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Author

DAVID LYON is Professor of Sociology at Queen's University in Kingston, Ontario, Canada, K7L 3N6. His research, writing, and teaching interests revolve around major social transformations in the modern world. Questions of the information society, globalization, secularization, surveillance, and post-modernity all feature prominently in his work. Recent publications include *Surveillance Society: Monitoring Everyday Life* (Open University Press, 2001) and *Jesus in Disneyland: Religion in Postmodern Times* (Polity Press/Blackwell, 2000). He can be contacted at <lyond@post.queensu.ca>.

'Placing' Cyberspace: Geography, Community and Identity

Rob Kitchin

National University of Ireland

Martin Dodge

University College London

Abstract

Recent academic and media rhetoric has described cyberspace as a transformative technology that is helping to create a world where geography ceases to matter. Moreover, cyberspace itself is conceptualised as being spaceless and placeless. In this paper we critically examine and challenge this rhetoric, arguing that geography continues to matter, both off- and online. We illustrate our arguments by focusing upon recent discourses about identity and community, using three case studies¹.

Introduction

Cyberspace is a recent technological development which has grown extremely rapidly in the past decade in terms of its physical infrastructure and in its usage, both in terms of the number of people using it and its volume of use. Whilst this growth is impressive, the real importance of cyberspace is centred on its transformative nature. There is little doubt amongst analysts that cyberspace is a transformative technology, changing societies in a number of ways at a number of scales (Castells, 1996; Kitchin, 1998). To them, cyberspace is facilitating processes of deep-restructuring, radically altering social and cultural, political and institutional, and economic life. To some the transformative quality of cyberspace rests primarily on its reconfiguring of the spatial logic of modern society (Castells, 1996; Gillespie & Williams, 1988; Mitchell, 1995). This reconfiguring, it is hypothesised, will eventually lead to the eradication of geography as a central organising modality of society, both in relation to space and place.

In this paper we examine the changing role of space and place, as central organising principles in the understanding of the world around us, as information and communication technologies (ICTs) increasingly pervade life (whether we use them or not). We focus our discussion on examining cyberspace's impact on identity and community both offline and online. In contrast to those who predict the 'end of geography' (e.g., Cairncross, 1997; Hauben, 1995), it is our contention that an appreciation of how geography continues to matter is essential in order to understand how social relations are being transformed. Furthermore, it needs to be recognised that cyberspace itself has distinct geographies that situate online interactions and transactions, and a key future endeavour must be to chart these structures and spatialities.

We divide the paper into three main sections. In the first section, we consider the relationship between space and cyberspace, documenting current debates about the dissolution of spatial relations in geographic space and the absence of space 'inside the wires'. In the second section, we turn our attention to the relationship between place and cyberspace, examining theses relating to how cyberspace is creating placeless landscapes offline by providing new, dislocated, but authentic, places online. In the third section, we illustrate our rejection of the spaceless and placeless theses, and assert our contention that geography continues to matter in relation to identity and community (and all other aspects of daily life), through three short case examples.

Space and Cyberspace

In modern society it is recognised that social relations are spatially-constituted. People and their sites of production and consumption are spatially organised in relation to a spatial logic dictated by factors such as the friction of distance. Under this logic, cities developed in order to overcome time with space and located where they could take advantage of raw materials or routes of trade; sites of production located in relation to materials and markets to minimise costs and maximise sales; and sites of consumption located in places that would maximise sales. It is contended by some analysts that cyberspace is the key technological system that renders this modern logic of space obsolete (e.g., Negroponte, 1995).

Those that declare the 'death of distance' (e.g., Cairncross, 1997) contend that the instantaneous communications of the Internet, intranets and mobile telephony have led to a collapse in spatial and temporal boundaries, leading to radical space-time compression

which frees social and capital relations from modernist spatial logic. Whereas innovations such as the railway reduced communication times substantially, ICTs make them near instantaneous. Clearly, 'instant' ICTs date back to the same era as the railways (e.g., telegraph), but now they are much more sophisticated and support a variety of media used within the service-economy. As such, modern ICTs complement the negation of spatial separation with additional services that are more ubiquitous, allowing wider and more ready exploitation. Here, the increasing efficiency of communication is translating into greater and more efficient productivity by permitting the exploitation of a truly globalised economy. For example, increasingly sophisticated interactions and services, that were predominately place-centred activities, are becoming telemediated (e.g., banking). This has led some commentators, such as Benedikt (1991) to question the 'significance of geographical location at all scales' and Gillespie and Williams (1988) to ponder the significance of classical geographical ideas such as the 'friction of distance':

The idea of telecommunications as "distance shrinking" makes it analogous to other transport and communications improvements. However, in so doing the idea fails to capture the essential essence of advanced telecommunications, which is not to reduce the "friction of distance" but to render it entirely meaningless. When the time taken to communicate over 10,000 miles is indistinguishable from the time to communicate over 1 mile, then "time-space" convergence has taken place at a profound scale. Because all geographical relationships are based, implicitly or explicitly on the existence of the friction imposed by distance, then it follows that the denial of any such friction brings into question the very basis of geography that we take for granted.

