Online research introduces new ethical issues inherent to the medium. In this chapter we provide a case study of online research in action, focusing on the ethical issues of conducting qualitative research within virtual environments. The case study provides an example of how research can be conducted within virtual environments with the consent of research participants and their community, without compromising their confidentiality, violating their assumptions of privacy or infringing upon their copyright entitlements.
focus is on the process, rather than the results of the research. Research findings from this study have been published and presented elsewhere (Roberts, Smith, & Pollock, 1996, 2000, 2002).

The chapter begins with a brief overview of the research conducted and the research setting. This is followed by an exploration of the ethical issues encountered during the research process. Issues addressed include the blurred distinction between public and private space in virtual environments, the identification of researchers within virtual communities, processes for obtaining informed consent, protecting the confidentiality of research participants and their online personae and maintaining the security of data collected. A further issue to be addressed is how to respond to research participants who indicate they are suffering from or exhibit psychological problems.

Researching ethically within virtual environments requires a familiarity with, and adherence to, the netiquette and social norms of the environments of interest. Through this case study, we highlight the conduct of ethical research within virtual environments with the consent of the individuals and their community, without compromising their confidentiality, violating their assumptions of privacy or infringing upon their copyright entitlements.

OVERVIEW OF RESEARCH

The case study presented here is based on a Grounded Theory (Glaser & Strauss, 1967) study of social interaction in MOOs. This study was part of a larger research project examining how characteristics of the individual interact with characteristics of computer-mediated communication (CMC) to enable socio-emotional communication and behavior in text-based virtual environments (Roberts, 2001). A research proposal was submitted to Curtin University of Technology’s Human Research Ethics Committee prior to the research commencing.

THE RESEARCH SETTING

The study examined social interaction in MOOs, and was also conducted largely within them. MOOs are socially oriented text-based virtual environments. Individuals from disparate geographic locations can connect simultaneously to a social MOO to engage in synchronous (“real time”) text-based (typed) communication with one another.

A MOO consists of a database of rooms, characters and objects (Curtis, 1992; Curtis & Nichols, 1993). All MOO users have access to object-oriented programming to create and modify the virtual environment. MOO users can create descriptions of buildings and objects and write computer programs for use within the environment. MOO users “own” the objects they create and can allow or deny other MOO users access to these objects. Characters, buildings, objects and written programs modify the database, meaning the items continue to “exist” even while the user is not logged in.

MOOs vary in their purpose, size and requirements for identifying information. Allen (1996a) identified four genres of MOOs: social, adventure, professional and special interest. Most MOOs have a stated theme that newcomers are encouraged to read and are expected to adhere to. The number of individuals using a MOO varies widely. MOOs range from private ones set up for the use of owners and their invited friends to large public MOOs that are accessible to anyone with an Internet connection. While most MOOs are accessible by the general public, some have particular requirements for membership. For example, Media MOO is for media researchers only (Bruckman & Resnick, 1995) and MOOSE Crossing is specifically for children (Bruckman, 1997). The MOOs selected for this research were all publicly accessible social MOOs.

Upon connecting to a MOO, an individual is greeted with a welcome screen that provides an introduction to the MOO and details for obtaining...
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guest and permanent characters for use on the MOO. Typically, a newcomer is provided with a temporary character for use during the session that identifies them to other MOO users as a “guest.” Guest characters are by default assigned the gender “neuter” and have only basic descriptions. Upon connecting as a guest, the individual is invited to complete a tutorial that provides information on using MOOs and covers basic commands. A guest may request a permanent character on a MOO by providing their e-mail address, and the name they wish to use for their character.

Once a permanent character has been assigned, the character can be modified to suit the individual’s requirement. Character names, descriptions and gender can be changed at will. In addition to the primary character, many MOOs support the creation of “morphs,” alternative characters that also can be gendered and described. A “home” can be “built” and “furnished” (programmed) for the character and “possessions” (objects) can be created.

Commands are used to communicate and move around within the MOO. Basic commands are used to “walk,” “teleport” and “look” at rooms, objects and characters. “Say” and “whisper” commands allow users to communicate with other characters present in the same “room,” while the “emote” command can be used for expressing actions and feelings. “Paging” and “remote emoting” are used to communicate with characters, who are currently logged into the MOO but are not in the same “room.” These text-based MOO worlds where all communication takes place in ASCII text provide the context for this study.

