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ETHICAL BOUNDARIES AND INTERNET CULTURES

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INTRODUCTION: DISABLING METAPHORS

Terms used to describe the internet such as the electronic frontier, information superhighway, cyber-space, virtual community, being Wired, the Net are loaded with cultural expectation, attitude and values. It is difficult not to use and implicitly endorse such descriptors. Science fiction has greatly contributed to the internet and its cultures, inspiring scientific enhancements of it, future possibilities and assisting understandings of our interactions within the internet. Cultural studies, alongside deconstructive readings of the internet, have also proselytised it. Further both cultural studies and science fiction have contributed to a perception that the internet is for the bold, an uncharted destiny, emphatically different from what those who have been left behind are familiar. The avowed revolutionary nature of the internet contributes to the difficulty of realistically addressing questions about the ethical implications of internet technologies.

Writings about the ethical implications of the internet are difficult to summarise. Writers adopt very different points of entry, informed by diverse moral values and visions. Even thematically related materials often embrace irreconcilable assumptions about the role of internet technologies and the nature of the activities involved, the character of the internet community, the relationship between real and virtual communities, and the relationship between ethics, laws and law reform. Further there is a high emotivity present in much of the writing. We have seen interminable moral panics displayed in print media, radio and television - about the possibility of corruption of innocents by online predatory opportunists, alarm at the limitations of applying intellectual property rights in cyberspace, anarchy and ruin brought about by "hacking" at the institutions of respectable society, new and extreme levels of social alienation because a keyboard and terminal mediates interactions. Exuberant testimonials to the internet are also commonplace, with technologies having made possible previously impossible friendships and romances, connecting communities based upon a philosophy of sharing and nurturing a creative ethos, giving us a safe place spiritually within the world but away from the inhospitable realities of city life, somewhere playfully serious where we are unhindered by maladroit bodies.

Broadly speaking, questions of ethics relate to three themes - (1) access to internet technologies (2) access to information and (3) the impact of both technology and information upon identity and relationships. In evaluating arguments raised with respect to each of these themes I want to do more than merely describe or contrast writers' hypotheses about the problems created by the internet.

The ability of a new technology to transform society depends upon how it affects the collective imagination and whether it stimulates a desire for a different future. Technology can create a desire to change the physical and human environment, including our laws, to amplify technological dreams and with that, stimulate further

innovation. Less optimistic fantasies can focus efforts to forestall such developments. Acceptance and appreciation of any technology is always uneven. In this context it is unsurprising that internet technologies have generated strong opinions for and against their development and use. Utopian and dystopian stories are part of any new technological milieu.

In order to evaluate realistically the stories being told about the internet I want to put this development into a broader context by treating it as an example of how a new communications technology disrupts the social, political and economic landscape. To help focus this study I want to refer to the impact of an earlier revolutionary communications technology- the printing press. The development of printing technology also heralded calls for more intense censorship, new monopoly rights, made possible new relationships between strangers, led to the creation of reading societies and new meeting places for self selecting groups of writers and readers. A comparison between these two communication mediums can help ground discussion, providing a measure to judge the more extravagant claims about the impact of cyberspace. Are there parallels between the early broadsheets sold on street corners and internet home pages? between pirate printers and hackers? between meetings in coffee houses and internet Newsgroups? between the "Sublime Society of Beef Steaks" and the "WELL" (Whole Earth 'Lectronic Link)? Do contemporary calls for regulation mirror those of an earlier age? Are there any fundamental similarities in the ethical issues that arise with developments in communications technology?

This paper appraises the ethical implications of the internet from a position neither within current debates or one that presumes the possibility of an objective position suspended outside of them. Rather, in exposing the internet to an historical analysis, it is hoped we can more realistically comprehend what precisely new challenges the internet involves, appreciate the precedent of contemporary calls for its regulation and, in the process, come to better understand the complex interrelationship between new technologies, ethics and law.

DISSECTING CYBERCULTURE

"The cyborg is our ontology; it gives us our politics."

Donna J. Haraway[1]

To separate cyberculture writings into one of three concerns - technology, information or people - is problematic. It is at odds with the view that whether we like it our not as individuals, as a society we have already embraced "technobiopower" and as a consequence, technology, information and identity are now inseparable constructs. Regardless of how we, as individuals, may feel about any of the cyber-technologies, the society we live in accepts the reality of medicinal and cosmetic implants, genetically-enhanced plant and animal species, the economic importance of high technology industries and the value of their "virtual" intellectual property, the global networking of communities, nations and humanity. In this situation technology transcends the status of being a mere tool or instrument. Technology can become an active participant in its own application. Communicating involves more than comprehending the message. Information becomes open-ended and adaptive within the parameters set by the technology. Identity is not bound by nature or biology. Nature and biology merge with the machine and its infomatics:

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[1] *Simians, Cyborgs and Women: The Reinvention of Nature,* (1991, New York: Routledge) p. 150.

"When Haraway declares that we are all cyborgs, she means it both literally- medicine has given birth to "couplings between organism and machine," bio- and communications technologies are "recrafting our bodies" - and figuratively, in the sense that "we are living through a movement from an organic, industrial society to a polymorphous, information system"."[2]

Evaluating cyberculture and its ethics by separating analyses into groups primarily interested in technology or information or identity is, not only reductive but also incompatible with the basic premise of cyberculture. However, from the perspective of where questions of ethics intersect with questions of law, this kind of categorisation makes more sense.

Questioning the conditions of access to internet technologies usually intersects with issues of public policy, the global infrastructure, democracy, government and private regulation. Who should have a right to use the internet, how, in what circumstances and for what ends? To what extent should manufacturers of technology or providers of technology based services be forced to act in the public interest? Who should establish the international standards and protocols that allow the Net to function, and on what terms? Is there a case for subversive application of technology to expose or perhaps redress power imbalances?

Writings that debate the issue of access to information usually also concern the ethics of intellectual property protection in cyberspace. Should information be part of a "cultural commons"? Is it "theft" to circulate information online without regard for the wishes of the person who holds rights to it? Is "theft" to be determined with respect to the nature of the use of the information? What should be done to redress the practical problems of enforcing intellectual property rights in cyberspace? To what extent should third parties, such as internet service providers, be forced to take responsibility for the intellectual property transgressions of those who make use of their services?

Concern for the effect of internet technologies on human relationships often intersects with questions of criminal law and torts such as personal injury or defamation. Should an internet user be responsible for harm caused to another in a "virtual" interaction? If one learns online of harm that was caused to another, should they track down the alleged perpetrator off line and call them to account? To what extent are internet users responsible for each other? Or to those more vulnerable?

