engagement with place. Haualand (2008, page 111) has given careful attention to the matter and acknowledges the "deeply influential role that sound has played in dominant constructions of belonging and community". Significantly, Haualand does not engage in definitions of D/deafness that are premised on an understanding of hearing as a normal state of being, instead recognising

that Deaf and hearing ontologies demand distinct frames of reference, as the visuo-gestural ontology of the Deaf Way is markedly different from the aural inclination of hearing ways of being in the world. Haualand's work (2008, pages 111–112) destabilises the idea that hearing and sound-based communication are natural for everybody, whilst also evoking the important point that Deaf people do have a significant relationship with sound:

> "Why is the audible perceived as the natural form of communication? ... With the lenses of a Deaf social anthropologist I ask: What is sound? Being an outsider in a hearing world, I am like other Deaf people 'within hearing culture, but not of it.' My relationship to sounds is thus rather abstract. Through the process of listening, a hearing person most often hears things rather than sounds … . Deaf people may hear sounds, but rarely things, which means that we may perceive without making perceptions."

Baynton (cited in Davis, 1995, page 119) similarly does not accept the construction of a Deaf person as a nonhearing individual, defined solely in terms of their audiological ability, arguing that

> "to be deaf is *not* to not hear for most profoundly deaf people, but a social relation … . What the deaf person sees in these other [hearing and deaf] people is not the presence or absence of hearing, not their soundfulness or their silence, but their mode of communication—they sign, or they move their lips."

We can see that the commentary on sound emerging from within Deaf cultural theorising signifies a departure from the body of work on sound that has been produced within social geographical discourse to date. Arguably, the dialogue on sound by hearing persons can compound constructions of D/deafness which are predominantly hinged on rhetoric of lack, deficiency, and impairment, and it can feasibly be put forth that this is born of a lack of awareness of Deaf epistemologies and the visuo-gestural ontology of the Deaf Way.

Asserting the right to the Deaf city: audist geographies and urban difference

The term 'audism' was coined by Tom Humphries in 1975,[(3)] and refers to an active intolerance of nonhearing ways of being. Bauman (2004, page 239) describes audism as "discrimination against individuals based on hearing ability" and identifies three 'faces' of audism (page 245) as follows:

- The notion that one is superior based on one's ability to hear or behave in the manner of one who hears;
- A system of advantage based on hearing ability;
- A metaphysical orientation that links human identity with speech.

Discussions around the prejudicial and exclusionary aspects of Deaf experience resonate with social geographical discourse around the broad categories of identity and difference. Stremlau (2003, page 186) suggests a link between audism and Said's Orientalism, in the sense that "imperialism institutionalizes itself and attempts to perpetuate its values on the oppressed culture. When the means of oppression become institutionalized, it is difficult to excise the dominating culture." In his comprehensive expansion on the concept of audism, Bauman (2004, page 241) draws parallels with racism, citing the example of the selection of skin tone colours in which Band-Aids are manufactured, before stating that "this is such a minute, commonplace event that the white person would hardly be able to detect the systems of privilege that underlie this and thousands of other daily acts that add up to a lifetime of privilege." He asks: "Where do so many people acquire their racist or audist attitudes and behaviors? What is the nearly invisible thread that weaves them together into a systematic pattern that warrants a term to describe it?" (page 240). Within Deaf Studies, Searls (2008,

[(3)] Humphries's essay entitled "Audism: the making of a word" appeared in 1975 in the first edition of a magazine entitled *Capital D* which is no longer in press.

page 403) discusses Krentz's engagement with a well-known construct in discourses of difference: "Using the 'hearing line', parallel to W.E.B. Du Bois's color line, Krentz describes how deaf and hearing authors address the invisible boundaries separating deaf and hearing people by examining their similarities and differences." It can be argued that Krentz's hearing ine demarcates the ideological production of Deaf and hearing spaces, with Deaf identity perceived to be performed against an axis of hearing convention. Using this concept, it is possible to uncover the everyday ways in which the city, socially constructed along this hearing line, reproduces public spaces which render the Deaf Way 'other', and in turn we can begin to consider how Deaf citizens' participation in public spaces may be compromised. By virtue of not engaging with Atkinson's (2007) "sonic territories" in a hearing manner, Deaf people can face a set of exclusions, finding themselves 'othered' by the dominant associations of hearing with normalcy (Davis, 1995). Consequently, as Murray (2008, page 100) asserts, "Deaf people, for good or bad, shared a common experience of living as members of a visual community in an auditory world."

In terms of claiming the city, debates around urban struggles are often centred on instances of grassroots activism where physical space, actual room, is being sought, with the circumstances of migrant communities, homeless people, and young people among those frequently discussed. But where, then, do we turn with questions around the right to the intangible city of emotions, attitudes, biases, and ontological dispositions? Owing to its capacity in "responding to the problem of urban disenfranchisement" (Purcell, 2002, page 106), Lefèbvrian thinking on the right to the city can help to critically understand what Emery (2009, page 42) has identified as "the ways in which Deaf citizens are excluded from citizenship, namely, due to citizenship being phonocentric, [and] social policy being audist". Writing in *Le droit à la ville*, Lefèbvre (1996, page 34) stated that:

> "The right to the city, complemented by the right to difference and the right to information, should modify, concretize, and make more practical the rights of the citizen as an urban dweller (*citadin*) and user of multiple services. It would affirm, on the one hand, the right of users to make known their ideas on the space and time of their activities in the urban area; it would also cover the right to the use of the centre, a privileged place, instead of being dispersed and stuck into ghettos (for workers, immigrants, the 'marginal' and even for the 'privileged')."