THE STUDY

As noted, this research was conducted with MOOs as not only the object of study, but also as the context in which the study was conducted. Active data collection within the communities of interest is consistent with recommendations by community researchers (Fenwick, 1999; Thompsen, Straubhaar, & Bolyard, 1998) to conduct research within, rather than on, virtual environments. The “wizards” (administrators) of the MOOs where research was conducted were contacted and permission sought and obtained, to approach and interview users within the MOO environment prior to the research commencing. A character called “Questioner” and a virtual interviewing room called “Questioner’s Retreat” were set up on each MOO.

A combination of passive and active data collection was used in this research. MOOs support synchronous CMC, enabling the use of online interviewing and participant observation. Sources of data for this research included online interviews, face-to-face interviews, participant observation, MOO documentation and postings to MOO mailing lists. The combination of active (participant-observation and interviewing) and passive (collection of postings to MOO mailing lists and MOO documentation) data collection techniques were used to strengthen the research. The use of multiple sources of data and methods is referred to as “triangulation” and increases the reliability and validity of Grounded Theory research (Glaser, 1992).

The role of participant-observer was adopted for this research. Jorgensen (1989) recommended the use of participant-observation when a phenomenon is relatively unknown, when insiders’ views differ from outsiders and when the phenomenon is not easily accessible by outsiders. Very limited psychological research had been conducted in MOOs prior to this research beginning. Anecdotal reports from users suggested that they had difficulty explaining their online lives to outsiders, and they felt that someone outside of the environment “just can’t understand” what they are experiencing. In addition, frequent sensationalist media attention to pornography and sexual activity on the Internet made users wary of outsiders’ motives in conducting research.
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An insider’s viewpoint is also important in gaining an understanding of the culture, language and reality of the participants. One way of achieving this is for the researcher to experience the phenomenon directly. Participant-observation decreases the likelihood of miscomprehension and inaccurate observations resulting from failure to understand the culture (Jorgensen, 1989). As MOOs have developed their own specific cultures, immersion in these cultures was essential to understanding the nuances of behavior.

In accordance with Grounded Theory methodology, theoretical sampling was used to select the MOO users interviewed. The first MOO users interviewed were selected for their availability. Categories that emerged from the coding of early interviews guided the selection of further research participants. In total, 58 individuals were interviewed about their MOO-ing experiences. Fifty-four interviews were conducted on eight social MOOs, using typed CMC. MOO users were contacted individually and asked if they would like to be interviewed about their MOO-ing experiences. Interviews were conducted in the “Questioner’s Retreat” or the research participant’s MOO room. Interviews were semi-structured and lasted between one and three hours. Each interview was logged with the permission of the research participant. A further four interviews were conducted face-to-face with local MOO users, audio recorded and later transcribed.

Data collection, data coding and analysis were conducted on an ongoing basis. The Non-numerical Unstructured Data Indexing Searching and Theorising (NUD*IST) program (NUD*IST, 1995) was used as a data management tool. Data were coded based on the constant comparison of data. Data collection and coding continued until saturation was achieved.

The outcome of the study was a substantive Grounded Theory of social interaction in MOOs. The theory provided a thick description of how individuals represented by virtual personae engage in social interaction within the MOO environment, and the effect this has on their offline lives. A stage model of social interaction in MOOs was developed. It details the stages an individual passes through in the process of integrating MOO use into their lives, as they come to terms with what initially appears to be an alternative reality (Roberts, 2001; Roberts et al., 1996).

ETHICAL ISSUES

Many professional associations provide ethical guidelines for the conduct of research. As researchers working within a psychological framework, we are guided by psychological codes of ethics for research. The Australian Psychological Society (APS) provides a code of ethics for member psychologists within Australia (APS, 1999). The three general principles guiding the code are responsibility, competence and propriety. Section E of the code details guidelines for the conduct of research. Similarly, the American Psychological Association (APA) provides a code of ethics covering research and practice for member psychologists in the United States. In August 2002, the APA adopted a new ethics code that will be published shortly. The five general principles guiding the code of ethics, as outlined in Draft 7 of the new APA “Ethical principles of psychologists and code of conduct” (hereafter referred to as the APA code) are those of beneficence and non-maleficence, fidelity and responsibility, integrity, justice and respect for people’s rights and dignity. More specifically, ethical standards for research and publication are outlined in Section 8 of the APA code (APA, 2002). These codes will be referred to, where appropriate, when discussing ethical issues that arose during this research process.

