Internet research: privacy, ethics and alienation: an open source approach

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Abstract

This paper examines some of the ethical problems involved in undertaking Internet research and draws on historical accounts as well as contemporary studies to offer an analysis of the issues raised. It argues that privacy is a misleading and confusing concept to apply to the Internet, and that the concept of non-alienation is more resourceful in addressing the many ethical issues surrounding Internet research. Using this as a basis, the paper then investigates the Free/Libre and Open Source research model and argues for the principles of "open source ethics" in researching the online world, which includes a participatory and democratic research method.

Introduction

A complex medium containing surprising and unforeseen developments demands complex procedures and defies analysis on the basis of rules which have been set up in advance and without regard to the ever-changing conditions of history (Feyerabend, 2001).

[T]he very possibility of research depends on the good will of the populations studied. To needlessly alienate them by exploiting their online activities where consent and involvement might have been negotiated is not only disrespectful, but also destructive of the research enterprise (Bakardjieva and Feenberg, 2001).

The Internet has provided the researcher with new forms of social life that are remarkable in their diversity, accessibility and persistence, and which have excited researchers across many different disciplines (Castells, 2000a, b, 2001; Jones, 1999; Negroponte, 1996; Turkle, 1995). This social activity is predominantly manifested within discourse (Allen, 1996; Denzin, 1999, p. 114; Rheingold, 2000), articulated online within a textual substrate which the Internet facilitates in low-cost reproduction, instantaneous dissemination and radical decentralisation (Jones, 1999, p. 6; Poster, 2001, p. 262). Further, due to its digital substructure, the texts are stored in online repositories, Web pages, caches and so on, enabling easy accessibility and retrievability, and can be viewed later and easily manipulated without the loss or corruption of data (Sharf, 1999, p. 244).

The World Wide Web, built on a constellation of Internet technologies, is constructed from groups of decentralised Web sites which lie within open, unrestricted areas of access that are interconnected using hyperlinks. This "overt intertextuality" (Mitra and Cohen, 1999, p. 182) has the result that any user can access, view and download pages, as in principle every text is linked to every other (Mitra and Cohen, 1999, p. 183). This, combined with the persistent nature of the Internet's structure, can give rise to the *assumption* that all texts are created in a public domain or public sphere (Jones, 1999, p. 5; Mitra and Cohen, 1999, p. 183). However, this assumption is challenged by the growth of intranets and other secure network technologies, which can securely connect and restrict access to and from the Internet, creating a *discontinuity of interconnection*. Additionally, texts can remain in existence long after the author has forgotten about them, and can easily be replicated in multiple forms across the Internet, as seen with

the longevity of Usenet postings (Sharf, 1999, p. 246). There are also issues of copyright pervading the Internet that have yet to be fully resolved (Lessig, 1999; Vaidhyanathan, 2001; Litman, 2001; Berry, 2004b), particularly in regard to Web pages and other artefacts (Ess, 2001). All these copyright issues are challenged by the activities of online software development groups such as the Free/Libre and Open Source movements[1] (Stallman, 1999; Williams, 2002).

The technologically flexible, dialogical and fluid nature of the Internet, allowing users to post and read texts without restrictions, lends itself to being conceptualised as a vast public sphere. Yet this position is contentious (Bakardjieva and Feenberg, 2001; Bassett and O'Riordan, 2002; Herring, 1996; King, 1996a, b). Assumptions of the natural "public-ness" of the Internet contribute to some of the problems involved in undertaking Internet research, due to the loaded nature of terms such as "public" and "private" and the difficulty of applying them to the online world (Bruckman, 2001; Ess, 2001; Herring, 1996; Waskul, 1996). The concepts of public and private are highly contested in the offline world too. And so I use a minimal analytical conception of "private" and "public" throughout this paper, based on a distinction between a public realm of rational-critical communicative interaction contributing to inter-subjective agreement and a private arena of affective-communicative relations (Benhabib, 1992; Habermas, 1992).