Asserting the right to the city is about participating equitably in the practices of social life against a backdrop of understanding the city as a series of culturally pluralistic social spaces. Purcell (2002, page 103) notes that "because appropriation gives inhabitants the right to 'full and complete' usage of urban space in the course of everyday life (Lefèbvre, 1996, p.179), space must be produced in a way that makes full and complete usage possible." A consideration of Mitchell's (1995, page 125) assertion is useful:

> "Urban public space is not merely un-private—what's left over when everyone walks off their private domains. A space is genuinely public … only to the extent that it really is openly accessible and welcoming to members of the community that it serves."

To what extent, then, can space which is produced under the influence of audist and phonocentric biases be considered truly 'public'? In what ways do such spaces jeopardise the fully accessible Deaf-friendly city and uncompromised active citizenship by Deaf people? There is evidence to suggest that Deaf citizens are experiencing what May (2001, page 129) has described as "the increasing disenchantment of national-minority groups with current cultural and linguistic hegemonies". Sign Language Peoples as indigenous minorities (Batterbury et al, 2007) are part of the reality that often, "in political, social, cultural and economic life, Deaf adults are not represented, are not visible and are deprived of influence over major parts of their lives" (Conroy, 2006, page 46).

If we accept understandings of public spaces as 'default' hearing spaces, and hearing practices to be 'central' in urban social life, it is arguable that Deaf identities are being performed in marginal contexts, defined by and against the hearing 'centre', as per Bauman's (2008, page 3) description of the Deaf World as "the world often overlooked in the peripheries of the phonocentric focus of the West". hooks (1990, page 341) considers the margin to be "a central location for the production of a counter hegemonic discourse that is not just found in words but in habits of being and the way one lives". Taking a Deaf-centred approach to reading urban spaces, then, we are well placed to critically revisit hearing-centred assumptions which in turn can help us to better understand the mechanisms of 'hearingness' in the reproduction of place, as well as the role of sound in the social construction of spaces.

Claims for linguistic and participatory parity on the civic stage are distinct from calls for space in the city and require a critical type of understanding that rejects notions of 'access' and 'the city' as being purely infrastructural phenomena. Instead, such claims require us to understand, as Raban (1975, pages 9–10) does, the impression the soft city makes on our identities, and vice versa: "Cities … are plastic by nature. We mould them in our images: they, in their turn, shape us by the resistance they offer when we try to impose our own personal form on them." This soft city is the site of the intangible, and consequently insidious, audist practices that demarcate the Deaf body as 'other'. By considering this inconspicuous geography, we can revisit existing discourses and open up geographies of access and exclusion to a pertinent and necessary dialogue with Deaf Studies. Consequently, the question of how well the contemporary city responds to the challenge of comprehensive visual design achieves a new pertinence and begs attention. Reading the city from a Deaf-centred perspective can help to unfold questions of the origins and persistence of the "aural architectures" (Blesser and Salter, 2007) that exist in urban spaces, their reproduction, and the social relations that dominate therein. It is in this regard, then, that we need to acknowledge the reproduction and appropriation of place around diverse sensory tangents, which in turn demands renewed reflection on the significance of sound.

Methodology—acknowledging the visual in Deaf Studies research

The research on which this paper is based took place across four research sites: two cities in Ireland and one large Irish town, as well as a southeast London borough. In total, forty-four Deaf adults participated in the research, ranging in age from nineteen to eighty-seven years old, with thirty four of these people involved in both the focus group and interview phases of the iterative methodology, which also featured a research blog on which participants across all research sites could convene on topics posted. All of the participants self-identified as being culturally Deaf and live in or close to urban centres, and were asked about their everyday experiences of these places and their microspaces. Their responses prompted reflections on sites of consumption, leisure and recreational spaces, work places, and mobilities.

The design of this research was informed by discourse around the tradition of asymmetry in Deaf–hearing research relations which broadly reflect the pathological understandings of D/deafness addressed above. Baker-Shenk and Kyle's (1990, page 71) work alludes to patterns of hearing centrality which have dominated research with Deaf communities in the past, stating that "hearing professionals have an assumption that they are able to understand 'the truth' (what is really going on) concerning deaf people's language and behaviour better than are deaf people." Research involving Deaf participants has tended to be informed by understandings of D/deafness-as-impairment, without regard for the visuo-gestural ontological premise by which Deaf culture is informed. Following such deficit-model perspectives, Ladd (2003) has posited that the contemporary Deaf experience is largely a postcolonial one. He invokes the homogeneity of the hearing society and the manner in which an ethnocentrism based on individualistic Western ideologies has placed hearing ontologies

at the centre of societal power relations and deemed the Deaf Way to be a counterculture, all with a disregard for the role of the communal identification implicit in Deaf culture. Drawing on Gramsci, Ladd (2003, page 81) frames the Deaf voice as a subaltern one, as the idea refers to "any group of people denied meaningful access to 'hegemonic' power". Ladd (2002, page 10) also states that there is a need for all research to bear integrity to the subjectively defined ontological and epistemological dispositions of the participants:

> "All of us as researchers (whether Deaf or hearing) are, I would suggest, called on to consider where we stand in relation to epistemological privilege; that is, how people's own cultural knowledge and views should be given *primacy* in situations which concern them."

