Virtual Ethnography

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2 Internet as Culture and Cultural Artefact

Chapter 1 introduced the idea that the Internet could be understood in two quite different ways: as a culture in its own right, and as a cultural artefact. This chapter takes these two perspectives as a starting point to discuss how we might develop an ethnographic approach to understanding the Internet. It has been suggested that developments in cyberspace provide a variety of new ethnographic field sites (Escobar, 1996). Here, the models of culture and cultural artefact are used to provide a structure for thinking about two aspects of cyberspace which can be seen as field sites for an ethnographer. Each view of the Internet suggests different methodological approaches and distinctive sets of problems and advantages. The first section reviews the approaches that have established the Internet as a culture and discusses some methodological dilemmas and innovations that this view has entailed. The second section then reviews the basis for viewing the Internet as a cultural object that is socially shaped in production and use. In the final section, the problems and opportunities provided by bringing together Internet as culture and Internet as cultural object are explored.

Internet as culture

The concern with the effects that CMC might have on communication processes is almost as well established as the technology itself. Early approaches to the study of CMC were far from acknowledging it as a site for rich cultural interchange. In comparison with other communication media and particularly in comparison with face-to-face interaction, email seemed limited. It seemed that computers could not support the same richness of communication as offered by face-to-face situations (Baym, 1998). Much of the early work on CMC considered its use in organizational contexts, often from a social psychological perspective. This research has been influential in establishing an understanding of the qualities of CMC. In this section I draw heavily on the work of Rudy (1994; 1996) in mapping and characterizing the organizational research on CMC. One strand of research which Rudy describes concerned itself with the criteria used to make a selection of the communication medium for a given task (media choice). Researchers differed in the extent to which they attributed choices to inherent qualities of the media that people could use to make rational

decisions. Ideas about the particular qualities that CMC provided were however largely established by the other main body of research on CMC in organizational settings, focusing on media effects. In the consideration of the Internet as culture, the types of communication that CMC affords are more pertinent, and this area will therefore be the focus of interest in the first part of this section.

Much of the media effects research was motivated by concerns with the problems of management: what would be the best way of setting up systems for CMC within organizations, and what might be the benefits and potential pitfalls? These general concerns were translated into some more specific questions: what kinds of tasks could be achieved by groups using electronic communication; how did the different communication media compare in their effects on communication; and what effect did different media have on groups working together? The issue of group working in particular became a focus of considerable interest. This question was also fed by a long-standing interest within social psychology on group processes. The new communications medium provided by CMC also afforded a new experimental setting in which to consider some more general hypotheses concerning processes within groups. Experimental methods were employed to establish consistent features distinguishing communications using one medium from those using another. Experiments were designed on the basis that differences between the functioning of groups using different communications media would demonstrate inherent differences between those media.

The 'reduced social cues' model for understanding CMC is probably the best-known and most influential of the technology-based approaches. This position was established through experimental studies on group decision making (e.g. Kiesler, Siegel and McGuire, 1984; Sproull and Kiesler, 1986; 1991). Typically a group of people would be given a task to perform via a computer-conferencing system, and their performance would be compared with that of groups performing the same task via face-to-face meetings. The resulting process would be analysed by measuring a selection of variables and comparing them between the computer-mediated and the face-to-face groups. Typical measurements might include equality of participation between genders or between members of different status, time or number of interactions taken to complete a task, and levels of aggression. The variables consisted of a mixture of assessments of the content of messages (e.g. level of aggression) and straightforward counting procedures (e.g. level of contribution). A social psychological approach to analysing these results suggested that computer-mediated communication was lacking in social context cues, with a resulting disinhibiting effect on participants. The text-based medium of electronic mail stripped out social context cues (features such as gender, age, race, social status, facial expression and intonation) routinely used in understanding face-to-face interaction. The lack of social cues could be used to explain both the equality of participation and the high levels of aggression perceived in the computer-mediated groups. Flaming (markedly aggressive

tones in electronic communications) can be explained as a disinhibition in the light of the lack of social context cues, leading participants to focus more on themselves than on other participants. Increased equality of participation can be explained as a disinhibition in the absence of visual and aural reminders of the status of other participants, leading again to a tendency to focus on self rather than others (Sproull and Kiesler, 1986; 1991).

The 'reduced social cues' model for understanding CMC and its effects has come under attack from more context-based approaches. Authors in this field are prone to stress the differences between use of CMC in different contexts. Spears et al. (1990) and Lea and Spears (1991) pointed out that previous work had focused on comparing CMC with face-to-face settings. An alternative approach was proposed which compared use of the same technology under different experimental conditions. This alternative approach suggested that the effects of CMC on group decision making processes could be varied depending on the extent to which participants thought of themselves as part of a group. In effect, they argued that what the 'reduced social cues' model attributed to the technology could be understood as a function of the ways in which the experimental groups had been organized. The upshot of this approach was that researchers should focus more on the context in which the technology was used, including the influence of social identity (orientation towards a group) and deindividuation (operationalized as visual anonymity of participants to one another) on group processes.

Mantovani (1994) also disputes the dominant 'reduced social cues' model. Mantovani assembles a review of observation-based studies that demonstrate that rather than overcoming spatial and hierarchical barriers in organizations as the 'reduced social cues' model suggests, CMC tends to reinforce them. There is thus little basis for maintaining that the technology has specific social effects independent of its context of use. Mantovani also questions the basis for some of the quantitative measures used to establish equality of participation. As he points out, even if a low-status member of the group contributes equally, this does not mean that their contributions have been given equal weight to those of high-status group members. Unlike the experimental settings where participants are usually either anonymous to one another or at least previously unknown, users of CMC within organizations are often thoroughly aware of status differentials. Mantovani suggests that rather than asking what social effects CMC produces, the opposite question deserves attention: how does the context shape the use and effects of CMC? This point will be revisited in the final section of this chapter.

The understanding of CMC as a technology with particular social effects has also proved controversial in other quarters. It has been observed that outside the strictly controlled experimental setting, rather than providing a limited and constraining medium for communication, CMC has provided rich and complex social experience. Rheingold (1993) was particularly influential in establishing a view of CMC as providing a community in its

own right. Rheingold's descriptions of his experiences with the WELL (Whole Earth 'Lectronic Link) portray a committed group of people who offer one another support and advice, who enter into close relationships and who conduct intense arguments. His account is the highly personal one of someone convinced by the potential offered by the technologies of CMC for bringing people together, for reforming the connections threatened by modern life, and for enhancing democratic participation. The term 'virtual community' was used by Rheingold to portray the level of commitment and connection experienced by users. His definition stresses the use of CMC to form sustained relationships:

> Virtual communities are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace. (1993: 5)

Curtis (1992) and Bruckman (1992) were among the developers of MUDs who wrote about the social structures that emerged in these settings. Their observations added to the accumulating evidence that CMC was far from inimical to the formation of social relationships (Parks and Floyd, 1996). Following on from early work on the WELL and on MUDs, claims have frequently been made that online environments can form virtual communities. Newsgroups, bulletin boards, IRC and role-playing environments such as MUDs have all been described in these terms. By the early 1990s a counter-current of work that stressed the communicative possibilities rather than the inherent constraints of CMC was established. This work proved highly influential in shaping the development of research agendas focused on the actual uses of the technology rather than its hypothetical potential or its effects in experimental settings. Researchers moved on from the observation that CMC felt like a community to its participants and began to pay detailed attention to the ways in which that perception was created and sustained (Jones, 1995; McLaughlin et al., 1995; Kollock and Smith, 1999). The relationship between CMC and social science was reconceptualized: in arguing that meaningful social relations existed in cyberspace, researchers effected a move towards CMC as a context of social relations in its own right, rather than a medium used to good or bad effect within other contexts. Between the poster of one newsgroup message and the author of a response, a space opened, and that space was a cultural context.