This paper examines recent thinking on ethics and online research. It focuses particularly on how such research can best be managed within an ethical framework, which would allow the researcher to carry out academic research, but would avoid causing harm and distress to its subjects – the so-called "golden rule" (Allen, 1996; Herring, 1996, p. 44; Thomas, 1996a, b):

(1) never deceive subjects;
(2) never knowingly put subjects at risk; and
(3) maximise public and private good while minimizing harm (Thomas, 1996b, p. 53).

Despite the importance of these rules questions regarding the "human subject", there has been intense discussion and disagreement as to whether these should be applied in different disciplinary approaches to Internet research (Bakardjieva and Feenberg, 2001; Bassett and O'Riordan, 2002; Bruckman, 2001; Ess, 2001; Herring, 1996; Walther, 2002).

A more flexible approach to research ethics contributes positively to the ongoing questions regarding the ontological status of the Internet (Koepsell, 2003; Capurro and Pingel, 2002). Is the Internet a space in which embodied human beings interact (White, 2002)? Or is it a textual repository where authors deposit work (Bruckman, 2001)? Perhaps it is a structural controlling architecture functioning in a way analogous to law (Lessig, 1999). Is it a radically different virtual realm that we have yet to understand? Or is it none of the above? Clearly our answers to these questions will affect our methodological and ethical research frameworks. In this paper, therefore, I argue for "open-source ethics", and thus a heterogeneous approach to research ethics that leaves the question of the ontological status of the Internet open.

The Internet is in a constant state of flux and technical change. It seems likely that this will continue into the foreseeable future, and so ethical considerations and responses will need to adapt accordingly (Bakardjieva and Feenberg, 2001; Ess, 2001). Flexibility is therefore extremely important in any ethical framework constructed for online researchers (Bruckman, 2001; Ess, 2001; Herring, 1996). This is one of the key advantages of an open-source ethics, which enables the ethical framework to be adaptive and flexible to the needs of the research. Nonetheless, issues of privacy, confidentiality, informed consent and appropriation of individuals' life stories will continue to require urgent attention in the context of online research (Bakardjieva and Feenberg, 2001; Sharf, 1999, p. 245).

This paper intends to examine the ethics surrounding research into the Free/Libre and Open Source Software (FLOSS) movements and attempts to develop an ethical framework within which future research could be undertaken (Bakardjieva and Feenberg, 2001; Herring, 1996). The unique nature of the FLOSS communities will provide a useful example to demonstrate how the open-source ethics presented here can be usefully applied and contrasted with existing ethical position in the natural sciences, social sciences and humanities (Capurro and Pingel, 2002, p. 28).

First, some of the early sociological research projects that were influential to the ethics of social inquiry are discussed in relation to research ethics generally (Seiber, 1982). Second, I examine contemporary debates surrounding the ethics of Internet research and their application in the online research arena (Bakardjieva and Feenberg, 2001; Cavanagh, 1999; King, 1996b). These debates are contrasted to those of the humanities (Bassett and O'Riordan, 2002; Ess, 2001; Herring, 1996) and the concept of "alienation" that has been introduced by Bakardjieva and Feenberg (2001). Third, a description of the Free/Libre and Open Source movement is given together with an examination of the principles of an ethics of care (Capurro and Pingel, 2002). I conclude by drawing these streams together,

applying them with a concept of a non-alienating research ethics, to propose "open source ethics" which, it is hoped, will assist the researcher in developing an ethical framework for future online research practices (Capurro and Pingel, 2002, p. 28).

Research ethics

To help clarify the ethical responses of Internet researchers, Thomas (1996a) outlines a useful typology drawn from earlier debates in philosophy (Anscombe, 1958; Nozick, 1978). These are divided into deontological and consequentialist positions (Capurro and Pingel, 2002, p. 30; Thomas, 1996a, p. 109). Additionally, Ess (2001) highlights the fact that the debates over computer ethics can be contrasted more generally between deontological approaches, which tend to be European, and American arguments, which tend toward consequentialism (Capurro and Pingel, 2002, p. 30; Ess, 2001, p. 20).