Correspondingly, the growing use of virtual spaces as a means to speed-up communication and social/commercial interaction is seen by some to be reinforcing the significance of time in peoples' lives. Time, it is argued, is becoming *the* crucial dimension of who is accessible in cyberspace, rather than geographical location. As such, the scarce resource over which commerce competes is not space but human attention and appropriate bandwidth (download times) (Goldhaber, 1997; Mitchell, 1998). Some have called this the 'attention economy' and Mitchell (1998, p. 21) comments, 'We now . . . increasingly live and work within an economy of presence, rather than one of propinquity'. So rather than being constrained by the friction of distance we are increasingly constrained within a new geography of time which regulates access to people and resources (Harvey & MacNab, 1999). Some even go as far as to claim that 'geography *and* time are no longer boundaries' (Hauben, 1995, our emphasis), contending that

most aspects of lives such as shopping and working can now be tele-mediated.

Cyberspace's destruction of space by time, it is argued, is transforming social and cultural aspects of life, with some commentators arguing that we are moving to a position of cultural homogeneity and a world that is placeless. Moreover, it is revolutionising how business is conducted, transforming patterns of work, and leading to significant levels of urban-regional restructuring. Indeed, preliminary analysis suggests that cyberspace, and in particular the use of intranets, is facilitating globalising processes such as office automation, telework and the adoption of back-offices operations leading to radical corporation restructuring and significant changes in employment patterns within and beyond high-tech companies. Further, there is evidence that urban areas are restructuring to gain competitive advantage through cyberspace, and some sections of industry are decentralising to the suburbs and even other areas/countries to take advantage of cheaper rents and skilled workforces, while remaining in constant and instantaneous contact via ICTs (see Graham & Marvin, 1996). It is thus argued that the transformative agency of cyberspace makes geographic space essentially 'spaceless' in that the contingency of space as a determinate of material practices is destroyed; geography/space no longer matters. Similar arguments can be made in relation to other aspects of life such as political structures (see Dodge & Kitchin, in press).

This destruction of space by time we would contend is a gross overstatement. There is little doubt that cyberspace does significantly disrupt the spatial logic of modernist societies, but it does not render it obsolete. Geography continues to matter - space, as an organising principle and a constituent of social relations, cannot be totally eliminated. The modern spatial logic can only be totally destroyed if everywhere offers equal opportunities for production and consumption, and everyone has access to it. Clearly, this is not the case at present, and is not likely to be in the near future. Cyberspace connections, bandwidth, cost, and access are unequally distributed both within and between countries (e.g., Hargittai, 1999; Holderness, 1998; NTIA, 1999). This means that principal spatial processes of modernism, such as centralisation, continue to operate because the use of cyberspace as a globalising agent is still dependent on real world spatial fixity - the points of access, the physicality and materiality of the wires (Graham & Marvin, 1996). Furthermore, there is a world outside of the wires in the form of other infrastructures, face-to-face social networks, skilled workforce, access to materials, and local and global markets. One must not overlook the practicalities, people still live in a materi-

al world and require food, shelter and human contact. Information may flow around the globe at the speed of light, but people are still very much limited by the human body and geographic scale. In cases where services can be decentralised they still have to locate in areas of suitable skilled-labour and conventional transport links. As such, industries are not completely footloose, free to locate wherever they wish.

In other words, whilst cyberspace works to destroy space-time relations, to render social relations 'spaceless', other spatial practices, forms and forces resist and work against this attrition. Consequently, we are witnessing simultaneous pressures of spatial fragmentation (decentralisation) and unity (centralisation) (Griswold, 1994), working at a variety of scales creating a tension between the production of a globalised homogeneity and localised heterotopia. Indeed, a complex interplay between local and global forces exists as some places use and develop their localism, their uniqueness, to try and attract visitors and business. As such, the processes of globalisation should not be seen as totalising since local circumstances are still significant. As Morley and Robins (1995, p. 116) state:

If we have emphasised processes of delocalisation, associated especially with the development of new information and communications networks, this should not be seen as an absolute tendency. The particularity of place and culture can never be done away with, can never be transcended. Globalisation is, in fact, also associated with new dynamics of *re-localisation*. It is about the achievement of a new global-local nexus, about new and intricate relations between global space and local space. Globalisation is like a jigsaw puzzle: it is a matter of inserting a multiplicity of localities into the overall picture of a new global system.

People, their residences, and the places where they work, shop and relax are only rendered *partially* footloose by cyberspace; the modernist spatial logic is fundamentally disrupted but it does not dissolve into a logic of 'spaceless'. Castells (1996) thus suggests that we are witnessing a division of spatial logic into two distinct forms: an emerging 'space of flows' which overlies, and is starting to dominate and control, the old 'space of places'. Geographic space is being supplemented by a virtual space allowing people and organisations to be more flexible in relation to real-space geographies (Kitchin, 1998). To us, this increased, flexible, spatial mobility and modes of accumulation signals that we now live in an era where the spatial logic is late-modern in nature (Jameson, 1991); an era where a new socio-spatial nexus is being constructed (Harvey, 1989). As we note below, these changing spatial relations have a number of consequences in regard to identity, community and the relationship between people and place.

Unlike geographic space where the role of space is seen to be diminishing, in cyberspace itself the role of space has barely ever been recognised, particularly by social scientists. As such, cyberspace has been conceived and examined as largely aspatial with research concentrating on social relations per se, and the production of identity and community. Often these accounts emphasise the lack of geography as a key to the development and sustenance of social relations. As such research utilising geographic practices and knowledge seems redundant in cyberspace.