The introduction to the ground-breaking edited collection *Cybersociety* proposed that new ways of doing research were needed to study the 'non-traditional social formations' found online (Jones, 1995: 11). The context of CMC was subsequently colonized by a range of social science methodologies and approaches. Once CMC was conceptualized as culture it became the business of anthropology, cultural studies, political science, communication and media studies, psychology and sociology. Researchers entered cyberspace to study the social, cultural and political formations they found there. Stone observes that cyberspace is now crowded with 'researchers

swarming over the virtual landscape, peering around at virtual natives and writing busily in their virtual field notes' (1995: 243). Each discipline employed its own range of methods, adapting them to the online setting as seemed fit. Quantitative analysis provided a way of exploring the uses to which the Internet was put, by counting and correlating the occurrence of various features of messages posted. The ambitious ProjectH (Rafaeli et al., 1994) was a particularly notable attempt to map the emerging social structures of newsgroups, as well as allowing its researchers to reflect on the experience of using CMC to coordinate the project (Sudweeks and Rafaeli, 1996). This large scale study involved content analysis of a large corpus of newsgroup postings, allowing the exploration of themes across a range of newsgroups. Mark Smith (1999) has developed methods for producing a systematic mapping of the social structure of Usenet, including levels of activity and links via cross-posting between newsgroups. Quantitative studies have an important role in providing for a structured analysis and comparison across settings. Qualitative and interpretive studies are however particularly well placed to study a cultural context in its own terms and have been influential in establishing the features of CMC.

The Internet and similar networks provide a naturally occurring field site for studying what people do while they are online unconstrained by experimental designs. Naturalistic studies of online settings take observations of the rich and complex uses of CMC as a starting point for the analysis of situated behaviour (Wynn and Katz, 1997). Many studies of this kind have been explicitly positioned against the experimental studies that established CMC as a limited medium (Baym, 1995a; 1995b; 1998; Paccagnella, 1997). Their aim is to do justice to the socially rich and often innovative uses to which CMC is put outside the experimental settings. A form of naturalistic enquiry is proposed as a way of focusing on the uses and interpretations of the technology in action. Qualitative approaches to CMC have, not surprisingly, focused on the linguistic resources which participants create and use. Drawing on perspectives from discourse analysis (Baym, 1995a; McLaughlin et al., 1995) and ethnomethodology (Correll, 1995; Thomsen et al., 1998), researchers have made a case for studying the practices through which meanings are made in context, through the interaction of participants. In online settings the apparent absence of a pre-discursive reality encourages the application of constructivist frameworks.

A discursive and practice-oriented approach to online community offers up the possibility of seeing online phenomena as functional in a social sense. Rather than seeing flaming as destructive or as a direct response to the limitations of the medium, as the experimental studies have it, discursive approaches stress the ways in which conflict can have social functions (A.D. Smith, 1999). Through identification of insiders and outsiders and through the assertion of community values, episodes of conflict can be seen as strengthening community rather than posing a threat (Franco et al., 1995; Phillips, 1996). Hierarchies can be formed, patterns of power can emerge (Reid, 1999) and standards of conduct can become set (McLaughlin

et al., 1995). The organization of newsgroup postings can be seen as functional, as header information, signature files and styles of message nurture the development of separate and often stable identities for participants (Baym, 1995b; Donath, 1999). The practice of quoting sections of the previous message in a response to that message reinforces the sense of an ongoing discussion rather than isolated utterances. Linguistic devices such as emoticons, in-jokes and local codes and abbreviations contribute to the formation of a community with shared practices, shared knowledge and language and collective goods (Kollock and Smith, 1994; Baym, 1995c; Fernback, 1997; Kollock, 1999). Similarly, Reid (1995) argues that MUDs can develop a common culture through the sharing of language and the development of ways in which participants can make themselves and their environment meaningfully present to one another through textual means. The crucial step in all of these observations is to see features of Internet interactions as functional in a social sense, enabling the achievement of a distinct culture.

The perspective that newsgroups constitute communities in their own right has been influential in shaping a generation of studies. Studies of online communities have been proposed as promoting a new definition of community, which relies more upon shared social practices than on physical boundaries (Jones, 1995; Watson, 1997). There are, however, critics who suggest that these formations are far from constituting a community as generally understood. Their concern is with the level of commitment and responsibility which participants associate with online social formations. It is suggested that online formations cannot be considered communities when participants can simply log out or turn off when they choose. The level of connection and intimacy is insufficient to make participants members of a community, although they may feel as if they are. This type of social formation is a pseudocommunity (Beniger, 1987). Advocates and critics of the idea of online communities tend to end up arguing about the authenticity of online social formations in relation to their real counterparts, in a way which often harks back to a romanticized view of traditional communities (Wellman and Gulia, 1999). There is, however, a wider dimension to this debate. Watson (1997) points out that although to speak of newsgroups as communities often 'feels right' to ethnographers and to participants, the term itself carries a considerable amount of cultural baggage. To say that something is or is not a community is to perform political work. Arguing over whether online social formations map directly on to those that occur either ideally or actually in offline settings may be a distraction from the study of whatever develops online in its own terms.

Along with virtual community, another prominent topic in the study of online social environments has been identity play. This interest stems from observations that people using text-based environments have often exploited the potential for representing themselves in ways quite different from their offline personae. This tendency is particularly apparent in role-playing environments such as MUDs, where participants actively select a

gender for their character and input a description often couched in physical terms. There is no guarantee that the gender and description will have any correspondence with the offline persona. Role-playing MUDs, with their emphasis on fantasy, offer up the possibility of experimentation with social interaction in a quite different role from that played in offline life (Turkle, 1995; Bromberg, 1996). Interest has also been focused on the ways in which people represent themselves on IRC channels through techniques such as the creative use of nicknames (Danet, 1998). Although identity play is less to the fore in many newsgroups and bulletin boards, the idea of identity play has been prominent in some notorious cases of deception (Van Gelder, 1991; Stone, 1996). There is considerable variation in the importance given to online identities. Identity play might simply be viewed as people exploiting the potential of the medium to try out a different role, or it might be seen as a fundamental threat to the idea of a unified self (Poster, 1995; Turkle, 1995). Whether there was ever a unified self to be threatened is a topic for some debate (Wynn and Katz, 1997).

It is a short move from observing that people play with identity in online settings, to suggesting that the technologies themselves are causing a change in conceptions of identity. It is worth reviewing the status of the technology in depictions of online community and identity. From an experimental mode in which the technology acquired the inherent quality of impoverished communication, we appear to have moved to an opposing but equally determined view of the technology as leading to rich social formations and fragmented identities. More recently, authors have taken pains to stress that the development of online community is not inevitable: virtual communities may fail (Kolko and Reid, 1998) or be places of tension and fragmentation rather than cohesion (Mitra, 1997). Identities may be multiple, fragmented and playful (Turkle, 1995; Stone, 1991), but may also be stable and sustained (Baym, 1995a; 1995b; 1995c; 1998). Far from conventional identity categories like gender, race and sexuality being erased, there is considerable evidence that these are still important ways in which some users of the Internet organize their understandings (Savicki et al., 1996; Dietrich, 1997; Shaw, 1997; Zickmund, 1997; Danet, 1998; Poster, 1998; Burkhalter, 1999; O'Brien, 1999).This observation increases the importance of critical analysis of the social processes and social formations that develop online, without assuming that communities will automatically form or that identities will intrinsically be fluid. The properties of the Internet are differentially socially constructed in the multiple social settings that develop online. While individual settings in the CMC context may be highly socially organized, the technology does not necessitate this kind of organization. The technology of CMC appears to lead to a widely varying array of different kinds of social organization, and community is only one metaphor for understanding online social formations. Recently authors have suggested narrative as an alternative framework for understanding online social phenomena, with virtual community just one of many different kinds of narrative (Jones, 1998; Poster, 1995).