Despite the violence done to the definition of cyberculture and the reality that the classification of particular writings may be contested, the identification of works emphasising a regulatory interest is useful. Questions of ethics are generally linked with questions of legal regulation.

By its nature legal regulation is a conservative force. Whilst it is essential that individual laws possess a degree of flexibility to cope with the unique and the unknown, in presuming its own coherence, law sets limits to its ability to accommodate the unexpected. Law can respond instrumentally to contemporary overtures and, in that way, try to extend its embrace well beyond that previously anticipated. To a degree this strategy is essential to resolve immediate conflicts before the courts. Nevertheless, however well this strategy is executed, the mismatch cannot be hidden. The legal "resolution" of a completely unanticipated problem is based upon a discriminating, reinterpretation of legal language and an insecure repositioning of legal space, language and categories. Legal meaning remains under a high degree of stress, and its extension and capacity to regulate the novel

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[2] Mark Dery, *Escape Velocity*, (1996, London: Hodder & Stoughton) p. 243.

circumstances disputed. In this environment new ethical discourses proliferate, in addition to technical legal ones.

Law is a conservative force not only because of its ties with established power, but also because legal power contests change. Law always redefines contemporary developments in its own terms. This means that regardless of how revolutionary the internet is, and how inappropriate the application of current legal processes and laws may be, the internet will continue to be judged by and through these laws or reincarnations of them. Accordingly discussing the ethical implications of the internet in terms of current regulatory arrangements is also appropriate. It does not follow that any "lack of fit" will be overlooked. Rather this approach can help pinpoint the limits to legal innovation and lead to an appraisal of the role of ethics in such a situation.

ACCESS TO INTERNET TECHNOLOGIES

"Increasingly we find that the greatest shortcoming of cyberculture is not in the provision of occasionally disreputable freedoms and liberties, but in the unavailability of such facilities of participation and fulfilment to the majority; in its foreclosure to certain geographies and in the general unwillingness of the privileged to account for the unrepresented. Cyberspace, as we have seen, is not the new, free global democracy we presume and defend, but an aristocracy of location and disposition, characterized, ironically, by acute insensitivity and territorialist proclivities.
"To remember that the vast majority of humanity, both outside and within the highly industrialised world, have [sic] no knowledge whatsoever of this new platform of liberties, to speak less of access to it, is to underline not only the esoterism [sic] of our discourses, but also to call our attention to the challenges of forsaken geographies and silent territories, of populations and denominations on a new margin of our own creation; those races condemned, as Gabriel Garcia Marquez ominously observes, to a hundred years of solitude with no respite on earth."

Olu Oguibe[3]

The question of the right to access technology is an issue that raises questions of equality both between nations and within national boundaries. An apt companion piece to Oguibe is a Doonesbury cartoon:
"Trudeau draws a street person going to collect his e-mail at the public library, where addresses had been handed out free to the homeless. Looking for potential employers' responses to his job resume, he posts an address that puts the hype about the universal democracy built into the technoscientific information system into perspective: lunatic@street_level."[4]
The question of access to internet technologies entails issues of responsibility for developing telecommunications infrastructure, the cost of devices and services that link individuals to the network, the level of technical mastery required as a consequence of the design of the devices and services, and the availability of an education that allows individuals to connect and use these technologies. What space is there for ethical discourses with respect to these things? How is the internet different from the press in this regard?

It is worth remembering that printing became very popular very quickly after it first emerged in 1476 despite the reality that comparatively few people were able to read,

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3 "Forsaken Geographies: Cyberspace and the New World 'Other'", *5th International Conference on Cyberspace*, 6-9 June 1996, Proceedings published at http://www.telefonica.es/fat/eoguibe.html

4 Donna J. Haraway, *Modest_Witness@Second_Millennium.FemaleMan©_Meets_OncoMouse* ™, (1997, New York: Routledge) p. 6.

paper production was both complicated and costly, and printing equipment was expensive.[5] However the ethical issues raised by printing technology were not concerned with enabling more liberal access, but with discouraging the use of the press for purposes other than education as authorised by Church and State. The introduction of new technology generated a legal response that took the form of licensing presses and censoring printed literature. However despite active discouragement of popularist uses of the press, such uses still proved hard to restrain, especially after 1640 when small hand presses were developed that could be purchased for a more modest outlay and were easier to conceal.[6] Once the potential of the new technology was appreciated, popular interest in it meant that thereafter it proved very difficult to deny individuals or communities access to it.

Henry VIII actively encouraged the dissemination of "useful" information by granting patents for a set terms of years for specific titles to guarantee that a publisher had a reasonable chance of a return.[7] This practice was also followed by Elizabeth I, James I and Charles I, although only a minority of books were ever privileged in this fashion. As well as these formal printing privileges, de facto printing privileges developed amongst the trade, with stationers recognising amongst the members of their guild a monopoly in the first who printed the text. The Stationer's Company had been founded in 1403 from older societies of scriveners, limners, bookbinders and stationers, and in the guild tradition the Company controlled entry into the printing trade. It had applied for a company charter and formal recognition of its de facto publication privileges in 1534. As part of the Catholic Counter-Reformation, Mary Tudor agreed to this request in 1557, not for the benefit of the stationers, but in order to extend control over what her subjects could read. Members of the Stationer's Company was given a monopoly in the printing of works, the right made effective by entering the work into the Company Register in the name of the publisher (the latter's copy-right). In return for these personal privileges the Company's keepers of the Register were responsible for seeing that the work was appropriately approved by Church and State.[8] No books, pamphlets, newsbooks or broadsides were to be printed without such a licence.[9]

Early regulatory responses to the development of printing show a ready appreciation of the potential of the technology to disrupt the established social order. However there was no notion of a right to access print technology, even though in some quarters there was clearly a desire for free speech. The licensing of presses ceased in 1695 when regulation lapsed following years of strenuous debate about the politics

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[5] See Elizabeth Eisenstein, *The Printing Press as an Agent of Change,* (1979, Cambridge: Cambridge University Press).

[6] For an entertaining study of the output of such presses see Jerome Friedman, *Miracles and the Pulp Press during the English Revolution. The Battle of the Frogs and Fairford's Flies,* (1993, London: University College London Press).

[7] See John Feather, "From Rights in Copies to Copyright", 10 *Cardozo Arts & Entertainment Law Journal,* (1992) p. 455.

[8] Michael Black, *Cambridge University Press 1584-1984,* (1984, Cambridge: Cambridge University Press) p. 28.