Deontological positions are in essence "rule following". They are based on formally specified guidelines that assist the researcher in the conduct of research behaviour (Nozick, 1978; Thomas, 1996a, p. 109). The professional codes of ethics drawn up by the Association of Internet Researchers (AoIR) that outlines responsibilities for the activities of social researchers online is one example. Thomas (1996a) further subdivides deontological positions into "act-deontological" and "rule-deontological" (Thomas, 1996a, p. 109). The former are research decisions based on particularistic or situational judgments of value, drawing on shared principles to establish the proper course of action in a given situation. In the latter, research is guided by concrete, universal rules, such as "thou shalt not lie" (Thomas, 1996a, p. 109).

In contrast, a consequentialist (sometimes called "teleological" or "Utilitarian") position operates from the premise that ethical behaviour should be determined by the consequences of an act (Anscombe, 1958; Thomas, 1996a, p. 109). Consequentialists hold that the goal or end of an act should be that which results in the greatest social good or the least social harm (Capurro and Pingel, 2002, p. 30). An example of this is when researchers justify gaining access to "deviant" research settings by deception on the basis that their work contributes to the public good. Online researchers might justify this deception by stating that it is the only way to obtain information on an important issue (Thomas, 1996a, p. 109).

Some famous examples of the problems found in early sociological inquiry include one of the first controversies to break out over research ethics. This project was carried out in 1958 in a study at Cornell University looking into participatory democracy in a local community and used a consequentialist ethics (Allen, 1998). The controversy (and its unanticipated best-selling book, *Small Town in Mass Society*) was due to the ease with which research subjects could be identified by the townspeople after the study had been completed. The book, which referred to the town of Candor by the pseudonym "Springdale", exposed the political activities of a group of businessmen who ran the town behind its "façade of folksy democracy" (Allen, 1998). Springdale/Candor believed itself to be a proud, independent self-reliant town, scornful of urban society. However, the research pointed out that the town relied heavily on federal and state intervention and was pervaded by mass culture. As they elaborated Springdale/Candor's political and social structure, the researchers described members of the community and their various roles. Although individuals were anonymised in the presentation of the results, identities were nevertheless still discernable. The book became a local bestseller and a source of shock and outrage among residents. Indeed, an effigy of the chief researcher was later burnt in protest by some of the town members (Allen, 1998).

Another infamous sociological controversy surrounds Laud Humphreys' research into sexual encounters between anonymous men (Seiber, 1982, p. 2). Humphreys' 1970 study *Tearoom Trade* (a euphemism for sexual acts in public toilets) raised the question of social science research in a public area (Thomas, 1996b, p. 1). Humphreys posed as "watchqueen", a loitering voyeur and lookout, waiting in public toilets for opportunities to study brief sexual encounters between anonymous men. In the course of the study, he noted license plate numbers and a year later tracked participants to their homes, which he then visited posing as a social health researcher. In their homes he conducted private interviews that provided more information than was possible during covert observation of their homosexual encounters (Thomas, 1996b, p. 1). When the study was published, the details given made it possible to identify his research subjects. This controversy led to arguments over Humphreys' research and ended with the sociologist, Alvin Gouldner, assaulting and hospitalising him. Gouldner was later stripped of his professorship at the sociology department at Washington University, and the entire episode eventually led to the closure of the department. This study continues to illustrate controversial ethical issues of the violation of participants' privacy. In this

case, Humphreys cited "situation ethics", believing general rules were less important than the requirements of the particular situation. Nonetheless, Humphreys' methodology was considered ethically dubious due to his use of deceit in the course of interviewing the research subjects and for subsequently publishing too much research data without sufficient safeguards to protect the identity of these research subjects (Thomas, 1996b, p. 1).