The APS and APA both recognize the emergence of the Internet as a new medium of relevance to members. The APA code specifically states that it applies “across a variety of contexts, such as in person, postal, telephone, Internet, and other...
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In 1999, the APS produced “Considerations for psychologists providing services on the Internet.” Despite this, the APS has not specifically referred to the Internet in its code, nor has it released statements relating to ethics in conducting research online. While the codes contain guiding principles for research, the translation of these principles into actions for conducting research in virtual environments is open to interpretation.

Our approach to the conduct of ethical research in virtual environments is based on the premise that all research should comply with the principles of ethical research as outlined in professional associations’ codes of ethics. When developing the research plan for this study, the question of how to translate ethical guidelines into ethical practice in virtual research became paramount. From initial explorations in virtual environments, a number of questions relating to the ethics of research online arose. Further issues were identified in the process of conducting the research.

For each ethical issue identified, the process of translating ethical guidelines into ethical practice involved a deliberation of the options available to the researcher and the likely impact on research participants, their communities and the research process. Central concerns in this process were maintaining respect for individuals, their online and offline identities, and their ownership of words.

Assumption of Privacy (Public vs. Private Space)

A major issue in developing ethical research procedures for use in virtual environment is determining the private versus public nature of the cyberspaces within which the research is conducted. The issue of assumption of privacy revolves around the blurred distinction between public and private space in virtual environments. For example, Lessig (1995) formed a typology of forms of association in cyberspace: association in public (newsgroups and bulletin boards), association in private (private chats) and association in construction (multiuser dimensions (MUDs)). However, there currently exists no general agreement over what constitutes public and private space in online environments.

Waskul and Douglass (1996) described the private/public distinction in virtual environments in terms of “publicly private” and “privately public,” noting that public and private are metaphorical labels based on the assumption that cyberspaces are like physical places (p. 131). In cyberspace, the defining of public versus private “space” may be reduced to a matter of accessibility. A cyberspace may be viewed as a public space as it is publicly accessible, yet interactions that occur within that space may be deemed by the participants to be private. Waskul and Douglass (1996) argued that researchers do not have the right to define spaces as public or private to meet their own research needs. Rather, account should be taken of the size and nature of the online forum and the intrusiveness of the study.

The most public form of communication on the Internet occurs in newsgroups, as anyone with Internet access can read these. Despite this, newsgroup postings can be, and frequently are, high in self-disclosure (e.g., Salem, Bogat, & Reid, 1997). Posters to newsgroups have varying expectations as to the privacy of their communication. In a survey of posters to sex-related newsgroups, nearly half of the respondents (47 percent) believed the medium to be private, while only 35.3 percent perceived their postings to be public or extremely public (Witmer, 1997). Similarly Reid (1996) argued that while Usenet postings are publicly accessible, it is “doubtful whether each author intends his or her words to be placed in the public domain” (p. 170).

Despite the varying perceptions of privacy by users of newsgroups, Bordia (1996) claimed the advantage of online research is that it can
“allow unobtrusive observation in a setting that is ethically defensible” (p. 149) on the basis that “presumably the participants were aware that their verbalisations were public domain” (p. 150). In direct contrast, Duncan (1996) argued that obtaining data without the express permission of the individuals involved is an invasion of their privacy.

Allen (1996b) differentiated between public and private spaces in MOOs. She defined public spaces as public rooms in the MOO that are accessible by all. In contrast, private spaces consist of private rooms created by users and that are only publicly accessible when and if the creator chooses to make them so. Based on this differentiation, she made the decision that public words and actions were available for analysis without the need for informed consent.

The presumption that online communication occurs in public space results in an anomaly in how research participants may be treated in equivalent settings in online and offline research. One pertinent example is psychological research on communication in support groups. Obtaining informed consent from research participants in offline support groups prior to the collection of data is required under current ethical guidelines. In contrast, where newsgroups are set up as support groups, individuals may neither be advised that their communication is being studied, nor may informed consent be obtained on the grounds that all postings are public documents (see, for example, Salem et al.’s (1997) study of a depression support group).