As mentioned above, methodological approaches to the study of CMC contexts have varied widely. Ethnography holds particular appeal for studying 'what people actually do' with the technology. Once we think of cyberspace as a place where people do things, we can start to study just exactly what it is they do and why, in their terms, they do it. However, as with all methodologies, moving ethnography to an online setting has involved some re-examinations of what the methodology entails. In an offline setting we might expect an ethnographer to have spent a prolonged period living or working in their field site. We would expect them to have observed, asked questions, interviewed people, drawn maps and taken photographs, learnt techniques and done what they could to find out how life was lived from the point of view of participants. Moving this approach to an online setting poses some interesting problems: how can you live in an online setting? Do you have to be logged on 24 hours a day, or can you visit the setting at periodic intervals? Can you analyse newsgroup archives without participating and call that ethnography? Snapshot approaches (Mitra, 1997), restricted samples (Phillips, 1996) and retrospective analyses (Aycock and Buchignani, 1995) have undoubtedly provided some thought-provoking analyses of online phenomena. These selective approaches allow researchers to focus on a specific topic of interest and to follow it through in detail without being overwhelmed by the sheer mass of words that some newsgroups produce. Cross-newsgroup samples (McLaughlin et al., 1995; Parks and Floyd, 1996) have similarly contributed to the systematic analysis of a given topic across settings. The temporal organization of these studies and their focus on restricted topics would usually be seen to prohibit their identification as ethnographic studies, and Lindlof and Shatzer (1998) caution against making excessive generalizations about community processes from a small sample. The selectivity of these approaches goes against the ethnographic ethos of engagement with events as they happen in the field, and of a holistic attention to all practices as constitutive of a distinct culture.

Two researchers whose studies fit the more generally accepted model of ethnography are Baym and Correll. Baym (1995a; 1995b; 1995c; 1998) and Correll (1995) undertook studies in which real-time engagement with discussions as they developed was combined with other kinds of interaction: email exchanges with participants, electronic or face-to-face interviews and the posing of general questions to the group. The distinctive nature of the claim to being ethnographic in these studies is that their authors aim to study enduring practices through which the community becomes meaningful and perceptible to participants. In this way, the ethnographic approach becomes a way of studying the achievement of a meaningful cultural context for participants. Ethnography is a way of seeing through participants' eyes: a grounded approach that aims for a deep understanding of the cultural foundations of the group. The use of different ways of observing and communicating with participants provides a kind of triangulation through which observations can be cross-checked. It is particularly important that

both Baym and Correll use two-way interaction, allowing the ethnographer to ask questions of informants and explore developing ideas. In their holistic approach, interactive and multi-channel communication, and long-term engagement, these ethnographies are markedly different from the more selective approaches to the study of online settings.

Reliance on electronic interactions can raise some problems for ethnographic analysis. Traditionally, the validity of the ethnographer's observations relies upon the breadth of observations and participations that have contributed to the findings. Given the ethnographer's sustained and involved presence, it seems unlikely that informants could keep up a false or fabricated identity. Margaret Mead may have been fooled by her informants, but her failing is held to be that she did not sufficiently engage with the field (Freeman, 1996). When we move from face-to-face interaction to electronically mediated contact, the possibilities for informants to fool the ethnographer seem to multiply. Identity play is acknowledged almost as a norm in certain online settings, such as MUDs. In this context, to take statements made by participants as having any relation to their offline lives is problematic. Turkle (1995: 324) discusses the dilemma in the context of her own study of the relationship between experiences of virtual environments and understandings of real life. Turkle chose not to report on online interactions unless she had also met face-to-face the person involved, considering that for her purposes this level of verification of online identities was required. She acknowledges that this 'real-life bias' is appropriate for her own study, while it may not be so for others. The decision to privilege certain modes of interaction is a situated one. If the aim is to study online settings as contexts in their own right, the question of offline identities need not arise. This point will be revisited in Chapter 3.

The popularity of the ethnographic approach to online phenomena probably owes something to the accessibility of the field site to increasingly desk-bound academics. In the current academic climate, time for prolonged immersion in a physically located ethnographic field site is hard to come by. The Internet is available from the researcher's desktop, and can be accessed whenever there is time. Newsgroups are often archived, so that the discussions can be retrieved long after they first arose. The potential to go back in time to review events poses some intriguing possibilities for the ethnographer. Field notes, recordings and photographs have a long history as records of events that allow the ethnographer to review data and to reconsider and refine observations. They also have an important function in allowing the ethnographer to show an apparently unmediated portrayal of the field to audiences. Methods of recording data are, however, necessarily selective. It is common to feel anxiety at not writing down or recording 'the right things' during an ethnography. The ethnographer knows that what is written and recorded in the heat of the moment in the field can later assume greater significance as it comes to stand in for the field experience itself. In contrast, the record of a newsgroup's discussions in an archive seems non-selective: the 'ultimate field recorder' as Stone (1995: 243) suggests. The

whole of the discussion is laid out, as it happened, and reviewing events in the field is no longer mediated by the technologies of data recording. It appears that ethnography can be time-shifted so that the ethnographer's engagement can occur after the events with which they engage happened for participants. Ethnographer and participants no longer need to share the same time frame. In some important ways this depends on how the ethnographic project is conceived. If the aim is to recapture the participants' experience, then time-shifted ethnography falls short. Part of following a newsgroup in real time is making sense out of the arrival of messages in the wrong order, waiting for responses to messages, and experiencing periods of high and low activity in the newsgroup. With a collapsed ethnographic time frame these features of participant experience are less accessible. In a similar vein, Reid (1995) argues that printouts from MUD interactions lose their ethnographic meaning when read after the event. The utterances of participants might be preserved, but the experience of participating is not.

A more active form of ethnographic engagement in the field also requires the ethnographer, rather than lurking or downloading archives, to engage with participants. Making this shift from an analysis of passive discourse to being an active participant in its creation allows for a deeper sense of understanding of meaning creation. Instead of being a detached and invisible analyst, the ethnographer becomes visible and active within the field setting. Questions can be asked and emerging analytic concepts tested and refined, with the cooperation of informants. This kind of engagement also allows for a reflexive understanding of what it is to be a user of CMC. Being a participant in a newsgroup entails reading, interpreting and replying to messages as they arrive, which according to the vagaries of news distribution mechanisms can be very different for users at different locations. The ethnographer cannot stand in for *every* user and recreate the circumstances in which they access the newsgroup, but she can at least experience what it is like to be *a* user. Reflexive engagement with the medium brings the interpretive problems of being a user of the medium to the fore, and in this way provides new angles on the experience of being a user for exploration (Markham, 1998). A reflexive understanding of the medium, if critically examined, can provide for insights not accessible from the analysis of archives.