[9] Feather argues that this royal charter had the effect of banning provincial printing outside of Oxford and Cambridge universities because only freemen of London, normally resident there, were able to join the Stationer's Company. However this was not of immediate consequence because none of the provincial enterprises had been very successful, there being little infrastructure to support transportation and distribution of books. See John Feather, *A History of British Publishing,* (1988, London: Croom Helm) p. 31.

of the licenser's role, the need for a free press and the creation of unfair monopolies.[10]

The point here in relation to our contemporary concern with ethics and the internet is a simple one: the right to access a technology has to be considered in the context of the political environment and regulatory practices of the day. With respect to the internet, today's political rhetoric generally supports the notion that access should ideally be democratic. However, public policy is generally directed towards defining and supporting access through "the market", not necessarily "of right":

"Everywhere, governments are preparing new laws and regulations for the digital era, but in virtually all of these debates the superiority of the market and the profit motive as the regulator of all branches of communication is taken as a given."[11]

"A market access regime favouring the material interests of the information and communication network and service users is recognised as requiring a complicated balancing of market liberalization measures and measures to ensure that the use of networks and services generates an acceptable economic return to their producers."[12]

Enabling access to technology via the market does not automatically exclude questions of ethics. However:

"The internet is not a thing: it is the interconnection of many things-the (potential) interconnection between any of millions of computers located around the world."[13]

Because there is no such thing as *the* "internet market", no possibility of a democratic "right" to access it or any other sort of overriding "internet ethic" can emerge:

"The outcome of the regime formation processes that coincide with technical change are not determined in a straightforward way by the power exercised by dominant industry actors or by the power of State actors."[14]

Shifting alignments among technology and service producers and users forestall any one party closely controlling developments. Vertical integration of various market sectors may be a potential problem for the internet, but at this stage in its development there are many players servicing different technologies and services, and subject to various regulatory regimes. Further, the various markets that comprise the internet are governed by an array of regulatory provisions that have their precedence in different communications strategies.[15]

The internet can be loosely deconstructed into markets along the lines of historically specific regulatory interests:

- telecommunications: where market players are government-licensed private owners;
- computer hardware and software: where along with ongoing revisions to trade policy, access to operating equipment is provided for by way of incentives to manufacturers, largely through reinvigorated intellectual property laws designed to accommodate the convergence of technologies and global "harmonisation" of these laws.

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[10] See Raymond Astbury, “The Renewal of the Licensing Act in 1693 and its Lapse in 1695”, *Library,* (1978) 5th series, Vol 336 p. 296.

[11] Edward S. Herman & Robert W. McChesney, *The Global Media*, (1997, London: Cassell) p. 109.

[12] Robin Mansell, "Network Governance" in Robin Mansell & Roger Silverstone, (eds) *Communication by Design,* (1996, Oxford: Oxford University Press) p. 192.

[13] Michael Froomkin, "The Internet as a Source of Regulatory Arbitrage" in Brian Kahin & Charles Nesson, (eds) *Borders in Cyberspace,* (1997, Massachusetts: MIT Press) p. 130.

[14] Mansell, above n.12 p. 192.

[15] See Ithiel de Sola Pool, *Technologies of Freedom,* (1983, Cambridge, Massachusetts: Harvard University Press) p. 233.

- internet services: this area remains largely unregulated beyond the various consumer and financial laws that affect most businesses in any given locality. Part of the regulatory challenge here is not to provide disincentives so that services relocate interstate or offshore.
- education: the "deregulation" of universities and colleges is sponsoring a redirection of attention to the interests and needs of industry,[16] especially where research and learning relates to the perceived needs of high technology industries.

Each of these areas is continually subject to law reform initiatives that contribute to more precise definition of markets for particular internet goods or services. Ethical questions tend to arise as part of these broader debates. For example, there is a perceived need for the internet to be universal in reach so that users are able to send a message or talk to anyone. Within national boundaries, where population densities are low and there are significant distances between large centres, there might be no profit in connecting homes to electricity grids and rolling out or upgrading cables and wires. Should government force telecommunications companies to service these "disadvantaged" areas as part of their licence to service more profitable routes, or should government rely upon a technological fix, such as the development of satellite services? Is connectivity to internet services as essential as to other communications services such as the post or telephone? If so, should a "common carrier" model also be adopted for the internet?[17] Some proprietary network systems such as America Online and Compuserve have seen the necessity for a common communications interface and have developed ways of integrating their networks with the internet. Where pressure from users does not call for such a development should government step in? Debate about the appropriate choice of model for the internet may be infused with questions of economics and debate over what is a viable return for an investment in infrastructure. Nevertheless underpinning these arguments is a moral issue: should public policy considerations, such as the "right" of anyone, anywhere, to interconnect, be structured into the internet telecommunications market?

Were a common carrier model to be adopted, this, of course, need not mean that every person could connect to anyone of their choosing. Were democratic access the general goal, along with a non-discriminatory capacity to connect to telecommunications infrastructure, it would necessitate non-discriminatory access to the essential hardware, software, services and internet know-how. However, because historically telecommunications regulation has been seen as separate from regulation of computer hardware, software and services, the regulation of access to these other things is generally treated separately to that of the internet infrastructure.[18] Technologies must converge in order to make the internet function, but from a regulatory point of view they can be disconnected and treated separately.[19] This means that even were a policy of a democratic right to access telecommunications

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16 See John McCollow & Bob Lingard, "Changing discourses and practices of academic work", *Australian Universities Review,* Vol 39. No.2 (1996) p. 11.

17 See generally de Sola Pool, above n. 15 p. 237-8.

18 This is not to suggest that telecommunications is only about the provision of infrastructure. The separation of telecommunications into hardware and services is an issue of major contention in itself. Issues constantly arise over cost of installing and maintaining a communications infrastructure as opposed to that of providing services.

19 Often this means that a number of regulatory bodies are asked to provide input into policy formation, with each uncertain as to how their role meshes with that of others. This diffusion of responsibility can work in the political interest of the Minister for Communications. The Minister can play organisations off against each other with careers of public servants affected by a judgment of how useful their organisation's policy is in the prevailing political situation.

infrastructure to be adopted, it would not result in equal access unless there were a corresponding obligation to provide access to all of the other essential components. So, for example, subsidised access to the infrastructure would need to be coupled with subsidised access to properly maintained computers and technical assistance in order for the "right" to access internet technology to be meaningful.