For a hearing researcher engaging with Deaf participants, awareness of his or her own hearingness as a primary epistemological filter must be recognised, as must the bias of sound in hearing communication strategies. Issues of 'voice' bear a significant potency and complexity in terms of Sign Language users achieving parity in the research process, as outlined by Harris, Holmes, and Mertens (2009, page 126) who use the term 'voice' "to represent the perspectives, values, and experiences of the Deaf and Sign Language communities". Traditional conceptions of 'voice' in social research are so tightly fused with speech as to be deemed inextricable, and yet, as Bauman (2004, page 244) asserts, "by dethroning speech, we may free ourselves to entertain alternative constructions of language and human nature." It is fundamentally important that we acknowledge and understand the role of the visual in research with Deaf communities, because as Haualand (2008, page 121) points out, "a phonocentric emphasis on local, audible belongings as the 'normal' human way to connect to each other may misguide both research and the researcher".

In order to ensure the central place of Sign Language in this research, and to reconstitute research trajectories in which the primary of speech is emphasised, focus groups and interviews were conducted in Irish and British Sign Language, (ISL) and (BSL), respectively, with qualified, accredited interpreters being employed throughout. It is significant also that the researcher herself possessed a Level 2 qualification [(4)] in ISL at the time of conducting the research, which granted her a strong proficiency at conversational level in the Irish context. In the conduct of the research, the size of the Deaf community and its consequences for participant anonymity, as well as preferences stated by participants for certain interpreters over others, were acknowledged and accommodated wherever possible.

Existing research within social geography on D/deafness has incited discussions around appropriate methods for recording interviews involving Deaf participants. What Skelton and Valentine (2003, page 458) term the "methodological tensions and dilemmas of recording the visual" were pivotal issues in the methodological design of this research. Considering the use of a dictaphone in the recording of an interpreted interview from Sign Language, Skelton and Valentine (2003, pages 459–460) assert that:

> "there are some ethical problems with placing the voiced interpretation of what they signed onto an audio tape. … Some of the tape recordings of the interviews have two voices, the researcher conducting the interview and the sign language interpreter putting the sign language of the D/deaf person into spoken language. There is therefore a form of exclusion of the interviewee, from the recorded form of the interview. It might be argued that this obscures their embodied subjectivity."

Furthermore, Conama and Grehan (2002, page 18) have stated that "the advantage of using videotapes is that original signed statements do not get lost." In this research, all focus groups and interviews were captured on video recorder. Participant consent was granted in every

[(4)] Level 2 qualification in Irish Sign Language attained from the Council for the Advancement of Communication with Deaf People, the organisation which has since changed its name to 'Signature'.

instance with only one exception when a Sign Language interpreter, and not a participant, did not wish to be recorded. The entire signing frame of participants was recorded, capturing all gestural and nonmanual features.

Negotiating the audist city

Sennett (1994, page 17) argues that "the spatial relations of human bodies obviously make a great deal of difference in how people react to each other, how they see and hear one another, whether they touch or are distant." The city as a site of social encounter offers rich opportunities for what Andersson et al (2011) term "cosmopolitan co-existence". Knox and Pinch (2006, page 44) outline the significance of urban encounter on an individual as follows:

> "urban environments also have a crucial impact upon subjectivities because they tend to bring together in close juxtaposition many different types of people. This mingling requires a response on the part of the city dweller, whether this is indifference, fear, loathing, incomprehension, admiration or envy."

A perception of social relations in which hearing and speech are taken-for-granted norms holds that the "larger social world to a great degree is a 'hearing world'—and deaf people are outsiders within it" (Higgins and Nash, 1987, page viii). Consequently, in encounters with hearing people, Deaf citizens are constructed as fundamentally 'other' and Deaf identities are understood as being performed against conventional hearing norms. Bauman (2004, page 245) argues that "incorporating phonocentrism into discussions of audism allows us to see what is usually an invisible orientation within which institutions (ie, medicine, education, psychology, governments, etc) derive their construction of deafness-as-pathology", something which will be illuminated by the empirical excerpts in this section.