Being actively engaged in a newsgroup poses some challenges to the ethnographer, not least of which is the negotiation of access and the requirement to self-present in ways acceptable to potential informants (Lindlof and Shatzer, 1998; Thomsen et al., 1998). To participate in a newsgroup without revealing one's role as a researcher would, as in all cases of covert ethnography, pose a considerable ethical problem. Arguing that online interactions are sufficiently real to provide a context for an ethnographic study has an ethical corollary: online interactions are sufficiently real for participants to feel they have been harmed or their privacy infringed by researchers. The ethical dimensions of research in online settings have been much debated. The status of messages posted to a newsgroup or events

in a MUD is controversial: it is questionable whether they are best seen as public statements and therefore fair game for the researcher, or as the property of their authors and not to be appropriated for academic purposes without permission (King, 1996; Waskul and Douglass, 1996). In offline settings it is rare for a researcher to reveal the name of an informant, for fear of causing embarrassment or harm. By extrapolation, researchers in online settings have often treated user names as similarly sensitive and changed identifying details to avoid the possibility of adverse consequence. This move is in accord with an approach that treats online interactions in their own terms as real to participants. To do otherwise would be to treat online identities as if they did not matter to participants, whereas in many settings they patently do matter.

While an important move, focusing only on user names is potentially insufficient: the availability of newsgroup search engines such as dejanews (http://www.dejanews.com) raises the possibility of a sufficiently committed reader being able to trace the source of any verbatim quotation. If the ethical commitment is to severing traceable links between the ethnographic text and a context that readers could identify, changing the user name is not enough. Refraining from making verbatim quotations would pose a considerable challenge to the reporting conventions of discourse-based research. Focusing on changing identifiers is not a total solution, but a situated compromise. Online settings are heterogeneous, as are the disciplines which study them, and no single ethical code is likely to do justice to all (Herring, 1996). It is the ethnographer's task to find out during the ethnography what is considered sensitive, not as an additional task but as a part of the ethnography itself. The researcher needs to apply an ethnographic sensitivity to the recognition of potential ethical problems and the development of solutions that are appropriate in context (Reid, 1996). This in turn provides more insight into the extent to which participants see their online interactions as real. Negotiation of consent can be seen as an ongoing process throughout the ethnography, rather than an isolated initial event (Allen, 1996). In online settings this can, however, pose some problems. The difficulties of negotiating consent with informants whose identities are unstable and whose presence may be ephemeral pose some problems for conventional notions of informed consent (Lindlof and Shatzer, 1998). The interactions involved in negotiating consent may affect the research setting or presuppose the topic of investigation (Jones, 1994). There is no quick fix to ethical problems and ultimately responses by informants to the written ethnographies are unpredictable (Brettell, 1993; Hine, 1995).

Active engagement with a newsgroup might be seen to make the ethnographer's observations more authentic, in the sense of being more like the experience of participants. However, this argument only works for the active participants, who may be only a minority of those following the newsgroup. The status of lurkers, who read newsgroups but do not post messages, has always been problematic for ethnographic studies of CMC. Ethnography relies on observable features of interaction and the reading-based activity of

the lurker is simply invisible to the observer of a newsgroup. Even direct appeals to newsgroups addressed to all participants including lurkers may receive little response: lurkers by definition lurk, and do not respond to the postings of participants even when the participant is an ethnographer. From a discursive point of view, the silent are difficult to incorporate into the analysis. Lurkers are known to be present and their presence may be confirmed by records of accesses to the newsgroup, but for the ethnographer of the newsgroup they leave no observable traces. From a community-based perspective lurkers can be seen as important only in as far as they eventually become active in the group (Correll, 1995) or are acknowledged by the active members of the newsgroup as an audience (Franco et al., 1995). Alternatively, they may be simply viewed as not a part of the community (Paccagnella, 1997): community becomes an elective phenomenon in which some who could participate choose not to, for whatever reason. What is not observable is simply defined out of the purview of the ethnographer, who then concentrates on those for whom the newsgroup is a community. Similarly, from an identity-based perspective lurkers have no online personae, and so are not present in any meaningful way (MacKinnon, 1995; 1997) or not 'part of the social' (Jones, 1997a: 13). While lurkers are not important or meaningful to ethnographers except in so far as they are part of the awareness context (Glaser and Strauss, 1964) of active participants, assuming that this is also the case for the lurkers themselves seems glib.

In newsgroups, sidelining the lurkers and focusing on active participants for the purposes of ethnographic study has been relatively easy. In their unobservability, lurkers are rendered as unimportant to the ethnographer as they appear to be to the newsgroup. The absence of the lurker in the ethnographic text enhances the perception of the newsgroup as a coherent bounded entity. Ethnographic approaches to CMC as a context have concentrated on bounded settings such as MUDs, IRC channels and newsgroups. The boundaries of the group being studied are symbolically enacted (by active participants) through the discourse of the group and through the devices which control access such as MUD addresses and passwords, IRC channel names and newsgroup hierarchies. The socially constructed and maintained boundaries coincide with the (socially constructed) technical devices that carve out a bounded space. This might not be a conventional, physical notion of place, but it is analogous in its focus on bounded social contexts. On the WWW observability becomes even more of a problem for the ethnographer, since little of the interpretive work that goes into producing and reading a web page is readily apparent, apart from through a textual analysis of the pages themselves. The rich social interaction that characterizes the MUD or the newsgroup seems absent, or at least lost to ethnographic observation. The appropriate unit of analysis is also less clear. By contrast to the newsgroup or the MUD, the WWW is less easily rendered as bounded social space and the would-be ethnographer of the WWW is left in doubt whether to focus on the construction of an individual

page, on the relationship between the author of a page and an audience, or on the hypertextual relationships between interlinked pages.

Individual web pages are developed by designers who may have little direct social contact with one another, virtually or face-to-face, except by viewing and making links to one another's pages. Each has their own domestic or institutional context that shapes the development of the site and could form the object of an ethnographic study. The relationships between pages are largely enacted through the hypertext links that allow a visitor to move from one page to another. The links themselves are observable through the source code of the page. Whether anyone in practice follows the links is less clear to the ethnographer, although individual web developers may track the paths that visitors to their pages take. The hypertextual form of the WWW seems more suited to a view of social organization as networks rather than as segmented social spaces like communities (Jackson, 1997), although these approaches too may be restricted to studying links in principle rather than links followed in practice. Social network analyses focus on the interconnectivity and patterns of connection rather than the content connected, and therefore only portray one aspect of the structure of the WWW. Web pages were at first relatively static representations, in which the same text and images were presented to whoever visited until the developer chose to update the page. Latterly more interactive features have been incorporated into some sites, including dynamic updates, guest books, chat forums, interactive virtual environments and experiments in web pages as social space (McLaughlin et al., 1995). In any of these interactive settings the problem of observability is temporarily solved and the ethnographer has again a bounded social setting upon which to focus. It is less obvious that an ethnographic approach can be applied to the WWW itself, rather than the bounded social settings of specific pages.

The most prevalent framework to date for understanding web pages has been to focus on personal home pages developed by individuals and to view them as a form of self-presentation, or construction of self (Turkle, 1995). The web page becomes a managed site for portraying oneself and one's connections (H. Miller, 1995). This approach misses several important features of web pages: the conception of the web audience and the technology's capabilities; the social and institutional location of the web designer; and the relationships between web pages. While the view of the web page as a form of self-presentation focuses attention on the detail of the web page itself, a broader view might also incorporate a recognition of both the context in which the page was produced and the web context into which it is inserted. This approach includes interaction with web site designers and real-time engagement in the developing web landscape. Only by including the features which surround and enable the production of a web page can we have a view of web production as a meaningful social act that incorporates a view of the emergence of relationships on the web over time. Chapters 4, 5 and 6 of this book consider how we might incorporate a view of the WWW page as a social act into the design of an ethnographic

study of CMC. To do so requires a reconceptualization of the relationship between ethnography and bounded social space, discussed in Chapter 3.