Humphreys' research and the Cornell University research were conducted predominantly within the public sphere, and assumed that only minimal research ethics applied (Allen, 1998). This research demonstrated that ethical issues could be raised even when data from public areas is used for research, especially if carried out without consideration for the research subjects themselves. These early sociological research projects highlighted the need for an ethical framework to assist research inquiry and the importance of guidelines for regulating the activities of the researcher in order to protect research subjects (Seiber, 1982, p. 3). They also provided some indication of how a lack of ethical responsibility can result in harm and distress to the research subjects unless care is applied when gathering, analysing and publishing research results. They raise important questions: is it ever justified to act contrary to the interests of subjects in order to obtain valuable knowledge? Should researchers be allowed to spy on subjects or study illegal behaviour? Are there scientifically valid ways to investigate this behaviour without these risks? (Seiber, 1982, p. 4).

These debates resulted in ethical research codes of the types published by the American Psychological Association in 1953 and the American Sociological Association in 1969 (Seiber, 1982, p. 4). The National Commission further strengthened these in the 1970s, for example in the Belmont Report for the Protection of Human Subjects of Biomedical and Behavioural Research in 1979 (Walther, 2002, p. 3). In the era of online research, the Association of Internet Researchers issued research guidelines in 2001 (Association of Internet Researchers, 2001). But these guidelines for Internet research have been controversial, particularly the assumption of the Internet as a "space" and the existence of an online "human subject" (Bakardjieva and Feenberg, 2001; Bassett and O'Riordan, 2002; Bruckman, 2001; Elgesem, 2001; King, 1996b; White, 2002).

These debates raise questions about the ethical issues surrounding research in public areas, which are similar to those currently debated about the "publicly-private" (Waskul, 1996, p. 131) nature of online interaction. They also raise the

importance of ethical justifications and considerations emerging early in the research process and continuing to be instructive to actual and potential online researchers. As Reid (1996) argues:

> ... to deny the existence of ethical pitfalls in social research is irresponsible; to decide that since they exist they are unavoidable is equally so (Reid, 1996, p. 173).

Online research

This section surveys the existing literature around online research and presents some of the arguments that surrounds research activities on the Internet. Many of the issues raised continue to be contested, but it is important that the researcher has an understanding of the key concerns before undertaking online research in order to address ethical issues as they emerge (Ess, 2001).

The Internet is a technically accessible medium, and is often equated to a public sphere. However, the question of whether technical accessibility equals publicness is problematic. The "technological point of view" (Frankel and Siang, 1999, quoted in Bakardjieva and Feenberg, 2001) simplifies the online relationship to one of a single mass public sphere, which is equally shared among the entire online community (Herring, 1996). However, the online status of public and private is ambiguous and contested (Bakardjieva and Feenberg, 2001). For example, one key aspect of online communities is that they are bound by mutual respect and trust among their members. This involves norms of confidentiality and respect for privacy within the group (Elgesem, 2001, p. 25).

Indeed, access to many group discussion sites requires the user (or researcher) to actively subscribe to e-mail lists in order to have access to the list history and online discussion forums. This has led to a call by King (1996b) and others to respect the "perceived privacy" of these online groups. Others have attempted to present a continuum of levels of privacy and publicness to guide the researcher's work (Robson and Robson, 1999, quoted in Bakardjieva and Feenberg, 2001). However, such guides seem to offer only limited practical assistance, particularly as they are inflexible and unhelpful in categorizing new types of online interaction. In any case, advances in security, encryption technologies and password-protected areas further problematises the idea of a single public arena.

Bruckman (2001) outlines an interesting alternative by arguing that the Internet should be

understood as being populated by "Amateur Artists": she does this explicitly to circumvent the potentially misleading terms of "public" and "private". This avoids the problem of treating online research in terms of human subject research ethics, and encourages research within disciplines that have different perspectives on the Internet. For example, discussing a famous composer would be nonsensical if in discussing the work the ethical guidelines make it necessary to anonymise the music and interviews. Instead, she outlines a continuum between "no disguise" and "heavy disguise" that would need to be weighed depending on the actual content of the research itself. For example, vulnerable groups should naturally be disguised before publication (Bruckman, 2001).