At some levels the intersection of previously distinct markets is recognised. As a consequence new regulatory fora and standards have emerged to negotiate the shared interests of the various network and service innovators. Beyond the more general issue of "harmonised" commercial laws that has generated quite a lot of academic attention,[20] there is the no less important issue of industry standards and protocols. These allow for the interoperability and networking of technologies:

"Each of these computers is independently managed by persons who have chosen to adhere to common communications standards, particularly a fundamental standard known as TCP/IP, which makes it practical for computers adhering to the standard to share data even if they are far apart and have no direct line of communication. TCP/IP is the fundamental communication standard on which the internet has relied: "TCP" stands for Transmission Control Protocol while "IP" stands for internet protocol. There is no single program one uses to gain access to the Internet; instead there are a number of programs that adhere to the Internet Protocols."[21]

However despite the convergence of technologies generating a need for the establishment of common standards to enable interconnection of the various technology sectors and internet markets, this does not create a new opportunity for the development of an industry ethic. Instead corporate alliances emerge and their co-ordination and co-operation strategies are the basis for common standards and protocols. This can be seen from the following account of how and why corporate alliances arise:

"AOL (America Online) has always been open-minded about partnering with companies. . . In the case of some of the core internet technologies around the Web, we realized that although we could continue to build these ourselves, the pace of innovation was accelerating, and several companies, including Microsoft, Netscape, and Sun, were pouring in significant resources. It made sense for us to partner with one or more of these companies, as opposed to competing with or trying to replicate what they were doing. We ended up establishing alliances with all of them. . .

". . . Competing with companies on one level while partnering with them at another level is an increasingly typical strategy, though it requires subtlety and finesse."[22]

Co-ordination, it turns out, is an important aspect of a competitive strategy. The new international regime of protocols and standards that has emerged is merely a further level of corporate negotiation in the face of mutual interests and problems. To the extent that an ethical issue is identified that affects all corporate and government players, it generally is restricted to concern whether recompense is owed to an innovator of an industry standard, in recognition of the loss of control over future development of its innovation, and perhaps the forfeiture of some level of monopoly protection that could have been conferred by intellectual property laws. If Java becomes the universal platform independent object oriented programming language for the internet, is its developer, Sun Microsystems, entitled to any special role in its ongoing development and licensing?[23]

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[20] See for example, Raymond T. Nimmer & Patricia Ann Krauthaus, "Globalisation of law in intellectual property and related commercial contexts," *Law in Context* , Vol.10 No.2 (1992) p. 80.

[21] Michael Froomkin, "The Internet as a Source of Regulatory Arbitrage" in Kahin & Nesson, above n.13 p. 130.

[22] "The States Man: Steve Case", in John Brockman, (ed) *Digerati*, (1996, London: Orion) p. 64.

[23] Not according to Microsoft and others. See Michael Moeller, "Intel,Microsoft, Compaq, Digital ask Sun to relinquish control of Java", *PC Week Online,* 11 Sept 1997, 6pmET. http://www.zdnet.com/pcweek/news/0908/11elett.html

In the competitive environment of large corporations there is no realistic possibility of an industry ethic developing. But individuals, organisations and private corporations are not precluded from developing or adopting their own ethic. Consider, for example, the following from the "GNU Manifesto" written by Richard Stallman, President of the Free Software Foundation and co-founder of the League for Programming Freedom:

"I consider that the golden rule requires that if I like a program I must share it with other people who like it. Software sellers want to divide the users and conquer them, making each user agree not to share with others. I refuse to break solidarity with other users in this way. I cannot in good conscience sign a nondisclosure agreement or a software license agreement. For years I worked within the Artificial Intelligence Lab to resist such tendencies and other inhospitalities, but eventually they had gone too far: I could not remain in an institution where such things are done for me against my will.

"So that I can continue to use computers without dishonor, I have decided to put together a sufficient body of free software so that I will be able to get along without any software that is not free. I have resigned from the AI lab to deny MIT any legal excuse to prevent me from giving GNU away."[24]

Individuals with such ethics have played a major role in fostering the development and public appreciation of the internet as a new sphere of freedom. As members of online communities and in association with like-minded organisations such as the Electronic Freedom Foundation,[25] they pressure the courts and legislature to make policy sympathetic to their beliefs. Professional organisations such as the Association for Computing Machinery (ACM)[26] host conferences, newsgroups and publish journals with a view to raising interest in ethical issues with respect to computer design and the broader relationship between computers and society. Competition does not erase optimistic ethical discourses about the internet. In some respects it invigorates this culture. However these views sit alongside the reality as seen by Bob Stein, founder of the Voyager Company:

"Whenever a new technology comes to the fore, people glom on to it and do what they can. In capitalism, the tendency over a very short period of time is for the market winners in the first year or two to be co-opted and made into businesses so there's no longer any room for the individual. First you get a Netscape - originally built as Mosaic on a university campus for work-study money - going public for $72 million. Next we have Yahoo!, a wonderful little site on the internet, which basically kept track of all the other sites, and overnight it became a business. The window of opportunity for individuals is shorter than we'd like it to be.

"Another much deeper concern in the long run is the contradiction between the technologists, who keep making and improving their technologies, without thinking about their social implications, and the rest of us, who have to live with these technologies for the next hundred generations. . . .They don't want the responsibility of having to think about the long-term implications of something as fundamental as . . . the development of new communications technologies."[27]

There may be space to consider ethics, but there is also the opportunity to not think about them or to think about ethics differently. For example, one researcher has recently argued that because people can access the Net "too cheaply", they are encouraged to "consume greedily while thinking that their actions have little effect on the overall performance of the Internet".[28]

This section began with reference to the technology needs of the poor. As Oguibe writes

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[24] Free Software Foundation (FSF), "The GNU Manifesto - GNU Project", http://www.gnu.ai.mit.edu/gnu/manifesto.html

[25] See http://www.eff.org

[26] The specific organisation with responsibility for this is the Special Interest Group on Computers and Society (SIGCAS). See, for example, *Computers and Society,* Vol 26(4) Dec 1996.

[27] "The Radical: Bob Stein", in Brockman, above n. 22 p. 272.

[28] Elizabeth Weise, "Going with the Flow", *Sydney Morning Herald,* Computer Section, Section, 29 July 1997.