The insights offered by Deaf participants in this research suggest that a significant aspect of their personal everyday geographies is encountering hearing citizens, and the discrete, yet powerful, audist biases that underwrite the social relations between them. The constant negotiation of hearing contexts means that "a relationship between communication, confidence, and identity is one that many deaf people are familiar with on a daily basis in having to deal with a mostly hearing/speaking world" (Young et al, 2000, page 194). This finds resonance in the well-established discourses on difference within social geography. In the same way race, sexuality, and gender can be understood as socially constructed categories of identity, so too conceptions of D/deafness. Bell and Valentine (1995, page 147) note how "in the crucible of everyday life, there is always a danger that people from one place or time will stray into another and so stumble on the performance of the 'wrong' identity, spoiling the 'impression' created'." The Deaf body is perceived as not fitting into the hearing world as it is expected to. Its ontological inclination towards a visuo-gestural modality contrasts with the aural inclination of the hearing speaking body, disrupting the conventions and expectations of the hearing majority. This is evidenced by the experiences of Deaf people engaged in this research, whose encounters with hearing service providers manifest the hearing line in action. The encounter being explained in the following passage demonstrates how the primacy of hearing ways inflects even the most seemingly banal situations, serving to remind us of Bauman's (2004, page 245) argument that phonocentrism enforces "a normalcy that privileges speech over sign and hearing over deafness" :

> *If I go to a fast food restaurant, for example, and I order food. If they have something on the counter, I can point … . But if there's nothing there, … I have to ask 'Sorry, can I get a paper and pen?' and the person is like, [frustrated tone] 'God, ok, hang on a sec' and they say [impatiently] 'What do you want?' and I say 'No, no. Please, can I get a paper and pen?' and they will try to see if I can speak. (Male interview participant, age forty eight)*

The sketches of British Deaf comedian John Smith often depict hearing service providers recoiling in uncertainty when a customer discloses his or her deafness. The laughter across his audience demonstrates that this is a prevalent feature of Deaf people's experiences. When simple requests for a pen and paper to communicate become so problematic that they induce panic, it suggests that it is really an engagement with difference that is at work in Deaf–hearing encounters, affecting people's behaviour and actions. It is made apparent that being Deaf is unconventional, perceived to be disruptive of hearing cultural norms. Knox and Pinch (2006, page 45) identify this as objectification, "the process whereby a group is analyzed in a way that constructs them as being inferior". In this way, the Deaf community is arguably objectified, seen as performing identities which are understood only in terms of the challenge they pose to hearing norms and convention.

The interface between service users and providers is distinctly compromised by the workings of audism and phonocentrism in tandem, as the following incident makes explicit:

> *I go into the branch, tell them I've a problem with my credit card and they tell me to ring the credit card company. 'No, I'm sorry I'm Deaf, I can't hear'; they can't do anything. And the credit card company don't have a place where you can go in, it's basically a PO Box ... . So what? You wait by the PO Box and when you see someone coming up, you say 'You! Cancel my credit card!?! ... I've heard of some Deaf people being told to shout down the phone just to make sure they're there. Imagine how embarrassing that is! (Female focus group participant, age nineteen)*

This Deaf woman's experience is clearly underwritten by audist tendencies in the communication strategies of service provision, which in this instance prove to be discriminatory on the basis of not engaging with sound-based infrastructures. These examples corroborate Humphries's argument (cited in Bauman, 2004, page 240) about audism:

> "[Audism] appears in the form of people who continually judge Deaf people's intelligence and success on the basis of their ability in the language of the hearing culture. It appears when the assumption is made that the deaf person's happiness depends on acquiring fluency in the language of the hearing culture."

The idea of being judged on the basis of hearing ability was explicated by participants who discussed their attempts to find employment in the city, a process which can often be seen to be characterised by low levels of D/deaf awareness on the parts of prospective employers and, in certain instances, a perception of risk associated with employing Deaf staff. One participant's experiences led her to believe that Deaf job applicants encounter wariness among prospective employers:

> *It's hard, because you see them and they know about wheelchair users, they know about blind people, but what do they know about Deaf? Zero! They need to know more about Deaf and what we are like, that we are not stupid because we don't talk. ... I think because they are worried about communication, there might be lots of telephone use. But there are other ways of accessing, through things like fax, the mobile phone for texting, and e-mail. ... If they [the Deaf applicants] have a great qualification, then they should be accepted. They should be more aware about how to prepare communication for Deaf people, or if you have a meeting what do you do? They should be aware and have an ISL interpreter there. How will the hearing person know about the Deaf person otherwise, you know? You can't go around to each of the employees tapping them on the shoulder individually! (Female interview participant, age thirty)*

One stakeholder who was interviewed works as a job-seekers advocate with members of the Deaf community, and he explained that low levels of Deaf awareness among employers are responsible for the difficulties faced by Deaf job seekers:

> *The employers are not bad people, ... they are scared, right, they are scared of dealing with a deaf person, and there is a need for training them, there is a need to explain that a deaf person is not going to disrupt the employer, ... is not going to cause them problems, they are not going to disrupt the team.*

It seems, then, that there is validity to the suggestion of an institutional wariness prevalent in the attitudes and perceptions of hearing employers concerning the communication capabilities of Deaf employees. This discrete process means that spaces of employment are being rendered inaccessible in intangible ways for Deaf citizens. The consequence of not being hearing is often, quite simply, the creation of profoundly exclusionary social practices. Unequal access to workplace information and participation in on-site meetings permeated the participants' responses on numerous occasions, an example of which follows:

> *If there was a meeting with the Union, I couldn't hear any of it and there was no interpreter so I'd miss everything. There'd be a long talk, and then I'd ask what had been said and I'd be told briefly, a shorter version. So there'd be a long talk, but I'd know nothing about it, it'd be about the job, and they'd shorten it. (Female interview participant, age fifty three)*