Thus, one of the key difficulties that Internet research raises is the issue of privacy and how to balance the needs of the research with that of the research subjects (Waskul, 1996, p. 6). Waskul (1996) uses the terms "publicly-private" and "privately-public" to demonstrate how the Internet will not easily fit into already existing spatial metaphors. Bassett and O'Riordan (2002) believes that the lack of applicability of a private sphere implies that all discourse lies *de facto* in the public sphere. Cavanagh (1999), however, disagrees:

> ... public and private are far from monolithic definitions to guide action. Rather all such definitions are locally produced and are therefore relative to the individual communal structures within which they are rendered meaningful. [...] Only an engagement with the frameworks of meaning and relevance of the individual communities as revealed through the forms and rituals of interaction can yield an understanding of these issues (Cavanagh, 1999, p. 14, quoted in Bakardjieva and Feenberg, 2001).

An issue that has been raised by researchers – and one that is considered particularly vexing by online group members – is "lurking". This is subscribing to mailing lists and visiting communities without actually participating in the list or community. Taken together with "harvesting" (i.e. appropriating people's online communication for purposes other than that intended by the group), such behaviour is generally frowned upon by members of online groups (Bakardjieva and Feenberg, 2001). Additionally, many researchers have raised the problem of permission itself. Questions raised include: should the community *as a whole* give permission? Should the individuals whose texts are being used be asked? Or are online communities "texts" to which standard copyright restrictions and the principles of fair rights apply, therefore removing the need for permission seeking at all? (Bakardjieva and Feenberg, 2001;

Bassett and O'Riordan, 2002; Bruckman, 2001; Walther, 2002; White, 2002).

An alternative way of considering the debate about the ethics of Internet research can, according to Bakardjieva and Feenberg (2001, p. 235), "serve as a guide for finding one's bearings on the broader question of privacy in cyberspace". They suggest the notion of "non-alienation" as the guiding principle of online research ethics. Non-alienation means avoiding taking the content of online communication out of its context of original occurrence without the explicit permission of concerned parties (Bakardjieva and Feenberg, 2001).

Bakardjieva and Feenberg (2001) define alienation, following Henri Lefebvre's *Critique of Everyday Life* (1947) as:

> ... the appropriation of the products of somebody's action for purposes never intended or foreseen by the actor herself, drawing these products into a system of relations over which the producer has no knowledge or control (Bakardjieva and Feenberg, 2001, p. 236).

They argue that the rights of online populations should be respected: to alienate them needlessly by exploiting their online activities is disrespectful and will be destructive of the research enterprise as a whole (Bakardjieva and Feenberg, 2001).

One of the most contentious problems within Internet research is that of the human subject (Bassett and O'Riordan, 2002; Herring, 1996; Walther, 2002; White, 2002), an issue that causes a great deal of ethical and methodological hand wringing. While it seems important to abide by the "golden rule", some research undertaken offline is already considered exempt from human subject ethical requirements (Walther, 2002). Walther (2002) believes that the same approach should be applied online. He argues that most quantitative research would be exempt from human subjects guidelines, and that much qualitative research need not necessarily explicitly name the research subjects or message contents, although there will be exceptions (Herring, 1996; Walther, 2002).

Bakardjieva and Feenberg (2001) suggest another approach that has "respect for the intent with which online communities have generated content [and that] emerges as a fundamental ethical principle of social life online" (Bakardjieva and Feenberg, 2001, p. 235). In other words, the deliberations of the online community should be used as the basis for understanding and using their online artefacts. They further argue that the "non-alienation principle" should be the basis of "emergent social conventions in cyberspace", and it should apply to researchers and anyone else "lurking" online (Bakardjieva and Feenberg, 2001, p. 238). The community from which texts and other artefacts are to be appropriated have to be

respected. Indeed, they suggest that the debate on ethics in virtual community research has been an "exemplary area where important ethical questions have been raised" (Bakardjieva and Feenberg, 2001, p. 238). Such questions have not generally been raised in the context of regular human subject research, journalism and other offline contexts (Bakardjieva and Feenberg, 2001).