There are currently no clear guidelines for psychological researchers on what constitutes private versus public space in virtual environments, yet the distinction is important as it affects the rights of participants to be advised of the nature of the research, and to give or withhold their informed consent. This is an issue we struggled with prior to our research commencing. For the purposes of our research, we accepted the distinction of private and public spaces in MOOs proposed by Allen (1996b), but also recognized that even within MOO public spaces, private interactions occur (Waskul & Douglass, 1996). In our view, the public nature of some MOO spaces was overridden in importance by respect for the expectation of privacy by MOO users.

**Informed Consent**

Given our stance that respect for the expectation of privacy over-rides the distinction between public and private spaces, the question arose whether there was a need in our research for informed consent for both active and passive data collection. Both ethical codes state that informed consent should be (except in specified circumstances) obtained from research participants. The APA code (2002) specifically states in standard 3(10) that “When psychologists conduct research … in person or via electronic transmission or other forms of communication, they obtain the informed consent of the individual or individuals” (emphasis added) (p. 7).

The need for us to obtain informed consent from people to be interviewed in virtual environments (active data collection) was straightforward. However, the method of obtaining this consent was more contentious. Obtaining informed consent in virtual environments is more problematic than in offline settings. Obtaining informed consent in offline settings usually involves providing potential research participants with an information sheet (including information on the research, the researchers, participants rights, including the right to withdraw, and confidentiality), discussing the research and answering any questions and obtaining a signature on a consent form. In online research, these procedures cannot easily be followed, as the researcher and research participants are frequently geographically dispersed. In addition, research participants may be reluctant to divulge details of offline identities necessary for the posting of information and consent forms.
Jacobson (1999) outlined three methods for obtaining informed consent for online research where the completion of documentation offline is not possible. The first method involves obtaining informed consent by e-mail. Signatures in a digitalized form can now be transmitted by e-mail, although many research participants may not have access to the technology required to do this. A further disadvantage of this method is that research participants are required to provide their e-mail address, constituting a link to their offline identity. The second method involves obtaining implied consent. Implied consent is inferred when an individual takes part in a research activity, after reading information about it. For example, surveys on the WWW can be set up so that the gateway to a survey is an information page that requires interested individuals to click on a button to indicate they have read the information and consent to taking part in the research. The third method involves the creation of an electronic document through a computer, logging the information supplied by the researcher and the consent of the research participant.

Selection of a method for obtaining informed consent from both the community and individuals will necessarily be dependent upon the virtual environment used, the level of anonymity required by research participants and their access to high-level computing facilities.

In our research, the wizards of the selected MOOs were contacted and permission sought and obtained to approach and interview users within the MOO environment. Obtaining signed consent forms was not feasible as most research participants resided overseas and signatures cannot be easily transmitted electronically. Research participants interviewed on MOOs were provided with an information sheet sent via MOO-mail when their participation in the study was requested. Informed consent was obtained in text, prior to the interview, and the opportunity was provided for individuals to “ask” (type) questions about the research. This procedure was logged (similar to the third method described by Jacobson, 1999). Research participants interviewed face-to-face were given an information sheet and signed consent forms were obtained. We recommend that, regardless of the method used, the information about the research be presented in a format that the research participants can keep and refer back to at any time before, during or after their research participation.

In our research, where an individual was identified through questioning as under the age of 18 years, parental consent was obtained by e-mail before the interview commenced. Nosek, Banaji and Greenwald (2002) noted the difficulty in controlling children’s access to research as children can self-present as adults online. No additional measures were taken to verify the age of research participants in our research. This is an area that needs to be addressed in future research.

The issue of whether to obtain informed consent for passive data collection was more contentious. The APA code exempts naturalistic observations and archival research from requiring informed consent, where no harm or distress is likely to come to those researched and where their confidentiality is protected. On the surface, the use of archived newsgroup and MOO group postings would seem to fall within these boundaries. However, research is emerging that questions this assumption.