Most workplaces are predominantly hearing environments and the social relations that are reproduced on the 'soft' sites of the factory floor and in offices become imbued with the audist biases and perceptions exist beyond those spaces, and which are contained in the dispositions and attitudes of the broader employee constituency. Many of the participants recounted being the only Deaf employee in the workplace, and Young et al's work (2000) suggests that communication barriers between Deaf and hearing coworkers can promote feelings of exclusion among Deaf employees. The experience of such a work environment was so profound as to bring the following participant to recognise the ideological disjuncture between the Deaf World and the hearing world:

> *When you're in this hearing environment, you get sent the wrong messages, you send the wrong messages, and it wasn't until, I got so used to it, after ten years I realised, you know, 'I'm bad in this place. I hate this place, I can't breathe.' And I just wanted to leave, and I wanted to finish this line of work. And I had to leave and try and find my way. (Male interview participant, age thirty seven)*

Indeed, that participant's feelings of frustration make explicit the otherwise inconspicuous and subtle friction of Deaf and hearing worlds colliding in everyday encounters in workplaces. The following Deaf stakeholder argued that the separateness imagined between the two worlds is superficially elided:

> *You really can't treat the Deaf community as though they're outside on an island and they're involved, just with themselves. In terms of employment, ... I think Deaf people, in the future, definitely are going to work in the hearing world ... and really the attitude of the social model of disability, providing subtitles, providing minicoms, providing interpreters, people think that's enough, but it's not. There's more to Deaf people than just access, it's their culture and language, but how that fits into the hearing world is a big issue for me, a very difficult situation.*

More discrete again are the architectures of sound that prevail in urban spaces. Systems in place to supply service users with aural information are prevalent, and according to hearing norms and practices their frequency possesses a taken-for-grantedness. For Deaf service users, on the other hand, it becomes readily noticeable what information is not being received in such environments, and several participants made reference to the impact this has on their

mobilities as they move through and between urban spaces. One participant, for example, spoke about the frustration he experiences on train journeys:

> *I can hear the sounds on the speaker. I don't know what they're saying, so I'm kind of more alert. It's like 'why is the speaker on?', 'where are the people going'? And I look outside and see there's nothing wrong, OK, fine. You sense it. I hate that. You know there should be information available, for example, the text up on the train, you know, the same as sound, it should be the same. ... I have to watch people's reactions and I have to tap a person to ask them what's going on and then it's explained through lip-reading or writing down. (Male interview participant, age thirty seven)*

This incident is reminiscent of Bauman's (2004, page 245) commentary in which he states that "the practices of these institutions then beget individual audist attitudes through daily practices, rituals, and disciplining Deaf bodies into becoming closer to normal hearing bodies." Another participant explained that the predominance of sound-based telephone communication impedes access for Deaf people:

> *Like if I'm on a night out in town and I go partying and to a nightclub, at the end of the night everyone around is on the phone ordering taxis, but I can't text one, you know? And that's access. (Female focus group participant, age thirty)*

In such instances, the differences between hearing and Deaf people's engagements with sonic architectures become apparent, quite often resulting in an inequitable landscape of information provision which can be regarded as deeply audist and which can cause Deaf citizens to feel disenfranchised:

> *When public transportation is delayed, the hearies get to listen to a public announcement giving reasons of delays (not always!). Deaf people don't have this access, being limited to what the "ontime" [sic] screens say (eg just delayed till what "new" time). (Anonymous response posted to the research blog)*

The city demands that people be aware of aural cues, even if they do not engage with them or rely on them in a typically 'hearing' way, in order to receive whatever information is being relayed. For Deaf citizens, then, the visuality of the Deaf Way is often constructed as deficient, and in situations where there is a dearth of visual information, Deaf citizens must often derive information from hearing counterparts using communication strategies that are rooted in an aural ontology.

Regarding the tendency explicated earlier in this paper to cast the Deaf community as a silent people, Gulliver's (2008, page 90) work poses a challenge to the idea that silence must only be about the absence of sound, by introducing us to the notion of "visual silence" which is premised on an understanding that spaces do not always offer an adequate, accessible response to visuo-gestural dispositions:

> "For someone who has never known significant sound and for who communication has always been visual it is not a lack of sound that constitutes the experience of silence, but a lack of visual communication; visual-silence. … Thus, in the same way that silence can appear unnatural, oppressive, fearful and isolating to a hearing person, visual-silence may be equally so to a deaf person."

The following excerpt depicts an example of visual silence in one participant's appropriation of leisure spaces, and suggests that there is an assumed hearing homogeneity implied in the design of public spaces. Ultimately, it demonstrates that priority is granted to methods of communicating which rely on sound, matched by the assumption that all citizens engage with

soundscapes in the same way:

> *I'm just thinking that with leisure as well you're talking about the gym and swimming. But how can a Deaf person hear if something happens? Like if a child fell in or if a whistle is blown to say the time is up, how are you going to hear it? ... Or you know if you're in the gym and on the treadmill, they all have TVs but none of them have subtitles. Or, like, in a reception area, there should be clearly visible signs telling you about what's to the left and what's to the right and clearly laid out, it's about visual awareness as well. (Female interview participant, age thirty)*