Our own experience of cyberspace, our empirical research, and the research conducted in the course of writing our book *Mapping Cyberspace*, however, leads us to conclude the exact opposite. Cyberspace consists of a myriad of domains - web pages, mailing lists, chatrooms, bulletin boards, MUDs, virtual reality environments, information databases, each with 'their own sense of place and space, their own geography' (Batty, 1997, p. 339). Here, we will consider space and spatial geometries, examining the relationship between place-making and cyberspace in the following section.

Spatial Geometries of Cyberspace

The spatial geometries of cyberspace are complex. Cyberspace offers worlds that, at first, often seem contiguous with geographic and outer space, and yet on further inspection it becomes clear that the space-time 'laws' of physics have little meaning. This is because space in cyberspace is *purely* relational (both geometrically and socially). Cyberspace consists of many spaces all of which are constructions - productions of their designers and in many cases users; they only adopt the formal qualities of 'geographic' (Euclidean) space if explicitly programmed to do so. Moreover, spaces are often purely visual, objects have no weight or mass, and their spatial fixity is uncertain (spaces can appear and disappear in a moment). Cyberspaces have spatial and architectural forms that are dematerialised and dynamic; spaces that are not physically tangible, in that they can only be explored by the mind, yet metaphorically relate to bodily experience. Many spaces have no tangible geographic counterparts - they are spatialisations utilising geographic metaphors to gain tangibility. Whilst some spaces are productive spaces (tied to sites of work, e.g., corporate intranet) they are also spaces of consumption (the space itself is consumed, e.g., network computer games like *Quake*), and many spaces are spaces of pure consumption; they only exist to be consumed. This has led Holtzman (1994, p. 210) to refer to the designers of virtual worlds as 'space makers'.

Castells (1996) thus describes cyberspace as a space of flows characterised by timeless time and placeless space; a space where the formal qualities of time and space are qualitatively different. Castells argues that temporality is erased, suspended and transcended within cyberspace. Stalder (1998) extends this idea to its logical conclusion by arguing that the defining characteristic of timeless time is its binary form. Timeless time has no sequence and knows only two states: presence or absence; now or never. Anything that exists does so for the moment and new presences must be introduced from the outside, having immediacy and no history. As such, 'the space of flows has no inherent sequence, therefore it can disorder events which in the physical context are ordered by an inherent, chronological sequence' (Stalder, 1998).

In a similar fashion, Castells suggests that geographical distance dissolves in the space of flows so that cyberspace becomes placeless. Movements within cyberspace are immediate, presences can be multiple, and distance as we currently understand it is meaningless. There are no physical places in cyberspace, just individual digital traces that are all equally distant and accessible. Every location is each others' next door neighbour; everything is on top of everything else; everywhere is local (Staple, 1995). Stalder (1998) extends the placeless space to its logical conclusion, again using a binary metaphor, to suggest that cyberspace is a binary space where distance can only be measured in two ways: zero distance (inside the network) or infinite distance (outside the network or barred by access controls); here or nowhere.

However, despite being able to have any geometry desired, rather than break out of traditional conceptions of space, many cyberspaces do in fact adopt standard geographic metaphors such as proximity to improve navigability and usage. Here, geographic and topological concepts are used in a process of spatialisation to aid the presentation of complex relationships or even construct new relationships that have never existed to open new ways to examine data (Cheesman et al., in press). In some cases, as detailed above, cyberspace is designed to look like geographic space and common 'real world' modes of interaction are used to make cyberspace more intuitive to use. For example, the use of the geographic metaphor structures in most MUDs, both textual and visual (Ander, 1998). Indeed, most MUDs consist of a labyrinth employing a solvable maze metaphor which consists of a linear route through connected spaces with a series of limited choices that either lead to dead-ends or towards the exit (Murray, 1997). Such spaces are relatively easy to navigate through and map because they typically adopt an Euclidean geometry (although in the case of cyber-

space the metaphor tends to be broken). In contrast, the tangled rhizome metaphor creates a space navigated non-linearly as with hypertext pages that constitute the World Wide Web. Rhizome spaces can be disorientating to navigate through and are more difficult to map. Murray (1997) explains that solvable mazes are given to purposeful navigation, whereas tangled rhizomes are given to wandering, as there is no beginning or end. Often, however, we wish to navigate purposefully through the Web, and this is where spatial conflict can arise.

The spatial geometries of cyberspace are thus made up of a complex collection of domains, some explicitly spatial with direct geographic referents (e.g., VR models of a geographic location), some explicitly spatial without a geographic referent (e.g., MUDs), some with real world referents but no explicit spatial form/attributes beyond their organisation on the screen (e.g., email messages, web pages), some with no geographic referent and no spatial form/attributes (e.g., computer file allocation tables). In all cases, however, there is a spatial component, a geography of sorts that bounds and helps define that space and the interactions occurring within and between. Understanding identity, community and social relations within different cyberspaces, then, necessitates a comprehension of their geography and the socio-spatial processes that operate within them. The ongoing efforts to map cyberspace seeks to expose these latent and explicit geographies.