King (1996) highlighted the potential for psychological harm to members of online groups, where research is conducted and published without the prior knowledge and informed consent of participants. Where there has been the expectation of privacy within a group (however misinformed that expectation may be), the individual may feel violated upon hearing of, or reading the results of, that research. Interpersonal dynamics of the group may change as the expectation of anonymity is removed. King (1996) cited the example of Finn and Lavitt’s (1994) journal article on a self-help group with sexual abuse survivors. In the article the group was identified and postings
by group members were used verbatim with only the names changed.

An alternative view was expressed by Sixsmith and Murray (2001). They argued that through the actual process of requesting consent to use archived material, researchers may alter group dynamics. However, they also question the ethics of researchers using material without consent, when the author of that material may be opposed to the purposes of that research.

Reid (1996) argued that even where informed consent is obtained in virtual environments, care needs to be taken to fully inform potential research participants of the possible consequences of their research involvement. Reid (1996) noted the possibility that her research into a MUD for survivors of sexual abuse contributed to the social disintegration of the MUD through “public scrutiny and personal exposure” resulting from participation in the research (p. 172).

Robinson (2001) developed a model that goes some way towards addressing the issue of whether to obtain informed consent for passive data collection. The model provides steps for deciding whether or not existing online data requires consent before use. The model is based on three pieces of information: whether the data is publicly accessible, whether data has a gatekeeper (e.g., moderated forum or password protected data) and the expectation of privacy by users. Where data is asynchronous, publicly accessible and does not have a gatekeeper (e.g., newsgroups), informed consent for use is not required. Where there is a gatekeeper, data is not publicly accessible (e.g., e-mail groups) or there is the expectation of privacy, consent should be obtained from respondents prior to use.

The wishes of the community also need to be considered when addressing this issue. The APA code (2002) states that, “Before deciding that research does not require informed written consent of research participants, members must consult with colleagues or gatekeepers and ethics committees as appropriate” (p. 6). In MOOs, the wizards are the gatekeepers. Some MOOs explicitly request researchers obtain permission for the use of material. For example, the first screen seen when logging on to LambdaMOO states:

**Notice for Journalists and Researchers**

The citizens of LambdaMOO request that you ask for permission from all direct participants before quoting any material collected here.

Given the potential for harm, when informed consent is not obtained, and the stated preference for obtaining consent in some MOOs, in our research we adopted an approach to the use of MOO mailing list postings, based on respect for individual’s right to say how their “work” is used. Permission was requested and obtained from individuals for the use of all postings included in the analysis. Quotes from postings have been used anonymously in all publications resulting from this research, except where individuals have requested that identifying information be included.

**Identification of Researchers in Virtual Communities**

The data collection methods used in this research included participant observation by the first author. The role of participant-observer can vary according to the degree and type of participation in the community studied, and the covert/overt nature of the participation (Spradley, 1980). For this research the role of “participant as observer” (Gold, 1969) was adopted where the researcher was clearly identified to research participants. The researcher’s presence on MOOs as a researcher was overt. Characters were clearly identified as research characters by the pseudonym “Questioner.” When a MOO user used the “look” command to look at “Questioner” they saw:
Questioner raises her head from the keyboard to smile at you. She is probably going to ask you lots of questions about your MOO-ing experiences... She is awake and looks alert.

Other researchers have also used the ability to create and describe characters and objects in MUDs and MOOs to alert people to the presence of a researcher. Allen (1996b) identified herself as a researcher in her character description. Reid (1996, p. 170) used a “virtual approximation of a visible tape recorder” to alert MUD participants that sessions were being logged.

The degree of participation in MOOs was “complete participation” as categorized by Spradley (1980). That is, the researcher was researching in situations in which she was already accepted as an “ordinary participant.” The roles of participant and observer are potentially conflicting. Conflict between the roles can result in research that lacks objectivity, is subjective and influenced by personal feelings (Jorgensen, 1989). To maintain a level of objectivity and to further separate the roles of participant and researcher, personal involvement in the virtual communities studied was limited for the duration of the research. Separate research identities were created, clearly identified and used for research purposes only.

Given the identity deception possible on MOOs and the strong negative reaction many MOO users have when they feel they have been deceived, a decision was made prior to the research commencing to adopt an open approach, linking social (“ordinary participant”) and research identities. Where a social character already existed on a MOO, the research identity was created as a “morph” for that character. This meant that social and research identities were listed as “aliases” on the character and the connection between the two was overt. When requesting interviews with MOO users that had previously interacted with one of the researcher’s social MOO identities, the MOO user was directly advised of the researcher’s social identities. New characters (with research identities only) were set up on MOOs where no social character existed. The open approach and linking of identities demonstrated respect for individuals, increasing the information they had in terms of giving informed consent to participate in the research.