Herring (1996) attempts to combat standard, usually human subject models, by demonstrating the range of possible research approaches, outlining four types of research and the corresponding forms of relationship between researcher and subject. Bakardjieva and Feenberg (2001) classify these as:

(1) naturalistic research, which relies on the non-disturbance of the research object;
(2) participatory research, in which subjects themselves consciously reflect and are encouraged to contribute to the research itself;
(3) consensual (or understanding) research, where the subjects are encouraged to reconstruct their own view and position; and
(4) critical research, where there may be tests for equity, fairness, ideological distortion and where there can be a political project to address these issues (Bakardjieva and Feenberg, 2001, pp. 233-239).

It is clear that each of these research types brings different ethical problems and issues to bear on the research question. A single, monolithic, ethical code mandating responses would be inappropriate (Bakardjieva and Feenberg, 2001; Herring, 1996). Certainly it seems that the researcher must take an active part in framing an ethical research position in order to ensure that unacceptable problems are avoided, and must be sensitive to the research questions and methodology being used (Bruckman, 2001).

For example, Herring's (1996) attempt to outline an ethic that "... respect[s] the privacy of individual participants while preserving the academic freedom to criticize" (Herring, 1996, quoted in White, 2002) is an issue within disciplines that are critical or linguistic in nature. This is an important point, and it seems clear that within most linguistic and critical research the balance between the maintenance of privacy and that of critical freedom should be maintained. However, this does not mean there are no ethical considerations at all. Rather, they will need to be formulated within the specific research framework of these disciplines (Bruckman, 2001, pp. 51-70).

It appears that one of the overriding worries of the academic community is the fear of an over-arching code of ethics, generally thought to be mandated from the human research community (Bassett and O'Riordan, 2002; Bruckman, 2001;

Herring, 1996; King, 1996b; Walther, 2002; White, 2002). However, as the guidelines mature, the deliberative actions of researchers are raising the importance of flexibility within any set of guidelines for online researchers (Association of Internet Researchers, 2001; Bruckman, 2001). These kinds of ethical dilemmas are not new: they can be seen in the literature surrounding the ethics of social science research (Foster Hartley, 1982; Geller, 1982; Knerr, 1982; Loo, 1982), and have been continually revised and debated by scholars across research traditions (Seiber, 1982).

Free/Libre and Open Source

The Free Software Federation and the Open Source Initiative are two diffuse, loosely co-ordinated groups principally sited on the Internet who produce free software ranging from operating systems to applications (Williams, 2002, p. 23). The Free Software movement began with a commitment to the preservation of the free exchange of scientific and academic knowledge within the software industry (Stallman, 1999, pp. 53-70). To this end, Richard Stallman, then a researcher at MIT, created a free software license called the GNU[2] General Public License (GPL). The GPL guaranteed that the source code and compiled software, or binary, remained in the public domain (DiBona *et al.*, 1999, p. 2). Stallman's attempts to build a complete operating system, free of copyright, eventually resulted in GNU/Linux. This was the combined effort of a large number of distributed programmers inspired by Stallman and the early work of Linus Torvalds, then a young computer science student in Finland. By distributing the workload in a network structure, GNU/Linux has quickly become a creditable alternative to proprietary operating systems such as Microsoft Windows. This success has highlighted the importance of the public domain and has been inspirational for many others. For example, there are now Free/Libre and Open Source hardware projects, record labels, walkmans, books and discussion sites (Creative Commons, 2003; Libre Society, 2003; LOCA, 2003; Stallman, 2003), and the British Broadcasting Corporation (BBC) is planning to release some of its television programmes into the creative commons (Creative Commons, 2003).