In this section I have shown how naturalistic studies overall, and ethnography in particular, have posed a challenge to the limited view of CMC provided by experimental studies. In highlighting the rich and complex social interactions that CMC can provide, researchers have established CMC as a cultural context. In so doing, researchers have drawn upon frameworks that focus on the construction of reality through discourse and practice. A style of ethnography that involves real-time engagement with the field site and multiple ways of interacting with informants has proved key in highlighting the processes through which online interaction comes to be socially meaningful to participants. In claiming a new field site for ethnography and focusing on the construction of bounded social space, the proponents of online culture have, however, overplayed the separateness of the offline and the online. A focus on community formation and identity play has exacerbated the tendency to see Internet spaces as self-contained cultures, as has the reliance on observable features of social organization. The interactions between the various social spaces both online and offline remain to be explored, although this is a task that cannot easily be accomplished from within the online setting. Observing online phenomena in isolation discounts social processes offline which contribute to an understanding of use of the Internet as a meaningful thing to do. Some pointers towards this approach may be drawn from the studies of CMC in organizations that suggest that perceptions of CMC, its success and the uses to which it is put depend heavily on the context in which it is used rather than on inherent features of the medium itself (Mantovani, 1994). For this dimension I turn to a review of the grounds for considering the Internet as a cultural artefact.

Internet as cultural artefact

The Internet, strictly speaking, is no more than the sum of the computers that can communicate using its language, the protocol TCP/IP. More loosely, the term 'Internet' is used to denote a set of application programs that enable particular kinds of communication and sharing of information. The applications that are available at any one time have a large part in shaping what the Internet is understood to be. Since the early electronic mail applications, which work best for asynchronous one-to-one communication, new applications such as bulletin boards, Usenet, IRC, MUDs and MOOs, video conferencing and the World Wide Web have extended the possibilities for communication into the synchronous and the one-to-many or many-to-many. There are now a multitude of different ways of accessing what is in principle the same network of computers, and through the new applications the network comes to look very different. The World Wide Web in particular, with its user-friendly clickable hyperlink structure,

is credited with bringing the Internet to a wider audience with a low tolerance for learning new technical skills. In contrast to many technologies which take a material form, it is harder to say where the Internet begins and ends and what is meant when the term is used: computers, a protocol, applications programs, content or domain names and email addresses. Both its production and its consumption are dispersed among multiple locations, institutions and individuals. The Internet is as much a discursively created object as a single, given artefact. In this section, I explore some discourses that make up the Internet as an object, and review approaches that provide analytic purchase on the constructed nature of technologies.

An NOP (1999) survey calculated that the proportion of the UK population with access to the Internet at home was 14%. The numbers of these potential users who use the Internet regularly may be much fewer. On this basis, the Internet is still a minority technology. Numbers online might be growing, but the Internet is far from saturation even among those who could afford access. Yet if we turn away from user surveys, and conduct a more informal cultural survey, we find a somewhat different picture. The Internet is everywhere (within an 'everywhere' limited to places where the mass media are readily available). Reviews of web sites regularly appear in newspapers and magazines outside the market niche for net-related magazines. Several broadsheet newspapers and the occasional tabloid newspaper in the UK have weekly supplements devoted to the Internet, computing and related developments. The zeal with which the online world is promoted might be related to commercial interests and cross-ownership or the attraction of journalists to the new and fashionable. However, the permeation of the Internet into the news media marks it out as a topic of general concern or interest, not restricted to a technical elite. On television too, the Internet is widely commented upon and brought into general magazine programmes besides the series devoted entirely to computing. The Internet has been embraced by television, and is promoted as a supplement to the viewing experience, allowing access to further information, the sending of feedback (for example, Newhagen et al., 1995) and occasional opportunities to interact with stars and experts from the shows. The permeation of the Internet spreads outside even the mass media targeted at the young and the male. It is not just regularity of appearance in the mass media that makes the Internet a mainstream technology, but also the matter-of-factness of those appearances in a wide range of settings.

The web site address on the cornflakes box signifies the Internet as a mainstream object with meanings outside a restricted technical elite. Few people in the developed nations at the end of the twentieth century can be unaware of the Internet, although many may still be baffled as to what it is and what precisely they might do with it. In just a few years, the giving of email addresses and web page addresses (Uniform Resource Locators, or URLs) has become routine. Not all of us may actually have easy access to the Internet, and certainly few of us will take up the invitation to 'Visit our web site' on the advertisement, television programme or cornflakes

packet, but we are expected to understand that we could. URLs and email addresses do not come with instructions for use: we no longer say more than 'This is a web site address' when we exchange URLs. Advertisements for Internet service providers even outside the technical press seem rarely to explain patiently what the Internet is for and what can be done with it. Increasingly they seem to cut straight to the differentiating factors: how fast are their connections; how much does it cost; how easy is their software to install and use; how good is their support? These statements suggest a confidence that the Internet is available as a cultural object to at least a significant audience.

This is not to say that those who have access to the Internet automatically know what to do with it. The central heating engineer working in my home tells me that his wife has the Internet at home, but does not yet know what to do with it. His cousin, who set it up for her, does know what to do with it because he works with computers and has a friend who knows about the Internet. We talk about the possibility that he could use the Internet link at home to avoid driving to the central office to collect job specifications by having them emailed or faxed via a modem. Notable in this short anecdote are several features common to many new technologies (Silverstone and Hirsch, 1994). The capacities of the technology are not readily apparent and available in advance to those who acquire them. Rather, they are worked out in a process of negotiations and interpretations, which happen in the specific context in which the technology is bought and used. Working out what the Internet is for is a process involving social networks such as cousins who have friends who know what to do with it, media representations that convince us that this is a desirable commodity, and finding uses for the technology that fit in with and transform local contexts. Vehviläinen (1998), Wakeford (1997) and Morse (1997) have shown how women in particular have been able to appropriate the technology in ways which are meaningful within their lives. The meaningfulness of the technology does not exist before the uses themselves, but is worked out at the time of use. At the same time, making the use of the Internet meaningful involves representing it to others as valuable in recognizable ways. At this point the abstract 'Internet' becomes meaningful in a concrete and contextual fashion. To say that the Internet is a mainstream object is not to imply that it is the same object to all. To paraphrase Ang (1996: 80), the Internet is everywhere but it is not everywhere in the same way.

Clearly, while we might be comfortable talking about 'the Internet' as if it were one object, it is going to mean very different things to different people. The technology is going to have very different cultural meanings in different contexts. This point would benefit from a more detailed empirical investigation. Here I draw again on anecdotal evidence. In teaching a course on the social dynamics of the Internet, I ask students to bring in cuttings from newspapers, whether articles or advertisements, which refer to the Internet. We use these to talk through the images of the Internet and

the Internet user that they portray. The class often consists of students from a wide range of backgrounds and countries of origin. Newspaper stories that the group used in the 1998 session portrayed the Internet as a dangerous place, where pornography was rife, paedophiles networked and neo-Nazis found a safe haven. One student from Brazil found these stories particularly puzzling: 'We just don't have this picture.' This is a reminder that in thinking of the Internet we should not necessarily expect it to mean the same thing to everyone. It could be said that ideas about what the Internet is are socially shaped, in that they arise in contexts of use in which different ways of viewing the technology are meaningful and acceptable:

> It is essential to treat telecommunications and computer-mediated communications networks as *local* phenomena, as well as global networks. Embedded within locally specific routines of daily schedules and the 'place ballets' of individuals, Internet has been shaped by its users. (Shields, 1996: 3)

The Internet could therefore usefully be viewed as shaped by the social context. As with media choice within organizations, perceptions of what a medium is for and what it symbolizes can be influential in determining when it is used (Trevino et al., 1987).