Place, Spatiality and Cyberspace

In addition to creating a 'spaceless' world, where space-time relations are meaningless, it is argued that cyberspace is creating a 'placeless' world. Here, a combination of cultural globalisation and the spatiality of cyberspace itself is thought to be transforming 'real' world spatiality and the relationship between people and place. Here we explore the relationship between cyberspace and placelessness through an application of the work of Relph (1976), an American geographer².

In *Place and Placelessness*, Relph (1976) explores the relationship between people and places. He posits that there is a powerful relationship between people and place, so that 'people are their place and a place is its people' (Relph, 1976, p. 34). As such, he contends that people develop and need attachments to places. The relationship to, and understanding of, place however varies. He characterises this through a discussion of experiences of outsidersness and insidersness in places. Peet (1998, p. 50), in his discussion of Relph's work, summarises these experiences as: 'existential outsidersness, in which all

places assume the same meaningless identity; objective outsidersness', in which places are viewed scientifically and passively (as in much quantitative geography); 'incidental outsidersness, in which places are experienced as little more than backgrounds for activities; vicarious insidersness, in which places are experienced in a secondhand way' (e.g., through paintings); 'behavioural insidersness, which involves more emotional and empathetic involvement in a place; and finally existential insidersness, when a place is experienced without deliberate and unselfconscious reflection, yet is full of significance.' Relph (1976) used these concepts to examine the notion of 'authentic' place-making and 'inauthentic' place-making (placelessness). An authentic sense of place involves a sense of belonging, an inauthentic the converse. To Relph spatial mobility is undermining authentic place-making, leading to the creation of places with which we have casual and superficial involvement. Inauthentic places, he contends, are the prevalent mode of industrialised, mass societies and stem from an acceptance of mass values.

Placelessness, then, is 'a weakening of the identity of places to the point where they not only look alike, but feel alike and offer the same bland possibilities for experience' (Relph, 1976, p. 90). Cyberspace is seen as an agent of placelessness as it allows a dislocation of the self - the mind enters a space free of the context of local geographic place and community (Adams, 1997; Mitchell, 1995). Cyberspace is thus what Foucault termed a 'technology of the self', a device which effects the social construction of identity by altering the conditions under which it is constructed (Aycock, 1995). In cyberspace identity is defined by words and actions, rather than by body and place. Rheingold (1993, p. 61) explains that:

We reduce and encode our identities as words on a screen, decode and unpack the identities of others. The way we use these words . . . is what determines our identities in cyberspace . . . The physical world . . . is a place where identity and position of the people you communicate with are well known, fixed, and highly visual. In cyberspace, everybody is in the dark. We can only exchange words with each other - no glances or shrugs or ironic smiles. Even the nuances of voice and intonation are stripped away.

It is contended by commentators such as Rheingold that in cyberspace we are forging new communities, new social structures, that importantly are not based upon what the participants look like, or where they live, but rather around what they say, think, believe and are interested in. We are witnessing the formation of communities that are free of the constraints of propinquity and are based upon new modes of interaction and new forms of social relationships.

In the context of the mapping of cyberspace and the information society, Relph's (1976) analysis raises two central questions: to what extent is cyberspace fostering a growth in existential outsidership and the creation of inauthentic places in geographic space?; and to what extent is cyberspace fostering the provision of alternative, online authentic places for interaction based around interests not geographic location? In other words, does cyberspace help render geographic space placeless? and does cyberspace have places, and if so are they replacing those in geographic space?

For many commentators, such as Rheingold (1993), cyberspace is helping to foster the creation of inauthentic geographic places in Western society, leading to a destabilisation in the link between geographic place and identity. He contends, as did Relph, that communities in geographic space are fragmenting and losing cohesion due to cultural and economic globalisation: a coalescing of cultural signs and symbols, simulacra and hyperreal sites, increased spatial mobility, a de-significance of the local, and changing social relations.

Rheingold, however, is much less interested in the causes of destabilisation than in how cyberspace can provide an antidote to placelessness by providing alternative and more attractive authentic places. If we take the definition of place provided by Jess and Massey (1995) - places are characterised by providing a setting for everyday activities, by having linkages to other locations, and providing a 'sense of place' - then there can be little doubt that new places, and new spatialities, are being formed online. Moreover, these places seem to be authentic as they embody a sense of belonging.

However, it is argued that these places differ substantially from places in geographic space because they are places without geography - they are places that can be accessed from anywhere in geographic space (given the right technology), they are based upon new modes of interaction, new forms of social relationships, and are centred on common interests and affinity rather than coincidence of location. Whereas social interaction, common ties and location are of importance in traditional notions of community in geographic place, in cyberspace it is suggested that personal intimacy, moral commitment and social cohesion come to the fore. For commentators such as Rheingold, cyberspace thus offers us the opportunity to marry *gemeinschaft* (where community relationships are tied to social status, public arenas and bounded, local territory) and *gesellschaft* (where community relationships are individualistic, impersonal, private and based on 'like-minded' individuals) aspects of community (Fernback & Thompson, 1995), so that individualistic, like-minded

people join forces to form public-based communities. Cyberspace offers the opportunity to reclaim public space and recreate online the essence and nature of authentic places which are disappearing in geographic space.