These experiences demonstrate how the subtleties of audism and phonocentrism find repeated expression in the geographies of Deaf citizens. In everyday encounters and through negotiating public spaces, by virtue of not engaging with Atkinson's (2007) "sonic territories" in a typically hearing way, Deaf people face a set of deeply embedded exclusions that compromise their right to an accessible, Deaf-friendly city. As well as the hearingness implicit in urban design, also significant are the audist perceptions held by the hearing majority, often informed exclusively by understandings of D/deafness as an inability to hear. It is reasonable to conclude that the city is socially constructed along audist lines and what has been illuminated in these empirical excerpts is that the hearing citizen, who listens and speaks, is being culturally sanctioned in social life, while the performances of Deaf identities are perceived as a disruption of hearing convention. This amounts to instances of disenfranchisement that occur on a number of scales. Even the most seemingly banal experiences—for example, the inefficiency and unreliability regarding the visual display of information in public spaces—point to the substantive issue of audist biases in the social reproduction of hearing-dominated spaces.

By engaging with the Deaf cultural perspectives, we are encouraged to see how hearing norms can become critically destabilised through an awareness of the Deaf Way. The performance of Deaf identities poses a challenge to unquestioningly understanding the hearing body as 'normal'. Through the perspectives of the Deaf people cited above, we engage in what Bauman (2004, page 242) has described as "trac[ing] the thread of metaphysical institutional–individual audism that has silently informed the very categories that determine the limits of our existence and draw the porous line between the human and nonhuman, between civilized and savage, and between hearing and deaf".

Towards a design philosophy of the Deaf-friendly city?

By highlighting the relevance, desirability, and necessity of the other senses, the attempts by the sensory turn to broaden focus away from the dominance of sight and 'the visual' have been successful. Considering the Deaf perspectives presented in this paper, there is a critical irony in that we have a scenario in which the visual elements of urban design, as well as attitudes towards visual awareness, are actually given too little rather than too much consideration in urban design, thus delaying the project of the Deaf-friendly city. Furthermore, while the sensory turn has worked to explicate aural architectures, they have only been considered from within a hearing frame of reference, with their impacts for Deaf people going largely unquestioned. Thus the design of contemporary urban spaces often fails to respond effectively to the visuo-gestural ontology of Deaf citizens.

Imrie (2003, page 63) has called for "an architecture that recognises, and responds to, the diversity of bodily needs in the built environment by (re)producing a fluid form that will affirm ambivalence and irony (rather than seeking to reproduce a static, singular, conception of the body)". There is a rapidly emergent body of work, primarily emanating from Gallaudet University in Washington DC, focused on the concept of a Deaf aesthetic design paradigm and how issues of accessibility for Deaf people can be articulated through architectural practice. Bauman and Murray (2009, page 8) state that "considerations like the quality of

lighting and the potential for human connections entail the concept of Deaf Space. … With the input of Deaf people, buildings can be designed in a way that promotes a more human way of coexisting." Considering the ways in which "visu-centric" (Rains, 2011) design might be achieved allows us to challenge the assumption that all human experience is rooted in a hearing ontological perspective. With regards to the Deaf-friendliness of cities, such discourse might encourage research into urban furniture, and a further reconceptualisation of what universal design means. The design process for the new Deaf Village project in Dublin, Ireland involved a consultation with architect Hansel Bauman, who has worked to produce DeafSpace architectural guidelines [(5)] which "address five major intersections between deaf experience and built environment: space and proximity, sensory reach, mobility and proximity, light and color, and, finally, acoustics." These guidelines inspire elements of design which reflect a visu-centric ethos, thus creating spaces where equity of access and appropriation by Deaf Sign Language users is facilitated. Such interpretations of access in urban design have a place in what Amin and Thrift (2002, page 135) term the cosmopolitan city, which "promises a politics of difference based on plural cultural expression and identification".

Of course the notion of a Deaf aesthetic paradigm is one that channels cultural understanding through architectural expression. A larger, more persistent issue is residual: how might we address the audist philosophies underpinning the social reproduction of urban space and social relations? While there is guidance for making the aesthetic qualities of space more Deaf-friendly, future research must also negotiate the complex, intangible network of audist assumptions and exclusions which underwrite all ideas about citizenship and 'the public'. Fundamentally, it is not just a question of what the Deaf-friendly city would *look* like; we firstly need to give consideration to the instances of institutional audism which find repeated expression across the spaces of urban public life and how they maintain a set of deeply embedded exclusions for Deaf citizens whose perspectives are rooted in a visuo-gestural ontological engagement with spaces. This is a significant issue and one which will require careful attention given that, as Bauman (2004, page 240) states, "although we may have identified instances of audism above ground, once we start pulling up its roots, we see how vast and hidden are its systems."

There is evidence to suggest that such awareness is slowly permeating the communication philosophies underlying public spaces, if we consider for example the growing accessibility of services providers by SMS communication, activating subtitles for programming televised in public places, and more comprehensive approaches to efficient signage and visual information systems by transport providers. All of these strategies can help to address the imbalance towards sound-based communication in our cities if implemented systematically and sufficiently resourced. Fundamentally, the assumed homogeneity of a hearing public needs to be addressed, as do dominant hearing-informed philosophies of communication and service provision.