In another way, access to the Internet is shaped and the applications developed for it are shaped by the expectations of what it is for and how it ought to be used. Stefik (1997) argues that our metaphors for thinking about the Internet have been crucial in influencing the ways in which the Internet has developed and may be similarly influential in shaping its future. Metaphors can certainly be influential in suggesting certain moves and precluding others (Lakoff and Johnson, 1980). Stefik is particularly concerned that the options of policy makers and technology producers are closed off by the metaphors they use. Within the dominant metaphor of the information superhighway or I-way, Stefik identifies the digital library, electronic mail, electronic marketplace and digital worlds to represent the ways in which the Internet is and has been conceived of as a store of knowledge, a communications medium, a commercial forum and a place for experience. Stefik argues that these different conceptions of what the Internet is for deserve closer examination if the Internet is to be actively shaped to maximize benefits and imaginative uses of the technology. It has also been argued that metaphors for understanding the Internet, particularly the 'electronic frontier', are gendered and have implications for acceptable online roles and uses (L. Miller, 1995).

In becoming an object of the mainstream the Internet has come a long way from its origins. The commonly accepted and often-told myth of the origins of the Internet has it that it first came about as a military technology. Within the US Department of Defense's Advanced Research Projects Agency (ARPA), the urge to connect computers was conceived to allow computing power to be shared between remote sites. The intention might be a collaborative one, but the way in which it was enacted was

according to military principles of resisting damage from enemy assault. The architecture that resulted was designed to be resistant to attack, with routing of data between remote machines able to adapt to the loss of parts of the network. This 'bombproof' system was enabled by a protocol for message packaging and addressing which was independent of the architecture of any one machine, and allowed very different computers to communicate. The close relationship between the military and the research activities of the universities enabled a gradual spread of ARPANET beyond the original network. Stories of the spread of the Internet present it as a technology that found a natural appeal. It simply grew, because it was too good not to. Along with this growth came a change of emphasis. Communication, although only a minor part of the original plan, became a major focus and emphasis on the use of networks for sharing access to processing power dwindled in comparison:

> The romance of the Net came not from how it was built or how it worked but from how it was used. By 1980 the Net was far more than a collection of computers and leased lines. It was a place to share work and build friendships and a more open method of communication. (Hafner and Lyon, 1998: 218)

The brief outline of the Internet's history told above is no doubt a distorted version of the events as they might be told by the protagonists. Hafner and Lyon (1998) bring this simplistic version of the origins of the Internet into question. Rather than a straightforward translation of a particular ethos into a corresponding design, Hafner and Lyon portray a complex set of interactions between computer scientists, politicians and research funders that together resulted in a network that could have been otherwise, and that could have foundered at many stages in its development. In particular, Hafner and Lyon counter the claim that the aim to build a bombproof network was a major drive in developing the network. Abbate (1998) shows how the development of ARPANET was shaped by particular policy contexts, of which Cold War military concerns were only one component. The intentions and experiences of the developers of the early networks might differ from the prevailing myth, but it is not the intention here to judge between them. It is for that reason that the story was described as a myth rather than a history. This is the story that users of the Internet tell each other about what kind of technology the Internet is and what kind of people they are.

The story of the origins and development of the Internet contains some key themes: the appropriation of a militaristic technology for humanitarian and libertarian purposes; the assertion of the natural human desire to communicate; the reclaiming of a weapon of destruction for the good of the people. Similar stories are told about the development of Minitel in France as a source of information, and its appropriation by users as a way of communicating (Lemos, 1996). The expansion of the Internet from the military research establishments to universities more widely allows the

technology to be reshaped, or possibly, to reveal its true nature. This theme permeated much of the early use of the Internet: its proclaimed anarchic nature, the counter-cultural attitude of the hackers and cyberpunks, and the emphasis on shared responsibility of early netiquette. Early theorizing about the Internet emphasized identity play, the development of online community and the discovery of new ways of communicating and sharing. A major shift in the Internet's identity occurred with the commodification of Internet access and its availability to people outside the universities on a fee-paying basis. Internet service providers (ISPs) package and sell Internet access to members of the public. The early influx of people accessing the Internet on a commercial basis was controversial to those who had shaped its culture. Newcomers who were unaware of the norms and values shaped in the early days were seen as threatening the culture or simply being rude (Herz, 1995).

From its early restricted origins, the Internet has become a commodity in principle, although not in practice, open to all. As a commodity, it needs to be sold to its purchasers, and considerable financial gains may be there for a company that can create and cater to demand. ISPs both feed on and contribute to the cultural trend. A complicated relationship with the original values of the Internet is the result. Many new users may be completely unaware of what it symbolized to its early enthusiasts. Its users now have arrived through varied routes of access and paths to understanding what it means for them. They have been exposed to a myriad of different messages about what to expect from the technology, themselves and their fellow users before they even begin to interact with others online. They use the Internet for work, for leisure, for information and for shopping. They explore new relationships and sustain existing ones. They assess what they see online in relation to what they know to be sensible and appropriate using interpretive codes both learned online and imported from offline settings.

The Internet can therefore be seen as thoroughly socially shaped both in the history of its development and in the moments of its use. The ways in which the Internet is currently understood and used are the upshot of historical (as an embodiment of Cold War military ideals or as a triumph of humanitarian values over said military ideals), cultural (through mass media in differing national contexts), situational (in institutional and domestic contexts within which the technology acquires symbolic meaning), and metaphorical (through the concepts available for thinking about the technology) shaping. This social shaping produces the object we know as the Internet, although the object that each of us knows is likely to be subtly and sometimes radically different. This way of thinking about technology owes its origins to the field of science and technology studies, and in particular the social construction of technology (SCOT) approach (Pinch and Bijker, 1987). A range of related approaches (including MacKenzie and Wajcman, 1985; Bijker et al., 1987; Bijker and Law, 1992; Bijker, 1995) has established that rather than being seen as the result of an independent

technical logic, the technologies that we end up with could always have been otherwise.

Social shaping implies that what the technology comes to be is the upshot of social processes of negotiation between different interest groups who view the advantages and disadvantages of the technology differently. The upshot of these processes involves the reaching of a closure around the definitions of the technology and the final version of the technology depends on which relevant social group's conceptualization wins out. The iconic example for this approach is the bicycle (Pinch and Bijker, 1987; Bijker, 1995). Although it might seem that the design of bicycle current today is simply the most efficient way for it to be, it can be shown that the self-evident design of the bicycle came about through processes of negotiation around the definitions of uses and problems of the relevant social groups. Technologies possess interpretive flexibility, such that not only do relevant social groups view the technology differently, but the technology could be said actually to be a different thing for each. Only in retrospect does the design that emerged come to seem self-evidently the best. Interpretive flexibility might seem to imply merely that perceptions of the artefact vary between different groups. Bijker (1987) acknowledges that 'artefactual flexibility' might have captured more explicitly the radical implications of different understandings for what the technology is.