We would caution against wholesale acceptance of the placelessness thesis however. As we discussed earlier, global processes are tempered by local forces so that in many instances places still retain a 'sense of place'; places are not, and will not be, experienced with total existential outsidership as processes such as territoriality and nationalism continue to connect people to place. As such, whilst cyberspace does undoubtedly fuel a destabilisation in the link between place, identity and community it does not destroy their interrelation; placelessness is partial. An illustration of this partiality is the many sites and projects which seek to provide a reconnection and reinvigoration of place-based communities by fostering interaction amongst local residents. For example, 'reconnection' is a principal aim of many freenets.

Moreover, we are sceptical about uncritically treating sites in cyberspace as authentic places. While undoubtedly some users of cyberspace consider themselves to be members of an authentic community, with a shared sense of place, many cyberspace users are transient, moving from space to space without loyalty or sense of loss. As such, cyberspace for many users consists of inauthentic places.

We enter cyberspace from geographic space, and although we can play with our identity, our online personae are grounded in our experiences and memories of geographic space (which in turn adapt to accommodate online experiences); our online and offline identities are not divorced but are situated in relation to each other. As we illustrate below, one common way to enhance online interaction is to give it a spatial context. As such, a variety of geographic metaphors is used to help create a 'sense of place'. Here, there is an explicit drawing on socio-spatial relations in geographic space to create new spatialities. Furthermore, offline contexts and work practices shape the technological developments which lead to improvements in the look and feel of cyberspace, and often determine its use (e.g., business interactions, telecommunication costs), and affect who gains access.

Furthermore, as Wellman and Gulia (1999) point out, it is wrong to consider Internet communities as replacements for geographic communities. They note that a person's community (their kith and kin) does not necessarily live within walking distance, a long-standing situation due to earlier developments in long-distance transport and telecommunications. Instead geographic communities have been

replaced by social networks that are spread over a wide terrain, and which are sustained by letter writing, telephone conversations and now Internet connections. Indeed, they observe that many social networks which do share the same geographic space are often sustained through telephone conversations rather than face-to-face contact. As such, the division between geographic and virtual is not helpful - one is simply an extension of the other. It is the relationship between people that is important, not the medium of communication (Wellman & Gulia, 1999). Social networks maintained exclusively in cyberspace are thus not pale imitations of 'real' networks, or substitutions for these networks, they are just another form of network, a subset of an individual's total network, much as pen-pals were in the era of letter writing.

In addition, many communities are using cyberspace to develop cross-community and cross-issue alliances to help fight particular concerns in geographic space. Probably the most widely documented political use of the Web was that of the Zapatistas of Chiapas (Mexico), who used the Web to garner international political support (see Froehling, 1997, 1999; O'Tuathail, 1994). Other forms of collective action are more localised. For example, Uncapher (1999) charts the development of Big Sky Telegraph, a network designed to link together teachers in the isolated, rural landscape of Montana; and Mele (1999) details the use of the Internet by a local community, Jervay (Wilmington, North Carolina), to gain help in challenging the redevelopment plans of their local area by the city council. Literally hundreds of other local communities and local protest groups similarly use the Web and other cyberspaces such as newsgroups and mailing lists to garner support, resources and political help. These avenues can be an extremely useful way of creating and sustaining new community-based, political structures that are explicitly tied into geographic locales.

Linking Space and Place: Charting Online Spatiality

In this third section we consider the role of space and place in relation to identity and community online using three examples. Our aim is to highlight the interconnections between spatial forms and social practices. It should be stressed that we do not consider these linkages deterministic, but they are highly illustrative of the ways in which geography helps to shape online interactions and transactions.

The extent to which social relations are contextualised by spatiality can be illustrated by the work of Adams (1998). He contends that online interaction is grounded through the use of geographic

metaphors. For example, cyberspace is replete with the vocabulary of place - nouns, such as rooms, lobbies, highway, frontier, cafes; and verbs, such as surf, inhabit, build, enter (Adams, 1997). Couclelis (1998) details that the use of these geographic metaphors - the spatialisation of cyberspace - is an attempt to translate information and communication spaces into domains familiar and comfortable to users. These spatialisations are particularly powerful when modes of thought and action that work in the familiar domain are also appropriate to the metaphorical domain (as is the case with most cyberspaces, e.g., exiting a room leads to another space). Cyberspace then is literally built out of the ideas and language of place, and the employment of these metaphors to create sites of interaction engenders an online spatiality. As a consequence, Taylor (1997, p. 190) states that 'to be within a virtual world is to have an intrinsically geographic experience, as virtual worlds are experienced fundamentally as places.'

Adams (1998) contends that one way to understand cyberspace is by examining spatialisations commonly employed in cyberspace, drawing parallels between the sense of place imbued in a particular network architecture with those of geographic spaces. Using combinatorial theory (a method for comparing network forms) he identifies several network typologies that mirror their geographical equivalents in terms of their structure and the social interactions performed (see *Table 1 in Appendix*).

Adams argues that relationships between physical/social structure and human agency are replicated online. Places within both spaces are multiple, diverse, and linked by complex paths that need to be traversed. He contends that an analysis of how spatial/place metaphors, in combination with a comprehension of network topologies, affect communications within cyberspace will lead to an understanding of social interactions online. Whilst we would question the deterministic link between socio-spatial interactions and spatial forms, Adams' analysis does illustrate that spatial structures and forms in geographic space are often used to provide context for interactions.