"Some would argue, perhaps, that such advanced technologies may not, after all, be of interest or indeed necessity to certain sections of society or regions of the world. . . Such arguments, however, only underline a tendency not only to create and perpetuate underclasses, but also to assume a liberal right to speak for such constituencies. Clearly, for billions of people around the world, cyberspace and connectivity are not a priority. . . but surely, a technology as versatile and increasingly domineering as that of cybercommunication holds inevitable possibilities, and consequences, for not just the minority that presently accesses and controls it, but for many others, too.[29]

Microsoft Corporation has recently embarked on schemes that seek to redress current imbalances in internet access. One program relates to enhancing access to internet technologies in India, another to "disadvantaged areas" in the U.S.A.:

""To be a leader in the digital economy of the 21st century, India must invest in basic infrastructure, education and information technology," said Gates in a speech to the Confederation of Indian Industry. "These are the tools which will drive the country into the future and make India an economic and software superpower".

He also urged that illiteracy, poverty, unemployment and ignorance be alleviated through the use of computers. However, this concern for the developing nation's future was not reflected in the billionaire's reported actions. Some of the world's richest man's hotel bills were reportedly paid for by the government."[30]

Microsoft's "assistance" to India was in launching the "Microsoft India Initiative" and in establishing the "University Advanced Technology Labs Program" in five universities. The investment of approx. $US1 million is designed to increase the number of Microsoft Certified Professionals who will teach Microsoft software skills and "to accelerate the use of the internet in India".[31] Comparatively speaking, the U.S. Microsoft initiative was much more generous. It involved "a $US200 million fund to port Internet access into libraries in "disadvantaged areas"."[32] Perhaps the Doonesbury cartoon is closer to reality than, at first glance, one might think.

Do these new programs testify to Microsoft's commitment to an ethic of a right to access internet technologies? Is Bill Gates Inc. the patron of the electronic age?

In the face of declining overseas aid to less developed countries and diminution in funding for public institutions such as libraries, it would be comforting to think that civic minded private institutions are working in "the public interest" of wiring structurally disadvantaged communities. These Microsoft initiatives may attest to the glory and moral virtue of Bill Gates. In effect, however, they are more corporate sponsorship than patronage. Historically a patron spent his [sic] money in return for public admiration and respect, but he generally didn't invest in works he touted as bringing future financial return, in expectation that he would eventually be a major beneficiary. That Gates sees this as the outcome of the Indian initiative is clear from his own projections about the future importance of India's technology and information industries. His initiative enslaves the country to a broader business development strategy under the guise of "patronage". With respect to his assistance to libraries in "disadvantaged communities", one commentator suggests it is part of a bigger strategy of establishing "push" technology as *the* means of navigating the Net. Push technology is technology that guides and directs a user's access to the internet:

"the Net has everybody on there with as much to say as they want about anything they want. . . This freedom of information - admittedly only available to those wealthy and politically free enough to have Net access - is what makes the Net such an explosive phenomenon. It can be likened to the Reformation in Europe, when ordinary people first got to see books and realise that they could learn about things previously hidden from them. . .

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[29] Above, n.3.

[30] Selina Mitchell, "Cultivating the Technology Backyard", *Australian Personal Computer,* Sept 1997, p. 103.

[31] Ibid.

[32] Jeremy Torr, "Resisting the Push", *Australian Personal Computer,* Sept 1997, p. 52.

"Combine this thirst for knowledge with the perceived veracity that the computer screen gives information displayed on it, and you have a potentially dangerous situation. Especially if some smart programmer at the Push Technology Institute decides that fascists are morally indefensible and doesn't include them in the potential site index, or if the push technology search engine is skewed to favour all the sites and reports relating to one particular industrial corporation.
". . . Bill Gates has announced a $US200 million fund to port Internet access into libraries in "disadvantaged areas". Given the hype push technology is getting from the Gates camp, I would seriously question the motives involved there."[33]

The technology "needs" of the poor are constructed in the same terms as the "needs" of investors, producers and current consumers of technology products and services. The acknowledgment of "information rich" and "information poor" communities is not accompanied by any sense of "duty" toward the potential technology creators and users who will inevitably be disabled from meaningful participation in this new sphere of "freedom" by market dynamics:
"The historical diffusion and use of electronic information services and their substructural support networks has been uneven and the prevailing network governance regime has been unsuccessful in creating incentives that would alleviate the gaps in the accessibility of advanced networks and services and the exclusionary consequences that these have engendered. Is there any reason to expect that the instability that presently characterizes the network governance regime will create conditions that will enable more inclusive participation in the production and consumption of electronic information services in the twenty-first century?"[34]
Strategies that seemingly reach out to the poor do not encompass any generalised ethic of a right to equal access to internet technology. Inequality of access is a product of the adoption of "the market" as the distribution strategy for the internet. Initiatives such as Microsoft's are designed to support, not disrupt, the market as the model for distribution of internet technologies and services.

A right of democratic access to internet technologies is advocated in many hacker communities. Further, hacking program code or electronic hardware has been viewed as political intervention, targetting commodification of information and technology, part of a broader political strategy of holding corporate power to account. As Dorothy Denning puts it:
"Hackers say that it is our social responsibility to share information, and that it is information hoarding and disinformation that are the crimes. This ethic of resource and information sharing contrasts sharply with computer security policies that are based on authorization and "need to know". This discrepancy raises an interesting question: Does the hacker ethic reflect a growing force in society that stands for greater sharing of resources and information- a reaffirmation of basic values in our constitution and laws?"[35]
Denning argues that the public conception of hackers as anarchists and criminals is false to the extent that many hacker communities adhere to an ethical code, involving principles such as not erasing or modifying data. However, more recently, in a postscript,[36] she raised fresh doubts about the politics of hacking suggesting that for many hackers, it was more of a game than a reflection of a coherent political strategy. Her change of heart can be largely attributed to the view that whilst hackers advocate on behalf of their own rights, they extend no corresponding respect to the rights of people and organisation they harass.[37] She says that, but for the presence of hackers breaking into networks, a good deal of corporate security would not actually be necessary. For this reason, she now recommends against engaging with hackers in

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[33] Ibid.

[34] Mansell, above, n.12 p. 190.

[35] "Concerning Hackers who break into computer systems" in Peter Ludlow, (ed) *High Noon on the Electronic Frontier: Conceptual Issues in Cyberspace,* (1996, Massachusetts: MIT Press) p. 157.

[36] Ibid p. 160.

[37] For an account of the pain hackers can inflict see Cotton Ward, "Revenge of the Nerds", *.net,* Issue 35, August 1997, p. 68.

her work as a computer security expert. Amanda Chandler's article, "The Changing Definition and Image of Hackers in Popular Discourse",[38] also points to the diversity of motivation and political outlook amongst hackers. She too notes that whereas at an earlier period hackers attracted more respect for their technical ingenuity and understanding of the personal computer revolution, popular images of hackers are now predominantly negative. Although she does not claim that the negative press is always deserved, she suggests that this proliferation of negative imagery coincides with an increasing diversity of hacking practices.