Protecting Anonymity

Many online users adopt a pseudonym (or pseudonyms) for use in virtual environments, which on the surface appears to provide a high level of anonymity to the individual. It can be argued that research involving pseudonymous characters is exempt from regulations governing human subjects as “true” or offline identities are not known (Jacobson, 1999). However, many factors act to decrease the level of anonymity a pseudonym provides. First, some individuals chose not to use a pseudonym and use their own name. In some cases, individuals use pseudonyms that are nicknames and may be recognizable by others who know them offline. In online settings identifying information about offline identities may be self-disclosed or actively sought (Allen, 1996b; Jacobson, 1996). The same pseudonym may be used in a range of online environments that vary in their requirements for offline identification details (Jacobson, 1999). The combination of these factors means that researchers cannot assume that pseudonyms provide adequate protection for offline identities.

Attempts to verify the offline identities of online pseudonymous characters are hindered by the use of some pseudonyms by more than one individual, and the possibility that more than one person may have access to, and use, a single pseudonymous character (the “typist problem,” Jacobson, 1999). However, as Waskul and Douglass (1996) argued, the degree of anonymity conferred in these virtual environments does not reduce the ethical requirements for researchers.
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to protect the anonymity of research participants and virtual interaction settings.

Consideration should be given to protecting the anonymity of online pseudonyms, not only for their possible linkages to offline identities but also in their own right. Pseudonyms themselves gain reputations over time. To maintain the anonymity of research participants, Sixsmith and Murray (2001) recommended all identifying information (including pseudonyms) in messages used in research publications be removed, in addition to information identifying the source of the message (e.g., newsgroup names). However, the practice of replacing existing pseudonyms with other pseudonyms in research materials confers little additional protection to the existing pseudonym, when text searches can be used to identify source documents (Allen, 1996b).

Given the need to protect both pseudonyms and offline identities, and the possible linkages between pseudonymous online and offline identities, the greatest protection to the identity of research participants is afforded by keeping both “real-life” names and online pseudonyms confidential. For our research the anonymity and confidentiality of research participants was maintained. The desire for anonymity of both individuals and their MOO characters were respected. Virtual research participants were not asked for their offline (“real-life”) name, address or contact number. Neither MOO nor offline names have been used in any presentations or publications resulting from this study. There were two exceptions to this. First, some individuals specifically requested their postings were to be used with identifying information. Second, one individual, when approached for permission to use a quote from their interview as a heading in a conference paper, requested that the quote be attributed to their MOO name. For both these exceptions, the preferences of the research participants to have their words attributed to themselves were respected.

To provide protection for members of lists from which postings (whether used anonymously or identified) were used in this research, excerpts from postings included in all forms of written reports identified neither the name of the mailing list nor the MOO on which the mailing list was located. While it is still possible that a determined individual could track down the source of a quote from a posting, the ease of which this may be done is greatly hindered by excluding the mailing lists and MOO identifiers.

Ownership of Words

In trying to determine the ownership of electronic messages, we are entering murky legal waters. It is still unclear whether the individual who authored a message, the community to which it was sent or anyone who has access to the message is the owner of the electronic message (Sixsmith & Murray, 2001). Electronic postings may be considered original works protected by copyright, although this has not yet been legally tested (Ardito, 1996; Sixsmith & Murray, 2001). If informed consent is not obtained to use electronic messages, copyright provisions suggest that they should be referenced in the same way as paper documents. Researchers who neither obtain informed consent nor reference the material they use risk violating both ethical and copyright standards.

We concur with Sixsmith and Murray (2001) that “Seeking permission empowers people to choose whether they want their words used within a research publication and whether they would like to be credited” (p. 430). In our research, we sought permission for the use of all electronic postings. Most individuals chose to have their postings used anonymously, but some, as described above, chose to have the material attributed to either their pseudonym or offline name. We respected the right of individuals to make this choice and complied with their wishes.