The work of Correll (1995) illustrates this further. Correll's study of an online lesbian café describes how patrons constructed an elaborate café setting and contextualised all their interactions within this setting (for example, patrons would 'buy' drinks and hang out round the jukebox). She suggests that the construction (spatialisation) of this shared setting created a common sense of reality which grounded communication. In essence, the locale needed for community in geographic space was replicated online, so that place and setting

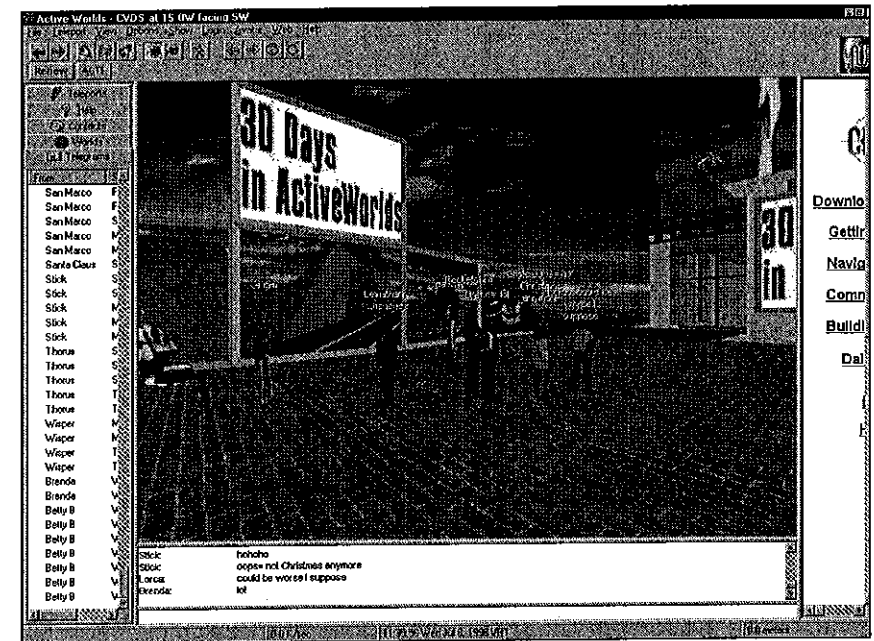
remained important. Indeed, for her, the spatialisation of the online meeting space was the secret to the community being a success, suggesting that without the shared reality of the bar, the community might have dissolved. This bar, however, differed in significant ways from gay bars in geographic space, 'where the games are for real' (Correll, 1995, p. 281). Here, patrons could explore their ideas and thoughts without fear of physical or mental retribution. As such, the bar served to augment offline lives by providing a surrogate community for a group which tends to be marginalised within geographic communities. In this case, the café was providing a relatively safe space, often denied to the women in the geographic world, in which they could express and explore their sexuality. Similarly, Foster (1997) documents an attempt to create a virtual community which he feels has failed because it failed to achieve a 'sense of place'. In this case, the community was a Public Electronic Network (PEN) seeking to revitalise a geographic locale. Instead of fostering social interaction, however, the PEN disintegrated in monologues and separate spaces.

The process of mapping has been used by a number of researchers to explore online spatial geometries and spatiality (catalogued by Dodge, 2000). Andy Smith (n.d.) has used this approach in his studies of interaction in a 3D virtual world on the Internet (see Figure 1). In his work he has sought to chart empirically the process of virtual place-making as performed in online, shared and immersive web-spaces such as AlphaWorld. AlphaWorld³ is one of a number of virtual worlds, accessible through the Internet and run as commercial ventures. Other worlds include V-Chat, InterSpace, Worlds Chat, WorldsAway, Deuxième Monde, CyberGate and Online Traveller⁴. The appeal of AlphaWorld has meant that since its inception in the summer of 1995 it has been visited by over 800,000 unique users, many of whom have added to its built form (as of August 1999, 39.5 million objects had been placed by the inhabitants).

In order to undertake his study, Smith created a new, virtual world called the Collaborative Virtual Design Studio, invited people to explore and build in the space, and then monitored in detail the building of urban structures and the social interaction of inhabitants over a 30 day period (starting Nov 30th 1998). The plot of land he used was 3 million square metres in size and capable of supporting 32 simultaneous users. No specific guidelines were provided, although inhabitants were encouraged to visit a website⁵ which detailed the experiment and a prize was offered for the best structure built during the 30 days. Inhabitants entered the world in a town square surrounded by

message billboards. Nearby a builders' yard provided a wide range of generic building blocks from which users could build structures.