Conclusion

As theoretical lenses, audism and phonocentrism facilitate an interrogation of the architectures of sound that we see reflected in the hearing-centred dispositions which underwrite the design of public spaces and philosophies of service provision. While subtle and intangible, they are powerful in their ability to elucidate the prioritisation of sound and the act of hearing. Once engaged, they illuminate ways in which the design of spaces is hearing-centric and make manifest patterns of social exclusion experienced by members of Deaf communities.

[(5)] Hansel Bauman's DeafSpace guidelines can be viewed at: http://www.hbhmarchitecture.com/index.php?/ongoing/deaf-space-design-guide/

Deaf scholarship on sound acknowledges that the visuo-gestural ontology of the Deaf Way exists as an alternative alongside the aurality of hearing ontology. Deaf commentators, while not denying the pertinence of sound, critically destabilise the assumption that to be hearing is a natural part of life for everybody. Considering this, the majority of geographical literature on sound is arguably essentialist in its hearingness, with its suggestion that engagement with sound is a fundamentally necessary aspect of human experience, and, significantly, such discourse is predominantly rooted in hearing ontology. Geographers have largely ignored Deaf cultural theorising, which supports understandings of Deafness as cultural and linguistic diversity, whereby "sensory lack becomes phenomenological plenitude, where the peripheral becomes central, where Deaf becomes desirable" (Bauman, 2008, page 4). By failing to engage with these perspectives, geographical discourse on sound could inadvertently compound phonocentric arguments and support the audist view that D/deafness is a problem, understood only in negative terms as a *non*-hearing experience characterised by the *absence* of sound. Thus far, the hearingness implicit in geographical commentary has gone largely undetected, and its impact on discourse around sound has gone unquestioned. By querying the prevalence of aural ontological interpretations of place, hearing geographers may better understand the true extent of the role of sound in the reproduction of spaces. In turn, this will open up possibilities to contribute to discourse on Deaf-friendly spatial practices in urban design, service provision, and communication strategies.

McCann (2002, page 78) suggests that the ideal city would be one of "centrality, access to information, truly broad participation and enfranchisement, of unalienated labor, and offering the opportunity to live life to the fullest". If such a city is to be unequivocally inhabited by Deaf citizens as a series of accessible public spaces where full rights of appropriation are enjoyed, then the performance of Deaf identities must be understood *not* as a disruption of hearing normality, but as a distinct and valid engagement with place. By acknowledging that public spaces are coauthored by Deaf and hearing citizens, recognition is prompted of how important it is that our cities respond effectively to visuo-gestural ontologies, and to Deaf citizens as they assert their right to a Deaf-friendly city.

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References

Amin A, Thrift N, 2002 *Cities: Reimagining the Urban* (Polity Press, Cambridge)

Andersson J, Vanderbeck R M, Valentine G, Ward K, Sadgrove J, 2011, "New York encounters: religion, sexuality, and the city" *Environment and Planning A* **43** 618–633

Atkinson R, 2007, "Ecology of sound: the sonic order of urban space" *Urban Studies* **44** 1905–1917

Bahan B, 2008, "Upon the formation of a visual variety of the human race", in *Open Your Eyes: Deaf Studies Talking* Ed. H D L Bauman (University of Minnesota Press, Minneapolis, MN) pp 83–99

Baker-Shenk C, Kyle J G, 1990, "Research with deaf people: issues and conflicts" *Disability, Handicap and Society* **5** 65–75

Batterbury S C E, Ladd P, Gulliver M, 2007, "Sign Language Peoples as indigenous minorities: implications for research and policy" *Environment and Planning A* **39** 2899–2915

Bauman H D L, 2004, "Audism: exploring the metaphysics of oppression" *Journal of Deaf Studies and Deaf Education* **9** 239–246

Bauman H D L, 2008, "Introduction: listening to Deaf studies", in *Open Your Eyes: Deaf Studies Talking,* Ed. H D L Bauman (University of Minnesota Press, Minneapolis, MN) pp 1–32

Bauman H D L, Murray J M, 2009, "Reframing: from hearing loss to deaf gain" *Deaf Studies Digital Journal* Issue 1, http://dsdj.gallaudet.edu/assets/section/section2/entry19/DSDJ_entry19.pdf

Bell D, Valentine G, 1995, "The sexed self: strategies of performance, sites of resistance" in *Mapping the Subject: Geographies of Cultural Transformation* Eds S Pile, N Thrift (Routledge, London) pp 143–157

Blesser B, Salter L R, 2007 *Spaces Speak, Are You Listening?* (MIT Press, Cambridge, MA)

Branson J, Miller D, 2002 *Damned for Their Difference: The Cultural Construction of Deaf People as Disabled* (Gallaudet University Press, Washington, DC)

Conama J, Grehan C, 2002, "Is there poverty in the Deaf community?", Irish Deaf Society, Dublin

Conroy P, 2006, "Signing in and signing out: the education and employment experiences of Deaf adults in Ireland—a study of inequality and Deaf people in Ireland", Irish Deaf Society, Dublin

Crary J, 2001 *Suspensions of Perception: Attention, Spectacle and Modern Culture* (MIT Press, Cambridge, MA)

Davis L J, 1995 *Enforcing Normalcy: Disability, Deafness and the Body* (Verso, London)