The Free/Libre and Open Source Software (FLOSS) groups are usually organised into a network of individuals working collaboratively on the Internet. Some develop major software projects that sometimes rival commercial software, but are committed to the production of quality, free alternatives to those produced by commercial

companies (Raymond, 2001; Williams, 2002, p. 45). Groups and individuals develop software to meet their own and others' needs in a highly decentralised way, which has been likened to a bazaar (Raymond, 2001). These groups often make substantive value claims to support their projects and foster an ethic of community, collaboration, deliberation and intellectual freedom (Berry, 2004a). In addition, it is argued by Lessig (1999) that the FLOSS community can offer an inspiration in their commitment to transparency in their products and processes. Others have suggested the possibility of opening up of governmental regulation and control through Free/Libre and Open Source code, through, for example, "glass-box" development (Berry and Moss, 2004).

The Free/Libre and Open Source movements place their texts and products within the public sphere under the terms of a license that explicitly allows reproduction and reuse providing the license is retained and that future work derived from these artefacts is itself placed within the public domain (Stallman, 1993). Therefore, with respect to FLOSS research, the distinction between whether a work is placed in a public or private sphere is probably easy to make. It would seem likely that most FLOSS research is public, in the sense that the contributors to the community have willingly put their information there and would be happy for researchers to use it. Nonetheless, the fact that a piece of information is available publicly on the Internet and easily accessible does not necessarily mean it can be used in a research project. Questions have to be resolved about whether the community of FLOSS developers consents to the harvesting of their data in this way.

Additionally, in the context of the FLOSS community, an important issue is who can give consent to using these community resources. Is it necessary for each individual in a community to give consent to research *before* research can be conducted, or can a few individuals represent the group? Indeed, with the decentralised nature of the Internet, not to mention the diffuse and shifting membership of these groups, seeking consent is extremely difficult.

This also raises two further important questions:

(1) How can a community give consent *before* they are researched?
(2) Should a community give consent to the publication of the results of research?

Both questions raise particular problems. In the first case, research subjects may act differently if they know they are being researched – an argument which might be used to justify the use of covert research methods. In the second case, those in positions of power might resist the publication of research in order to protect their interests, for example in the case of the wealthy and powerful business people in Springdale/Candor.

Hence, the FLOSS community's perspective on these issues is important, and can place serious restrictions on carrying out online research. E-mail lists, problem reports, source code, closed online debates and so on might be considered to be private, in the sense that they are owned by the community that created them, and not for the use of the research community (Cavanagh, 1999, p. 12). Thus, although these texts are unambiguously public in nature, in that they can be read and used, they may not necessarily be appropriated into research, and the discussion groups themselves may be subjected to stronger privacy concerns by the community.

In addition, although there are generally no copyright restriction issues with Free/Libre and Open Source works, they can raise unique questions. Some FLOSS-licensed works are licensed under licenses such as the Open Audio License (eff.org, 2003) or the Creative Commons licenses (Creative Commons, 2003), and may be quoted or reproduced in research without any problems. However, the GNU General Purpose License (GPL) raises distinct practical questions. Section five of the license explicitly states that when reusing GNU licensed material, derivative work must also be licensed under the GPL, and that:

> You are not required to accept this License [...] However, nothing else grants you permission to modify or distribute the Program or its derivative works (Stallman, 1991, p. 1).

In other words, to use GNU material, subsequently created materials *have* to be re-licensed under the GNU license itself. Legally, this may fall foul of the terms of fair use, but ethically it is clear that the Free Software community is making a specific claim to the non-alienation of licensed works within *any* copyrighted application – including, presumably, academic journals!

Capurro and Pingel (2002) argue that online research should be guided by an ethics of care. This can be usefully applied to the Free/Libre and Open Source Software communities. They advocate an ethic of care as an alternative to the instrumentalist or moral arguments of consequentialist and deontological positions. It is an approach that responds to the concerns of others not out of a sense of duty, but from a feeling of responsive mutuality (Baier, 1985; Benhabib, 1992; Gilligan, 1990). However, it seems important that an ethic of care should not

necessarily be considered to be a replacement for the deontological or consequentialist approaches. On the contrary, they are all necessary components of a dialogical and relational process of ethical responsibility. During research, all these positions argue that questions should be raised. Is the researcher responding to the needs of others? Do they care about the activities of members of online groups as people with feelings like themselves?