Figure 1. Typical view of the ActiveWorlds 3D virtual world

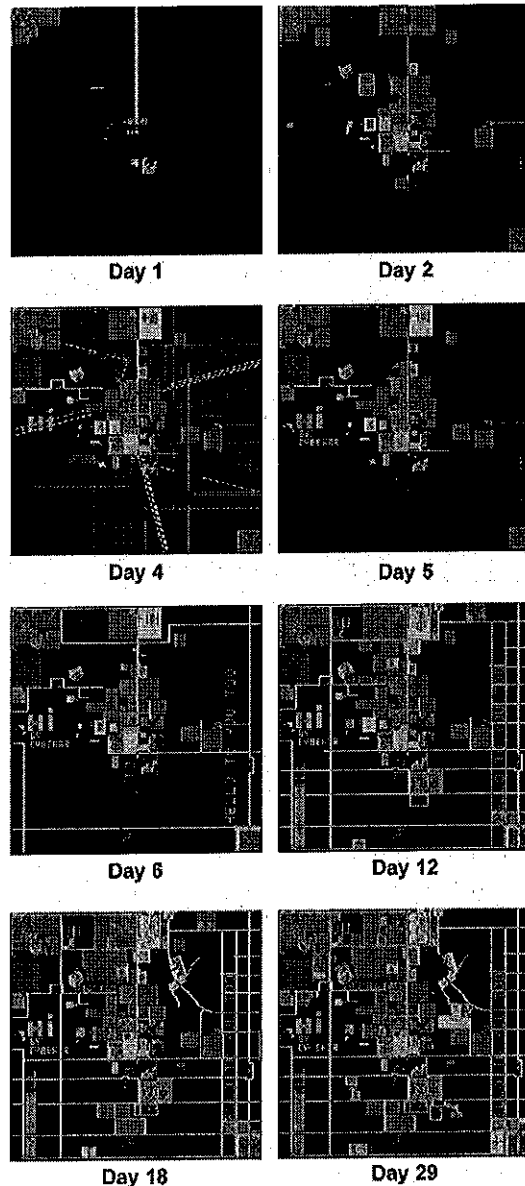


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The experiment revealed a number of interesting results. Most importantly, users built a diverse range of structures and a strong core community, who met and interacted regularly, developed. The extent of the building is evident in Figure 2. These diagrams contain 'satellite'-type land-use images of the world showing the urban growth over the 30 days. The first 24 hour period in particular experienced considerable development, with 7,219 objects placed. In total, 27,699 objects were placed by 49 registered users and an unknown number of tourists, with 49% of all available land built upon. Smith reports that a recognisable community of about ten users had already developed by the third day, appearing much sooner than he predicted. This group used the same nicknames and avatar appearances over the course of the 30 days. The community developed throughout the experiment, and produced a number of communal structures such as a temple and undertook a number of communal events, such as all adopting Smith's avatar for a day.

Figure 2. 30 Days in ActiveWorlds

(Source: <http://www.casa.ucl.ac.uk/30days/news30.htm>)



In addition, the world experienced some of the more anti-social phenomena of AlphaWorld (Schroeder, 1997). For example, on day 4 it was subjected to attack from what was self-described as the Activeworlds Terrorist Group. On this occasion over 85,000 objects were added to the world, as evidenced by the patterns of dashed lines in Figure 2. Also some inhabitants took to 'sky writing' – claiming sizeable tracks of land to spell out a message when the world is viewed from the air. The first of these appeared on day 5 ('Hi'), and was subsequently followed by more. Smith is still analysing the data generated, but his findings to date reveal interesting insights into social production of space and communities in AlphaWorld. His 30 day experiment has now been extended to 360 days.

Using Smith's work it is possible to think of AlphaWorld consisting of hybrid places - lacking the materiality of geographic space but yet having a mimetic quality, containing enough geographical referents and structure to make them tangible. This, we suggest, engenders a level of spatiality beyond that found in other virtual spaces, with social-interaction explicitly situated and grounded in a geographic context. As with textual MUDs, the place-like qualities of AlphaWorld provide a context in which specific forms of social interaction and experiments with identity are played out (Schroeder, 1997). In AlphaWorld the 'sense of place' is centred around the activity of claiming land, designing and building homesteads, the means by which the space is transformed into meaningful *places*, and by social interaction between the inhabitants. Both lead to specific forms of socio-spatial practice: the playing with identity, the creation of community, land disputes, virtual vandalism, and policing. These in turn are framed within a regulatory structure centred on citizenship. In essence what Smith's experiment reveals is that space, place and socio-spatial processes are central to online interactions within the Alphaworld environment, and by extension other social milieu (although the forms of spatialities might differ between domains as noted by Adams).

Conclusion

To us cyberspace reinforces the centrality of space and place as central organising principles in society. Whilst cyberspace is undoubtedly reconfiguring cultural, social, political and economic geographies, geography continues to matter, and in many cases is becoming more important. Indeed to us, far from eradicating geography, cyberspace accentuates geography both off- and online, as our case examples illustrate. Our contention is thus that social scientists and others interested in understanding cyberspace itself and its effects need to be

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For a colour representation of this figure, visit
<http://www.casa.ucl.ac.uk/30days/news30.htm>

sensitive to the role of geography. An important future project will be to chart the emerging spatial geometries of cyberspace and the information society; deconstruct the ways in which these geometries are produced and consumed through socio-spatial practices; and explore the spatialities of cyberspace. A significant aspect of this project will be the mapping out of the interconnections and recursive relationship between geographic space and cyberspace, and the exploration of the complex interplay of socio-spatial processes across domains as they impinge upon identity and community.