In allowing the author of the posting the decision over the use of their posting, we have privileged the author, rather than the community or reader, as the “owner” of the message. How-
ever, we recognize that the community also has a stake in the ownership of the message, and their preference may be to not be identified. Out of respect for this, the source of postings (name of the mailing list and name of the MOO on which the mailing list is located) was not included in research publications. We deemed our potential ownership of messages as readers to be less important than that of the individual author or the community.

**Responding to Psychological Problems or Distress**

The researchers for this study are psychological researchers. Humphreys, Winzelberg and Klaw (2000) outlined the issues involved in psychology professionals’ involvement in online settings, noting the absence of ethical guidelines covering psychologists’ behavior in online groups. The major issues they identified were establishing and maintaining role definitions. Identifying oneself as a researcher once within an online group does not mean that absent or future members of the group are also informed of the researcher’s role. For example, notification of research being conducted by posting to a group does not alert new group participants that research is being conducted (Sixsmith & Murray, 2001). There is a need to identify the researcher and restate and clarify the role of the researcher on an ongoing basis.

When research is conducted in areas that require individuals to introspect upon their behavior, there is the potential for research participants to confuse the role of the researcher with that of a therapist. An example of work where the line between research and therapy created role confusion is a study by Holge-Hazelton (2002). This study involved free association narrative interviews of young people with diabetes. Holge-Hazelton (2002) noted the problem that arose with one research participant when clear boundaries were not set on the duration of the contact between researcher and research participant.

In our research we delimited our role in the MOOs to research only. Prior to the research beginning, the first author consulted with a senior staff member, who is both an academic and a counseling psychologist, about the most appropriate action to take if a research participant raised concerns about their own Internet-related behavior or expressed other forms of psychological distress. The decision was made to advise any such individual to contact a registered psychologist or counselor in their local area to discuss the issue, but not to make referrals to specific professionals. We recognize that this course of action was not ideal, as it placed the onus on the individual to seek help. In offline research, where research participants live within a discrete geographical area, it is possible to set up specific referral arrangements. In online research such as this, the diversity of locations of research participants (both within and across countries) makes it impossible.

No attempt was made to offer counseling online by the researchers or other parties. Although we are psychological researchers, we are not clinical or counseling psychologists and are not qualified to provide therapeutic services. Even if we were, the provision of online psychological services is in its infancy and has yet to prove its efficacy. Furthermore, while the APS code (1999) states that: “Members must anticipate the subsequent effects of research participation and provide information on services available for participants to alleviate any unnecessary distress that follows from their participation” (p. 7), it specifically states that “Members must not engage in other professional relationships with research participants in relation to resolving any such distress” (p. 7).

**Returning the Research Findings to the Community**

The APS code (1999) states “Members must provide an opportunity for participants to obtain appropriate information about the nature, results,
and conclusion of the research” (p. 7). This can be a difficult process in virtual research unless contact details (either e-mail address or name and physical mailing address) for research participants are collected. In our research, we recorded the MOO pseudonyms used by research participants. Following the initial analyses and write up of research findings, all MOO users who had participated in the research were sent a MOO-mail that contained the WWW address of a site containing a summary of the research findings. The Web-site address was also posted to mailing lists on MOOs. Participants and other interested MOO users were invited to provide feedback on the research findings. The feedback obtained was incorporated into the research findings. This process not only meets the ethical requirement to provide research participants with information about the outcome of the study, it also demonstrates respect for the individuals who participated in the research. In addition, the feedback obtained also strengthens the validity of research findings.

Maintaining the Security of Data Collected

The APS code (1999) states “Members must make provisions for maintaining confidentiality in the access, storage and disposal of research data” (p. 7). Maintaining confidentiality and security of data collected in computer-mediated research poses unique difficulties. In online research, confidentiality relies upon data security. Confidentiality may be breached at the site of data collection, during transmission of data or in the storage of data. Sites at which data is collected may not be secure. For example, wizards on MOOs can monitor all activity and access data stored within their MOO. This can include “listening in” on interviews conducted online. The use of surveillance tools on MOOs by users other than wizards is also possible. Confidentiality of data may be breached during data transmission, where another party intercepts data (Nosek et al., 2002). Possible interceptors include, but are not restricted to, the service provider of the research participant or researcher. Employers may also monitor employees’ e-mail and Internet usage (Sipior & Ward, 1995; Weisband & Reinig, 1995). Confidentiality of data may be breached during storage of data, where hackers may access files stored on unprotected or poorly protected computer systems.