Vivian Sobchack takes a different position arguing that even as constructed by its advocates hacker culture is neither progressive nor democratic. She uses the cyber-delic magazine, *Mondo 2000*[39] as reference material on hacker culture. Prominent writers featured in *Mondo 2000* include Howard Rheingold, Timothy Leary, John Perry Barlow, the virtual reality innovators Brenda Laurel and Jaron Lanier, as well as the magazine owners R.U. Sirius and Queen Mu. In analysing their work she comments that:

"The hacker/cracker/cyberpunk "world-view" pits the individual against big government and big corporations and cannot envision more than "small group" intervention in the public sphere . . . Their ideolect is one that "winners" in the modern world adopt and speaks to a belief in personal freedom and a faith in self-help that are grounded in privilege and the *status quo*: male privilege, white privilege.

"Indeed, the rights and privilege of the "individual" in this libertarian view of things are most openly evident in the discourse surrounding the Utopian "public sphere" of virtual reality. Supposedly the new "public sphere" in which people can freely - and equally - come together in consensual social interaction, the magazine's major interests in virtual reality seem to be as a "private sphere" in which a free (from inhibition or prohibition) and (generally white) male body "comes" in sensual - and safe - sexual intercourse with a (name the colour) female body. Thus, the increasing development (and sales) of "cybererotic" software on this new democratic frontier."[40]

She argues that in terms of enabling access to internet technologies the hacker is profoundly self-interested. The more democratic aspects to the internet, such as email, are overwhelmed by an obsession with virtual reality and desire for a technologically-extended body. She concludes that despite its anti-establishment affectations, *Mondo 2000* culture ultimately supports libertarian individualism and corporate capital.[41]

The common co-option of hackers to work on the payroll of the institutions and organisations they once explored as unauthorised "guests" provides support for Sobchack's analysis. The mutual interest of hackers and corporations can be seen in the following example: a Swedish company, Infinit Information, hosted the "Crack a Mac" contest, giving a 10,00 knoner prize for modifying Infinit's home page and providing a description as evidence of having hacked into its server.[42] Print culture offers a precedent for the co-option strategy. The hacker's ancestor is the printing "pirate" who refused to respect the trade monopolies of the London Stationer's Company. John Wolfe was a notorious pirate who argued in defence of piracy that “it was lawfull for all men to print all lawfull bookes what commandement soever

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38 (1996) *International Journal of the Sociology of Law,* Vol.24, p. 229.

39 *Mondo 20O0* is a glossy Berkeley based quarterly. The description of it as "cyberdelic" is drawn from Dery, above n. 2 p. 22.

40 "Democratic Franchise and the Electronic Frontier," in Ziauddin Sardar & Jerome R. Ravetz, *Cyberfutures,* (1996, London: Pluto Press) p. 85.

41 Virtual reality is not necessarily an internet technology, nevertheless Sobchack's analysis of it is also of relevance to a discussion of MUDS and MOOs. This issue is taken up further below. See "Responsible Relationships".

42 Dominique Jackson, "Hack a Mac", *Australian Personal Computer,* Oct 1997, p. 24.

her Majestie gave to the contrary".[43] Following spells in prison and the seizure of pirate copies, Wolfe was appointed beadle of the Stationer's Company, having been offered nearly twice the regular wage.[44] Loewenstein argues that Wolfe "abandoned" his poor printing associates given a lucrative opportunity to police the company of behalf of the powerful.

The co-option of technology "rebels" suggests that it is wrong to presume a firmly held commitment to lofty ideals in everyone who justifies their actions in the name of the excluded. Objections to regulation of either print or internet technology, may be grounded in sincerely held Enlightenment and/or democratic ethics, which leads to protest action against the creation of monopolies in cultural goods. But it cannot be denied that rebels may also be motivated by quite instrumental reasons. As Oguibe says, we cannot rely upon the esotericism of such discourses, no matter how much we might want to believe in a right of democratic access to internet technologies.

ACCESS TO INFORMATION

Educom Review: *I'm sure you've heard the currently popular slogan, "Information wants to be free ". What do you make of that slogan?*
Bruce Lehman: *I don't know what it means. That information should be free? I'd say: freely accessible, yes; free of charge, no.*[45]

The *information wants to be free* slogan is most often associated with John Perry Barlow and his discussion of what your rights should be on the "electronic frontier".[46] His concern for access to information assumes a broader right of access to internet technologies. However whilst the former is seen as an exciting and volatile issue, the latter is barely raised. If the free flow of information on the Net is so important, surely the right to access internet technologies must also be equally vital? The neglect of the latter issue is what informs the critique of writers like Oguibe.

It is not surprising that Barlow fails to dwell on the issue of access to technology. He is not against the market as a distributive mechanism. His well-known disagreement with Lehman[47] concerns, rather, the definition of what the internet market involves. Barlow sees the internet as *a market for information services*, whereas Lehman sees it as *a market for information content.*

Barlow objects to the operation of intellectual property rights in cyberspace because he considers that these laws solidify the fluid character of internet relations and destroy the life inherent in the online medium and media. In his view, intellectual property laws were designed for a different time and space:

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[43] Joseph Loewenstein, "For A History of Literary Property: John Wolfe's Reformation", 18 *English Literary Renaissance,* (1988) p. 401.

[44] Ibid p. 404.

[45] "Royalties, Fair Use and Copyright in the Electronic Age", *Educom Review,* Vol 30 (6) Nov/Dec 1995. republished at http://www.educom.edu/web/pubs/review/reviewArticles/30630.html

[46] See "The Economy of Ideas: A Framework for Rethinking patents and copyright in the Digital Age"*Wired,* March 1994. p84; recently republished as "Selling Wine Without Bottles" in Ludlow, above n.35 p. 9.

[47] Lehman chairs the Working Group on Intellectual Property Rights within the Information Policy Committee on the Information Infrastructure Task Force, is Assistant Secretary of Commerce and Commissioner of Patents and Trademarks in the U.S.A.