Notes

1. This paper is derived in part from *Mapping Cyberspace* (Routledge, 2000).
 2. It should be noted that the concept of placelessness is not new. Gertrude Stein has referred to the placelessness of suburbia with the contention, 'there is no there there.' However, its extent has increased and accelerated under the pressures of globalisation.
 3. *AlphaWorld* is owned and managed by Activeworlds.com, Inc. - a small firm based in Newburyport, MA, USA (Available: <http://www.activeworlds.com> [2001, February 16]).
 4. Damer (1997) provides a populist's travel-guide style overview of a number of the virtual worlds. Addresses for a selection of online communities are listed below.
V-Chat Available: <http://www.research.microsoft.com/vwg/projectsheets%5Cv-chat.htm> [2001, February 16].
InterSpace Available: <http://www.ntts.com/inspace.html> [2001, February 16].
Worlds Chat Available: <http://www.worlds.net/> [2001, February 16].
WorldsAway Available: <http://worldsaway.net/help/index.shtml> [2001, February 16].
Deuxième Monde Available: <http://www.2nd-world.fr/homevisiteurs.htm> [2001, February 16].
Blaxxun CyberGate Available: <http://www.blaxxun.com/> [2001, February 16].
Onlive Traveller Available: <http://www.onlive.com/> [2001, February 16].
5. Available: <http://www.casa.ucl.ac.uk/30days/> [2001, February 16].

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Appendix

Table 1. Networking typologies and their geographical equivalents (Abridged from Adams, 1998, pp. 92-93)

Networking typology	Architectural archetype
<i>Cybercasting</i> (radial/one-way topology) This arrangement supports communication from one or few to many. This is the topology of radio and television. It is presently used for online magazine and newspaper text and for messages to users from the managers of computer networks.	temples, churches, theatres, lecture halls, auditorium
<i>File Search and Retrieval</i> (radial/two-way topology) This is user-driven information search and retrieval in which users extract text, images or sounds from central repositories. Search engines and indexes installed at central or peripheral nodes help locate material. Online examples include world-wide-web, wire-service reports, online encyclopedias, education resources.	library and archive stores
<i>Email</i> (one-to-one or one-to-many/one-way topology) This connection resembles regular postal mail except the messages travel much faster, and sending mass mailings to all members of group is easier and cheaper to accomplish.	mailbox and the seclusion of a private room or office
<i>Computer Bulletin Board</i> (radial/two-way topology) This arrangement is topologically identified with file searching and retrieval, except that the database that users search is also a repository of users' contributions. Users interactively search the messages of others and leave their own inquiries, comments, and replies.	bathroom stall with graffiti or a message board
<i>Computer Forum</i> (many-to-many, two-way) This arrangement is often referred to as the 'chat room'. It involves real-time discussion among spatially separated participants, all of whom are logged on at the same time and view each others' contributions instantaneously.	auditorium and central square, places that allow one to listen at intervals to a public speaker and also exchange comments with other listeners
<i>Multi-User Environments</i> (many-to-many, two-way) These contexts are like computer forums but with textual descriptions automatically inserted by a computer program to narrate the experience of being in an invented place.	role-playing theme park/public space

Authors

ROB KITCHIN is a lecturer in human geography at the National University of Ireland, Maynooth. His research centres on culture, space and power with particular interests in the geographies of cyberspace, disability and sexuality. He is the (co)author of four books, including 'Cyberspace: The World in the Wires' and 'Mapping Cyberspace' (with Martin Dodge) and is the managing editor of the journal 'Social and Cultural Geography.' He can be contacted at <Rob.Kitchin@may.ie>.

MARTIN DODGE is a computer technician, researcher and part-time Ph.D. student at the Centre for Advanced Spatial Analysis (CASA), University College London. His background is in social geography and geographical information systems. His Ph.D. research is on the geographical analysis of the Internet and mapping cyberspace. He directs the Cyber Geography Research project (<http://www.cybergeography.org>). He can be contacted at <M.Dodge@ucl.ac.uk>.

The Languages of Cybercommunities

Kerri-Lee Krause

Macquarie University, Sydney

Abstract

This article examines the pivotal role language plays in building cyberspatial communities and subcultures. Drawing inspiration from the Aboriginal belief in mythic Songlines which connect tribes across vast expanses of terrain – both physical and spiritual – the discussion explores ways in which this analogy can be applied to the cyberlines of communication on and about the Internet. The central thesis of the essay is that while the Internet by definition facilitates interaction and connections across previously immutable barriers of time, space, language and ethnicity, these pathways are not as smooth and unimpeded as they may seem.

Introduction

The Australian Aboriginal way of perceiving their country and its origins provides a unique yet widely applicable means of interpreting the ways in which language creates, and is created in and by, the realm of cyberspace and those who journey through it. This paper juxtaposes two seemingly disparate worlds – that of the ancient Australian mythical Dreamtime, with its focus on the significance of tracks in the dirt and a valuing of the lessons of the past; and that of the futuristic, high-tech world of computers and technology, with its focal point the speed and might of machines. Strangely, however, these two worlds are not so dissimilar. There are many points of comparison, one of the most significant of which is the potency of human language and the lines of communication which operate through the times and spaces of both worlds.

After briefly considering the parallels between these two worlds – the world of Aboriginal Songlines and that of cyberspace – the article will examine the subject of linguistic change, particularly in the cyber context. Discussion then turns to two specific aspects of cyberlan-