In our research in MOOs, we took several steps to increase the security of data collected. The biggest risks to breach of confidentiality were at the data collection stage. In MOOs, commands exist to “lock” rooms and to sweep for surveillance tools. The need to lock the room during interviewing soon became apparent, when another MOO user chose to teleport in uninvited during one interview. Before all future interviews were conducted in the researcher’s room, it was swept for bugs and locked. While it was possible to take precautionary measures when interviews were conducted within the researcher’s room, this was not possible where research participants requested that interviews be conducted in their own rooms. In these circumstances, the research participant had control over access to the room and interviews were suspended upon the arrival of any third party.

All data collected (including interview logs) were stored on a password protected site on a university server. While a copy of the information sheet for the research was created as an “object” on the MOO and located on the research character in the research room, no actual research data was held on the MOO itself. This was a decision made in recognition of the potential for breaches of confidentiality inherent in the MOO environment. Online researchers need to provide the most secure forms of data collection, transmission and storage possible, aiming to minimize the risks of unauthorized persons gaining access to research data at any stage of the research process. The procedures used to obtain this will differ according to the virtual medium used.
CONCLUSION

Our approach to the conduct of ethical research in virtual environments is based on the premise that all research should comply with the principles of ethical research as outlined in professional associations’ codes of ethics. In the absence of specific guidelines for online research, we recommend researchers be guided by the principles outlined in the code, adapting guidelines for use in virtual environments as necessary.

Useful sources of information in identifying ethical issues specific to virtual environments are current researchers in the field, human research ethics committees and IRBs. We acknowledge that members of human research ethic committees and IRBs may have limited knowledge of the nature of online research, but their level of knowledge is increasing as the use of virtual environments as the object of and/or method of research increases. The prior identification of ethical issues and the development of strategies for addressing them is aided by researchers’ familiarity with, and adherence to, the netiquette and social norms of the virtual environments that they are studying.

The adaptation of existing ethical frameworks for use in online environments requires careful consideration of the likely impact of adaptations on both research participants and the communities in which the research is conducted. The three stated areas of emphasis in this chapter—respecting individuals, their online and offline identities and their ownership of words—are not always complementary and provide a potential source of conflict between the optimal ethical treatment of individual research participants and their communities. For example, a decision to fully cite electronic sources, such as newsgroup postings, provides respect for the ownership of words of individuals and their copyright entitlements. However, such a decision may impact negatively upon other community members, who may feel exposed and experience a loss of privacy. Ethical dilemmas such as this highlight the need to develop ethically defensible strategies that balance the needs and offer protection to both research participants and their online communities.

In this chapter we have highlighted the need to identify and address ethical issues prior to research commencing, but also the necessity to adopt additional measures if new issues are identified during the research process. Allen (1996b) argued that research ethics for virtual environments “should be situated, dialogic agreements that develop over time between researchers and the participants of the research study” (p. 186). This leaves little protection for research participants unless these agreements are based on the principles of ethical research and are encompassed within an overarching ethical research framework.

All research conducted in virtual environments should be guided by ethical principles, with strategies adopted to ensure respect for individuals, identities and their ownership of words. In this case study we have attempted to provide an example of how research can be conducted within virtual environments with the consent of the individuals and their community, without compromising research participants’ confidentiality, violating their assumptions of privacy or infringing upon their copyright entitlements. While the strategies adopted to conduct research may vary according to the type of research and virtual environment, research conducted online must not be exempt from ethical considerations.

REFERENCES


Conducting Ethical Research Online


ENDNOTES

1 Human research ethics committees are the Australian equivalent of institutional review boards.

2 The human research ethics committee approved the research, but raised two areas of concern requiring clarification prior to the research commencing. These were (a) how informed consent could be gained via the Internet given that “Normally, legally, a signature is required for consent” and (b) consideration of whether data collected should be coded.

3 There were insufficient face-to-face interviews to be able to assess the equivalence of interviews conducted on MOOs and face-to-face. The equivalence of online and face-to-face interviews is explored further in Roberts (2001).

4 This was published in the December 2002 issue of the American Psychologist.