These questions seem to mirror the arguments of Bakardjieva and Feenberg (2001), who believe that the "dialogical affordances" of the Internet medium greatly facilitate collaborative working models and the ability to take into account "participant interests" (Bakardjieva and Feenberg, 2001, p. 235). They believe that true inclusiveness of the research subjects in the project requires open-mindedness and methodological flexibility by researchers, resulting in improved understanding and methodological creativity from researchers and subjects alike (Bakardjieva and Feenberg, 2001).

A strong commitment to an ethics of care seems appropriate to the study of FLOSS groups themselves, where a duty of care is continually required to ensure mutual support and understanding between the groups and the researcher. Additionally, this approach can highlight that FLOSS groups often have fragile social structures, which can be easily destroyed without attention to the wider implications of carrying out online research (Bruckman, 2001). Certainly, in regard to the FLOSS movements themselves, an undertaking not to disrupt the movements during and after the research process is of key importance. This should form a key consideration in ongoing research into the online environment as part of any research project (Berry, 2004a, b).

Conclusions

This paper has examined the current and historical debates surrounding the ethics of research, and has particularly focused on the online research environment. I have shown that the Free/Libre and Open Source communities raise some particular issues with regard to online research, which, it is hoped, will be useful for practioners of future online research (Bruckman, 2001). FLOSS research places the researcher in paradoxical situations regarding copyright and fair use, and also raises questions about the use of texts and other online artefacts and the rights of the community to control them (Elgesem, 2001;

Herring, 1996; King, 1996b; Stallman, 1991, 1993; Walther, 2002).

It is the view of this paper that ethical research boards should avoid mandating monolithic ethical guidelines in online research, especially unreflexively advocating ethics drawn from human subjects research. Flexibility and decentralised decision-making in online research ethics should continue to be safeguarded both by the researcher and the wider research community. Particularly in view of the ongoing contestation of the ontology of the Internet (Koepsell, 2003, p. 10), it is important that researchers have the ability to be flexible in the application of Internet research programmes and the corresponding ethical guidelines they choose to implement. The FLOSS movements both demonstrate the power of networked structures (Raymond, 2001) and can serve as models of how online research programmes could be implemented in a decentralised manner.

Additionally, I see one of the major threats to online research not from human subjects research guidelines *per se*, which are framed by the academic research community itself, but from digital rights management (DRM) technologies. These are technologies that increase copyright protection and are being implemented by private companies for online digital works (Stallman, 1993). Particularly with regard to issues of fair use and the public domain, restrictions built into these technologies will undoubtedly cause great problems for future researchers, regardless of the research model they use. Although not within the scope of this paper, this issue raises important questions for further research.

In conclusion, this paper argues that in the design and implementation of online research projects, an open source approach to ethics provides an important degree of flexibility for the researcher. Additionally, it is hoped that the Free/ Libre and Open Source Software communities' principles of openness, decentralisation, sharing, collaboration and mutual support would be used in research programmes that apply open-source ethics. This would ensure the non-alienation of research subjects (Bakardjieva and Feenberg, 2001), encourage open and participatory research methodologies, promote an ethics of care, and return research results to the community and the researched groups (Capurro and Pingel, 2002, p. 28). Indeed, due to the open and participatory principles that inform the activities and practice of the FLOSS groups themselves, the use of an open-source ethics will contribute both to an ethically informed research project and to a dialogical and mutually supportive research paradigm.

Notes

1 For more information about the differences between the Free/Libre and Open Source Movements, see Berry (2004a).
2 GNU is a recursive acronym for "GNU's Not Unix", a term playing on a common computer programming technique known as recursion where a function or method calls itself.

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