"Copyright worked well because, Gutenberg notwithstanding, it was hard to make a book. Furthermore, books froze their contents into a condition that was as challenging to alter as it was to reproduce".[48]
Intellectual property laws protected distribution rights in tangible goods in order to reward "the ability to deliver (ideas) into reality. For all practical purposes, the value was in the conveyance and not the thought conveyed."[49]

Prior to digital technology it made sense to attribute works to a particular person:
"Cultural production, literary or otherwise, has traditionally been a slow, labour-intensive process. . . . The time lapse between production and distribution can seem unbearably long . . . Before electronic technology became dominant, cultural perspectives developed in a manner that more clearly defined texts as individual works. Cultural fragments appeared in their own right as discrete units, since their influence moved slowly enough to allow the orderly evolution of an argument or aesthetic. Boundaries could be maintained between disciplines and schools of thought. Knowledge was considered finite, and was therefore easier to control."[50]
However:
"Environments like the Net tend to grow organically. They expand not according to any one person's conscious design, but because the Net is by nature a collection of individuals all making contributions to it. The growth is at an exponential rate, though not as much in terms of size as in terms of features and feature sets . . . Today's Web will be unrecognizable in five years . . .
"One of the biggest misperceptions about content is that it's an asset that endures, that has value, like catalogs, libraries, film records, music records, or written archives. However, as Esther Dyson point out, the time value of information on the Net is extremely short."[51]
On the electronic frontier the positions of author, reader and subject merge. This disrupts the spatial and temporal presumptions that have traditionally delineated and separated the legal rights and roles of original author, text, publisher, distributor and consumer.

The internet involves individuals and corporations who, in embracing the potential of these new technologies, have created new communities, relationships, identities, activities, lifestyles and markets. To the *information wants to be free* camp it is unethical to inflict laws designed for a different technological age upon these people: a different technological age deserves a different legal and ethical culture. The fear is that without appreciation of this, "life" online will be extinguished and emerging technical and cultural developments will be thwarted. Intellectual property laws do not "belong" in cyberspace and in order to enforce them a new world-wide administration of regulation and control has to be developed, which will interfere with the natural "disorder" of the internet and corrupt the freedoms on offer to those with access to them.

It is difficult to define the ethic behind this position more positively. Ethics here appear in the guise of an attitude shared toward the internet and online activity, rather than as principles that guide or instruct action. Critics such as Lehman draw attention to this, and infer from it that the *information wants to be free* position is of little practical guiding force in "the real world". However this dismissive attitude is unwarranted. The real situation is more complicated.

The organic metaphors[52] used to describe the internet and its possibilities suggest that underlying the chaotic connection of humans and machines there is order,

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[48] Above n.46 p. 11.

[49] Ibid.

[50] Critical Art Ensemble, "Utopian Plagiarism, Hypertextuality, and Electronic Cultural Production", in *The Electronic Disturbance,* (1996, New York: Autonomedia) p. 89.

[51] "The Thinker: Doug Carlston", in Brockman n.22 p. 41.

stability and progress. No one individual or organisation can speak for the Net, or is able to control it. In such circumstances there is no sense in positing universal cyberethics. What should constitute cyberethics will depend upon the time, space, people and circumstance. Faith in human-centred technological progress and inhuman capacity to develop appropriate ethics, underpins these organic analyses.

Despite a dilution of power on the Net, individuals and organisations still feel that they can influence the internet's development. For many such influence is their reason for being. However, interventions tend to coalesce around particular issues, cases and events considered detrimental to the growth of online life. Ethics are made visible in the context of a reaction to a specific problem, and in the context of the slogan used to publicise the issue. Regarding the *information wants to be free* position, it makes no sense to try and abstract ethics from the particularity of Web politics at any one time.

So what does the *internet as a market for services* look like? Barlow's economy of cyberspace takes for granted that consumption is not a passive process, capable of being contrasted with, say, an active mode of production. Consumption is not understood as a way of servicing needs, nor is production the process of manufacturing goods. Rather consumption is understood as an activity "consisting of the systematic manipulation of signs".[53]

An object, such as a book, may be useful for what it says but as an object of consumption it is neither the book nor the ideas in it that are consumed. What is consumed are the relationships suggested by the book's marketing, packaging and promotion. As a commodity the value of the book is not its content or, in legal terms, the expression ©. Hence Howard Rheingold's claim:

"The concept of "content" is so poorly defined. One, there's the myth that content is king . . . content is not what drives a business. It's the story. It's the emotion. It's the way that the information is packaged and programmed.

". . . Magazine publishers and newspaper publishers looked at the internet as being an ancillary revenue stream. They would repackage their content and make it available on CD-ROM, then put it on the Web or America Online. That's proven not to work, because this medium demands more. Content is not the end-product. Content is the activator of the conversation and the community."[54]

The wonder of cyberspace is the opportunity it offers for sponsoring new relationships. That this is taken for granted is reflected in the view that:

"The successful internet sites are not repurposing data from other sources. They are new breeds of services. The Yahoos!, the directories on the Internet, are a completely new kind of content. These areas are ones that are really going to grow. How long will text be the dominant form of information on the Internet? I would say it is not the dominant form now. Most people are not using the Internet and the Web for what they were designed for, which was the hypertext linking of documents to documents. They're using it as an interface toolkit for doing actual services, for interacting with customer service, finding things, doing searches. This shows that the interactive nature is really what's important to the Internet . . ."[55]

The value that lies in "the manipulation of signs" is also appreciated by those who claim that instead of authors receiving payment via copyright, they can receive payment for the performance of their works. Whilst appearing on the public speaking circuit, Barlow noted that "audiences will still want to have authors express

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[52] Despite Haraway's description of cyberculture as encompassing a movement from an organic, industrial society to a polymorphous, information system (above, n. 2), organic metaphors are still prevalent. eg. Web.

[53] Jean Baudrillard, "Conclusion: Toward a Definition of Consumption", in The *System of Objects,* James Benedict (trans.) (Verso: London, 1996) p. 200.

[54] "The Marketer: Ted Leonsis", in Brockman n.22 p. 240.

[55] "The Searcher: Brewster Kahle", Ibid p. 148.

themselves in person and universities, corporations, and other sponsors will still pay authors to be creative thinkers. Under this system, we would return to the old-time notion of patronage of the arts, sciences and humanities."[56]

Contrary to what is often supposed, the *information wants to be free* versus the *right of intellectual property owners* debate is not really a pro-commercialised versus anti-commercialised cyber-future. Both sides of the debate recognise that many individuals will contribute online with no expectation of financial gain, but some, will want financial return. The difference then comes down to a disagreement about who should get paid, for what, and by whom.

Where the internet is characterised as *a market for services,* "content providers" get paid as "media personalities".[57] Payment is not for what they say, but who they are and our ability to "get close" to them. Payment is also due to internet service providers, and conference holders, and indeed to all those who make some form of "relationship" with celebrity possible. In this sense the departure from copyright actually involves a concentration of the "author function". Whilst the author has no right of ownership to their text in cyberspace, the ability to make a living as a writer is in fact dependent upon recognition of the author "unplugged" as the original source of an important message. Why else would anyone pay to see and hear them? In order for celebrities to stand out on the internet they need to be already famous in another medium, or they need to market themselves effectively across the media spectrum so that the online merging of roles as author, reader and subject doesn't erase their identification or too quickly move them from "wired" to "tired".