The application of a social shaping approach to the Internet would imply that we conduct a detailed examination of the representations of the technology throughout its history, focusing on conflicting representations and the social groups that emerge from them. This approach might be able (if the model has general applicability) to unpack the processes that led to us being able to see the Internet in retrospect as either the product of military concerns or the triumph of a human will to communicate. Individual projects to set up community-based networks also could be analysed through the perspectives of the groups involved (Schmitz, 1997). The development of the Internet would be seen as the upshot of contingent social processes rather than the necessary outcome of either technical logic or human desire. The focus of this book is on the current state of the Internet rather than its history. Here the historical social shaping of the Internet is important in pointing to the problems of seeing the state at which the Internet has arrived as the result of a linear progress towards known goals, or as the embodiment of the concerns of any one group of people. Whatever the current uses of the Internet, it is useful to remember that they arise against a backdrop of negotiations about what the problem and the solutions might be. Considering the problems in this way makes it unhelpful to think of technical and social as two different things, as Bijker points out:

> A central adage for this research is that one should never take the meaning of a technical artefact or technological system as residing in the technology itself. Instead one must study how technologies are shaped and acquire their meanings

> in the heterogeneity of social interactions. Another way of stating the same principle is to use the metaphor of the seamless web of science, technology and society, which is meant to remind the researcher not to accept at face value the distinctions between, for example, the technical and the social as these present themselves in a given situation. (1995: 6)

In analysing the Internet, what might seem technical features or inherent characteristics are therefore open to ethnographic investigation. Technical and social become constructs which are performed in different settings, rather than *a priori* explanatory distinctions (Rachel and Woolgar, 1995). The Internet can usefully be considered as thoroughly social (Grint and Woolgar, 1992).

Grint and Woolgar (1997), while acknowledging that the development of technologies is a contingent process, take issue with the utility of accepting that closure then occurs around what the technology is. For Grint and Woolgar the capacities of the technology are never fixed, and apprehending what the technology can do is always a site for interpretive work. While Pinch and Bijker (1987) focus on the interpretive flexibility of the technology in the past, Grint and Woolgar take pains to situate it in the present. They do so via the metaphor of technology as text. While the design process involves developers in embedding their notions of what users are like into the machine, consumption involves processes of negotiation and interpretation. The users 'read' the technology text in ways that are subject to configured relationships with the producers of the technology and with the technology itself. Aberrant readings are always possible from inadequately configured users. The technology as text metaphor suggests a focus on processes of development and consumption, viewing the relationship between producers and consumers as mediated but not determined by the technological text. Rather than possessing inherent qualities, the technology text 'makes available' readings which users/readers interpret in context. This is not to say that contexts possess inherent qualities either. The pertinent features of the context are produced in moments of interaction with the technology. Grint and Woolgar's notion of the effects of technology is also thoroughly social. The effects which are recognized are the result of contingent social processes depending upon by whom, to whom and in what contexts the effects are represented. For the explanations of the persuasiveness of particular accounts of the effects of a technology we are encouraged to look at social processes rather than attribute their success to a faithful representation of the technology's qualities.

The technology as text metaphor focuses attention on the contingency of practices through which the Internet is made meaningful in both production and use. For Grint and Woolgar, though, focusing on the material, bounded artefact of the computer gave them an obvious starting point for their analysis. In their aim to deconstruct the notion that the artefact had inherent qualities or effects, they were able to focus on the social relations around that material artefact. They also had a temporal focus, in that they

could follow the progress of the new computer from inception through development to release on to the market. In applying the technology as text metaphor to the Internet some problems arise in deciding on appropriate field sites and sets of social relations to consider. While the computer hardware company in Grint and Woolgar's tale acts as a single point through which the technology finally delivered to the consumer must pass, with the Internet it is harder to identify any single track through which the technology is delivered to users.

Many groups of people, including hardware producers, Internet service providers, applications developers, developers of web pages and newsgroup contributors could be termed producers of the Internet. The Internet user might be found as a category in the work of Internet service providers, or of advertising agencies, or the marketers of new Internet-ready personal computers. We could design ethnographic studies to track the ways in which conceptions of the Internet user were embedded into particular access points, advertisements or pieces of hardware. We could investigate whom individual Internet users considered relevant producer communities, and then use that as a starting point to study the practices of those producers. Users of the Internet are often, however, producers too in terms of content. They (or at least, some of them) produce web pages, send email and post newsgroup messages. The concepts of producer and user are not routine ways in which social relations around the Internet are organized. The Internet is delivered at the point of buying a computer or signing up with an ISP, but it is also delivered up, and differently rendered, in every logging on, surfing session or newsgroup encounter. While Grint and Woolgar (1997) were relatively easily able to render the computer construction company as an adequate site for an ethnography of computers, the recognition of sites for the ethnography of the Internet is less straightforward.

The technology as text metaphor is therefore less straightforwardly applicable to the Internet than it is to bounded and located technological artefacts. It is however useful in focusing attention on the potential of a thoroughgoing constructivist approach to technologies that denies them an asocial core. It suggests that the making of the Internet can be explored through a detailed ethnographic attention to the ways in which the technology and its contexts are constructed. A first step is to disaggregate the Internet, and leave go of the idea that a study of the construction of *the* Internet is possible. An alternative to attempting to identify relevant groups in advance is to start with a particular use of the Internet and use that as a tool to explore the construction of sites of production and consumption without specifying them in advance. In this model, the ethnographer does not go to a single site or context and remain there, but focuses on travelling between sites as an analytic device. Chapter 3 describes an approach to ethnography of the Internet that embraces this ambivalence about the appropriate sites to study production and consumption of the Internet.

Research in the sociology of technology has shown that the properties we take to be self-evidently attached to technologies can more usefully be

thought of as the upshot of a contingent set of social processes. In the sociology of the media the categories of analysis are slightly different, notably in that users become audiences, but the preoccupations are broadly similar. Here the concern has been with the relationships between media texts and their audiences. The question, crudely put, is whether media texts possess inherent qualities such as ideological messages made available to and/or unthinkingly absorbed by audiences, or whether audiences actively construct meanings undetermined by the content of the media texts they view. Latterly, a prominent view has been that the production of a media text constructs a relationship with the audience, which actual audiences may either orient to, reinterpret or reject. The upshot, as in the constructivist approach to technology, is to focus attention on the social processes through which media texts are produced and consumed:

> Scholars of television and popular culture have increasingly realized that the meaning of a text, including its progressive or reactionary ideology, cannot be ascertained by textual analysis, but only by a knowledge of situated audiences and readers – hence the turn to ethnography in cultural studies recently. (Goodwin and Wolff, 1997: 142)

Ethnographic studies of production and consumption contexts have displayed the active processes of meaning creation that surround the media text, and have questioned the idea of a straightforward process of communication of ideas from sender to receiver. In his social theory of the media, Thompson (1995) stresses that understanding the media involves looking both at their content and at the ways in which they are produced and used. Thompson's understanding of the social context is more concerned with the circumstances in which media messages are produced and consumed than with the ways in which the media technologies themselves are shaped. There has also, however, been a recognition of communications media as technologies. In a parallel move to the social shaping approaches described above, Williams (1990) argues that television can be seen as both a technology and a cultural form. Williams proposes that television arose through particular sets of concerns, and its uses have developed in response to social concerns in ways that have come to seem natural but are far from being so. Viewing television as both technology and cultural form allows Williams to investigate the interrelations between the institutions that surround and produce television, and the detail of the content including the forms of programme produced, the flow of programming and the way in which the content of television is organized into a sequence, and the detail of the forms of address that the programmes contain. The breadth of this reach leaves no aspect of television as innocent, neutral or self-evident.

Williams displays the paucity of explanations that posit the medium as a cause of social effects. The uses of television and radio were far from obvious from the outset, but were actively developed by producers based on their understandings of the potential of the medium and the characteristics

of the audience (Scannell, 1996). For producers the audience is a category oriented to through various kinds of knowledge including ratings figures, surveys and focus groups, stereotyped portrayals of idealized knowledge and the use of personal experience and preferences. The audience is an imagined category that producers orient to in making their work meaningful (for example, Pekurny, 1982; Espinosa, 1982; Gill, 1993). The audience also acts as the 'money arrow' (Ettema and Whitney, 1994) which makes media production meaningful in an economic sense. The construction of the audience within production is a complex and situated practice.