Emery S D, 2009, "In space no one can see you waving your hands: making citizenship meaningful to Deaf worlds" *Citizenship Studies* **13** 31–44

Erlmann V, 2004, "But what of the ethnographic ear? Anthropology, sound and the senses", in *Hearing Cultures: Essays on Sound, Listening and Modernity* Ed. V Erlmann (Berg, Oxford) pp 1–20

Evans A D, Falk W W, 1986 *Learning to be Deaf* (Mouton de Gruyter, New York)

Gulliver M, 2008, "Places of silence", in *Making Sense of Place* Eds F Vanclay, M Higgins, A Blackshaw (National Museum of Australia Press, Canberra) pp 87–93

Harris R, Holmes H M, Mertens D, 2009, "Research Ethics in Sign Language Communities" *Sign Language Studies* **9** 104–131

Haualand H, 2008, "Sound and belonging: what is a community?", in *Open Your Eyes: Deaf Studies Talking* Ed. H D L Bauman (University of Minnesota Press, Minneapolis, MN) pp 111–127

Higgins P C, Nash J E, 1987 *Understanding Deafness Socially* (Charles C Thomas, Springfield, IL)

hooks b, 1992, "Marginality as site of resistance", in *Marginalization and Contemporary Cultures* Eds R Ferguson, M Gever, T T Minh-ha, C West (MIT Press, Cambridge, MA) pp 341–343

Imrie R, 2003, "Architects' conceptions of the human body" *Environment and Planning D: Society and Space* **21** 47–65

Knox P, Pinch S, 2006 *Urban Social Geography: An Introduction* (Pearson Education, Harlow, Essex)

Ladd P, 2002, "Ethics and politics of deafhood research design and practice", unpublished paper, copies may be requested from Dr Paddy Ladd, University of Bristol, Bristol

Ladd P, 2003 *Understanding Deaf Culture: In Search of Deafhood* (Multilingual Matters, Clevedon, Somerset)

Ladd P, 2005, "Deafhood: a concept stressing possibilities, not deficits" *Scandinavian Journal of Public Health*, **33** 12–17

Lefèbvre H, 1996 *Writings on Cities* translated and edited by E Kofman, E Lebas (Blackwell, Oxford)

McCann E, 2002, "Space, citizenship, and the right to the city" *Geojournal* **58** 77–79

Mathews P, Foley-Cave S M, 2004, "Village life: Deaf culture in contemporary Ireland", in *Deaf Studies in Ireland: An Introduction* Ed. P McDonnell (Douglas McLean, Coleford, Glos) pp 65–84

May S, 2001 *Language and Minority Rights: Ethnicity, Nationalism and the Politics of Language* (Longman, Harlow, Essex)

Mitchell W J, 1995 *City of Bits: Space, Place and the Infobahn* (MIT Press, Cambridge, MA)

Murray J J, 2008, "Coequality and transnational studies: understanding Deaf lives", in *Open Your Eyes: Deaf Studies Talking* Ed. H D L Bauman (University of Minnesota Press, MN) pp 100–110

Obasi C, 2008, "Seeing the Deaf in 'deafness'" *Journal of Deaf Studies and Deaf Education* **13** 455–465

Pocock D, 1989, "Sound and the geographer" *Geography* **74** 193–200

Purcell M, 2002, "Excavating Lefèbvre: the right to the city and its urban politics of the inhabitant" *Geojournal* **58** 99–108
Raban J, 1975 *Soft City* (Fontana, Glasgow)
Rains S, 2011, "Deaf space: Deaf culture meets architecture in UD", http://www.rollingrains.com/2011/04/reprinted-with-permission-deaf-space.html
Rodaway P, 1994 *Sensuous Geographies: Body, Sense and Place* (Routledge, London)
Searls J M, 2008, "Examining the hearing line" (book review) *Journal of Deaf Studies and Deaf Education* **14** 403
Senghas R J, Monaghan L, 2002, "Signs of their times: Deaf communities and the culture of language" *Annual Review of Anthropology* **31** 69–97
Sennett R, 1994 *Flesh and Stone: The Body and the City in Western Civilisation* (W W Norton, London)
Simpson P, 2009," 'Falling on deaf ears': a postphenomenology of sonorous presence" *Environment and Planning A* **41** 2556–2575
Skelton T, Valentine G, 2003, " 'It feels like being Deaf is normal': an exploration into the complexities of defining D/deafness and young D/deaf people's identities" *The Canadian Geographer* **47** 451–466
Smith S J, 2000, "Performing the (sound)world" *Environment and Planning D: Society and Space* **18** 615–637
Stremlau T M, 2003, "Language policy, culture and disability: ASL and English" *Rhetoric Review* **22** 184–190
Tonkiss F, 2003, "Aural postcards: sound, memory and the city", in *The Auditory Culture Reader* Eds M Bull, L Back (Berg, Oxford) pp 303–309
Valentine G, 2001 *Social Geographies: Space and Society* (Pearson Education, Harlow, Essex)
Wrigley O, 1996 *The Politics of Deafness* (Gallaudet University Press, Washington DC)
Young A M, Ackerman J, Kyle J G, 2000, "On creating a workable signing environment: Deaf and hearing perspectives" *Journal of Deaf Studies and Deaf Education* **5** 186–195