'Audience' is therefore far from a straightforward category. If producers, whose livelihoods depend upon it, have trouble in knowing their audiences, the problems in knowing the audience for ethnographers are going to be even more acute (Hartley, 1987; Radway, 1988; Turner, 1996). Production is a relatively bounded pursuit. Groups of producers are often institutionally contained and separately located. They are therefore quite easy for an ethnographer to find (if not necessarily easy to access: Espinosa, 1982). Audiences, by contrast, are dispersed and fragmented in time and space (they do not group together within an institutional location and they only act as an audience for some of the time). It is, however, no less important to have a rich and detailed understanding of the ways in which they interpret media and media technologies. There is a commitment within media studies to focusing on television use as a part of everyday life (for example, Bausinger, 1984; Silverstone, 1992; Livingstone, 1998), and a similar approach has been taken to other information and communication technologies within domestic contexts (for example, Frissen, 1997; Silverstone and Hirsch, 1994). Bausinger suggests that 'technology in the everyday can only ever be grasped conjuncturally' (1984: 346), as a part of ongoing interactions within the home. It would therefore be artificial to separate out television as a topic for study. Such injunctions to study audiences *in situ* and as part of a multiplicity of ongoing interactions are theoretically pleasing, but hard to put into practice.

For ethnographers the problems of knowing the audience revolve around the difficulties of finding an appropriate site and conducting a study of practices that mainly occur in the private space of the home. Since living within a household for an extended period is largely impractical, applications of ethnographic approaches to the media audience have involved some creative adaptations. While retaining the ethos of fidelity to the processes of meaning construction *in situ*, ethnographic studies of the media audience have often dispensed with the concern of ethnography with holistic analysis. This is a strategic application of ethnography to a particular problem, and so is quite distinct from the anthropological conception of what it is to be ethnographic. Given the difficulties of extended participant observation in domestic settings, group discussions, television viewing sessions and extended interviews have been used to explore the ways in which audiences understand the medium and their audiencehood (for example, Morley, 1980; 1992; Lembo, 1997). Similar strategies could no

doubt be used to study the interpretive practices of Internet lurkers, if one could locate them in sufficient numbers. Interviews with Internet users have certainly proved informative (Turkle, 1995; Shaw, 1997; Clark, 1998; Markham, 1998), and could be extended further to include accompanied online sessions, allowing the interviewer to discuss interactions with the informant as they happen.

In sum, work in sociology of technology and in media sociology sustains a view of technologies, including communications media, as thoroughly socially shaped. Both propose that the content of media/technology is open to ethnographic analysis in production and use. Categories such as producer, user and audience are constructed through the practices of production and consumption. It is only through these practices that an understanding of the capabilities of the technology arises, in situated contexts. Research on television is particularly pertinent in a consideration of the Internet. In television it has been argued that the content carried is created by producers in relation to their understandings of both the audience and the technology itself. Television in this sense parallels the Internet, in that Internet content can be seen as thoroughly shaped by ideas of what the technology does and who the audience are, as Chapter 5 will illustrate. The settings in which television content is consumed are diverse and spatially distinct. In the Internet, however, the sites of production of content are also markedly dispersed as compared with both television and the technologies considered by Grint and Woolgar (1997). In two senses the users of the Internet are involved in the construction of the technology: through the practices by which they understand it and through the content they produce. The dispersal of sites of production fragments the notion of producer while the technology makes situated interpretations of the technology at least partially available to other users. These processes complicate the identification of appropriate ethnographic field sites.

Tracing complex connections

The first section of this chapter explored challenges to the 'reduced social cues' model of CMC effects. Even within organizational groups, the attribution of social effects to technical characteristics has proved controversial. The recognition that 'effects' are different in different contexts goes some way to explain the often conflicting results that experimental studies produced. Schmitz and Fulk (1991) and Fulk (1993) propose that CMC be seen as socially constructed rather than a given technology with foreseeable effects. As Fulk et al. (1992) point out, organizational contexts vary widely, and so the apparent impacts of CMC might be expected to vary widely. By extrapolation, we might also expect that studies of CMC use in organizations might differ radically from studies of its use in other social settings. The Internet, and particularly the social context of group forums like newsgroups and MUDs, has complicated relationships with diverse

organizational and domestic settings. The Internet can also, as argued in the second section of this chapter, be seen as a cultural artefact shaped by social processes in production and in use. The technology as text metaphor provides one way of exploring the producer/user relations enacted in the text and its interpretations. While the Internet might be seen as a culture in its own right, the meanings and perceptions which participants bring to that culture may be shaped by the settings from which they access the Internet and the expectations that they have of it. As Baym (1998) points out, the online and offline worlds are connected in complex ways. The space in which online interactions occur is simultaneously socially produced through a technology that is itself socially produced:

> CMC of course, is not just a tool; it is at once technology, medium, and engine of social relations. It not only structures social relations, it is the space within which the relations occur and the tool that individuals use to enter that space. It is more than the context in which social relations occur (although it is that too), for it is commented on and imaginatively constructed by symbolic processes initiated and maintained by individuals and groups. (Jones, 1995: 16)

The Internet can be seen as textual twice over: as a discursively performed culture and as a cultural artefact, the technology text. In neither sense are its uses and interpretations determined by the text. The distinction between Internet as culture and as cultural artefact is a heuristic device for thinking about the indeterminacy of the Internet. It is not, however, to be taken as a distinction that is real in the experience of users of the technology, or as a straightforward reflection of an online/offline boundary. The distinction between culture and cultural artefact replays the real/virtual distinction and if accepted unproblematically may obscure the processes through which this boundary is itself constructed. The heuristic distinction acts as an incentive to finding an ethnographic approach to the Internet which takes both aspects into account and explores the connections between them. Treating the Internet as a cultural artefact interrogates the assumptions which viewing the Internet as a site for culture entails, and highlights the status of the Internet as itself a cultural achievement based on particular understandings of the technology.

It could be argued that existing ethnographic approaches to the Internet as culture have neglected some important aspects of the construction of the Internet as cultural artefact, through their focus on the bounded social spaces of the Internet. This chapter has argued for the contribution of ethnography to the understanding of the Internet both as culture and as cultural artefact. It appears that emphasis can usefully be placed on the production of meaning in context, where context is understood as both the circumstances in which the Internet is used (offline) and the social spaces that emerge through its use (online). Stone (1991) describes the online and offline as both being 'consensual loci', each with their own locally defined version of 'reality'. We know very little about the ways in

which these two contexts are connected. On one level this is a practical problem: the settings where we might observe Internet culture are different from the ones in which we would observe the Internet in use. One setting is virtual and the other a physical place. It is far from straightforward to design a study that encompasses both aspects of the Internet (Star and Kanfer, 1993). While it might be relatively straightforward to observe and participate in a newsgroup, it is more difficult to visit users of that newsgroup individually and form judgements of the context in which their use of the newsgroup arises. Similarly, while studying users of the Internet in their working or domestic environments is potentially straightforward, it is harder then to form a prolonged engagement with their online activities since this is generally construed as a solitary activity. The practical problem of designing an ethnographic study of the Internet is also a statement about methodological foundations. The 'problem' is a result of a narrow conception of ethnography, focused on prolonged engagement in a bounded social space, whether that be a village, a club, a computer company or a newsgroup. The next chapter explores some strands from current ethnographic thinking that suggest an ethnographic approach to the Internet beyond bounded social locations. This approach plays on the profound ambivalence about the appropriate sites for investigation that stems from seeing the Internet as textual twice over.