The *information wants to be free position* places confidence in the power of publicity to generate returns, whereas the *right of intellectual property owner's* position is concerned with controlling cyberspace as a new medium for "distribution" of works. The fear is that conventional media forms, particularly magazines and seminars will be put out of business by the internet.[58] In order to make the transition from the traditional economy for works to this new one, the current information owners need as much control as possible over their investment in communications technologies. For Lehman, the facts that the internet has expanded profitable ventures for traditional media publishers by the development of new newspaper sections, walls of magazines and books and endless seminars explaining the internet, is no compensation for the real loss of control entailed by conflation of the roles of author, producer and distributor in the absence of strong intellectual property protection on the internet.

Other media technologies have also disrupted established habits of communication and transformed economies. The typewriter, for instance, radically affected oral cultures and, consequentially, the connection between speech and writing. Marshall McLuhan argues that the typewriter "carried the Gutenberg technology into every nook and cranny of our culture and economy".[59] It changed writing patterns, styles and methods of composition; brought writing, speech and publication into closer association leading to standardised spellings and grammar; developed new social

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[56] David B. Resnic, "Conference Report: Ethics in Cybersociety", *Computers and Society,* Vol 26(4) Dec 1996 p. 23.

[57] It is interesting to note that Barlow is nearly always credited as a "retired cattle rancher and Grateful Dead lyricist". What do these personas lend to his message?

[58] Bruce Lehman as quoted above n. 45.

[59] "The Typewriter: Into the Age of the Iron Whim", in *Understanding Media,* (1967, London: First Sphere Books edition) p. 279.

roles such as the professional "lady typist"; and in conjunction with the telephone, changed commercial culture by the ability to send memos to confirm phone conversations.[60] Whilst oral culture had little protection by way of copyright rules, intellectual property rights in cultural accretions such as business communications were largely ignored.[61]

Personal computers and desktop publishing capabilities had a similar impact to that of the typewriter in affecting writing and visual styles, presentation and distribution of texts. The P.C. and laserprinter opened up avenues for self-publishing and distribution. Resources and energy permitting, graphic artist/writer/publishers could publish and mass reproduce works without oversight of traditional media enterprises, placing them in shops and selling by mail order. Publications such as *The Face, Mondo 2000* and *Wired* magazine are examples of "fringe" publications that have achieved mainstream distribution. Whilst these magazines may not have overtly threatened the intellectual property rights of multinational media players, they are purveyors of a new "do it yourself" ethic where copyright was represented through graphic styles and editorial contributions as inconvenient, rather than as a benefit.

As noted above with respect to Barlow, identification of the author of a work is still imperative in digital culture. However writing contributions are closely integrated with the other creative inputs in these enterprises. Appreciation of the written work depends upon all stylistic aspects of the production of the issue being "cutting edge":
"In the decision-making and "make happen" aspect of the work operation, the telephone and other such speed-ups of information have ended the divisions of delegated authority in favour of the "authority of knowledge"."[62]
This "authority of knowledge" is not derived from co-ordinating and consolidating rights to "content", and/or rights to the separate kinds of works that copyright individually recognises. Rather, it is based in compressing and unifying the various aspects of production, such as graphic design, writing, publishing, promotion and to a lesser extent, advertising. Integrating the technology with the content, creating a culture of and for the new technologies, is what has given these enterprises a new and dangerous authority.

Some of these "innovative" enterprises have now achieved a scale that has caused them to re-adopt many of the old divisions of labour. In terms of organisation and style, they now mimic their adversaries who have (at least superficially) adopted some similar stylistic motifs. This leads to a challenging of the legitimacy of the "innovators" to deliver a counter-cultural message. Nevertheless this hallmark of success only brings home how effectively their message has been delivered, and signals more grounds for concern at how the foundations of the older cultural enterprises, based upon ideals such as copyright, have been undermined.

The *right of intellectual property owners* position is more than an argument against "piracy" although it is also certainly that. It involves a cultural intervention designed to slow the acceptance of the internet, coupled with select legal actions and proposals for specific legislative reform, so time temporarily "freezes", disrupting the establishment of the new hegemony. A slower pace is not only more familiar; it is

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[60] Ibid p. 275-282.

[61] Lehman actually acknowledges this: "As a practical matter, a lot of letters are photocopied, and in fact, it's an extremely common business practice to photocopy letters that you get and send them around to scores of people. It happens every day. I suppose that technically, if you are doing that without having gotten permission from somebody, you may be violating the copyright of the author of the letter. But I know of no lawsuits that have ever been brought in that area". See above n. 45.

[62] McLuhan, above n. 59 p. 281.

conducive to a fuller consideration of developments so that strategies allowing for profitable participation in the internet can be implemented.

Strategies for slowing the pace of Net developments include Lehman's proposals for legislative reform presented in the Clinton "White Paper" on the National Information Infrastructure (NII).[63] Suggestions include:
- redefining access to information using an electronic medium (such as reading a copy of a text on a computer) as involving a "reproduction" of a work for which permission, and theoretically a licence, is needed.
- redefining electronic transmission of a work as a "distribution" of it, to which a license could be applied.
- attaching "copyright management information" to electronic copies of works. This is:

"a kind of license plate for work on the information superhighway . . . Under the proposed amendment, copyright management information is defined as the name and other identifying information of the author of a work, the name and other identifying information of the copyright owner, terms and conditions for uses of the work, and such other information as the Register of Copyrights may prescribe by regulation."[64]

It is proposed that these initiatives would be supported by encryption technology and legislation making tampering with the "tracking" of information in digital form a civil and criminal offence. The point is to enable the "owner" of information to more easily identify who accesses a work, and how often.

The technology required to support these proposals is not available. It is not easy to account for all the possible ways in which a computer can interact with a work. For example, by configuring networks and machines, many workstations can access only one copy; or a single workstation can be set up so that it stores many copies or parts of a copy in the process of generating what appears as the "one copy" seen on the screen. In these circumstances, managing "copyright management information" would be an undertaking of such difficulty that it would probably not be worth while. Reform proposals like these, therefore, amount merely to an ambit claim designed to redirect the development of the culture of technology.

Such proposals try to slow interactions with digital media by reintroducing the cost of accessing information into the culture. Lehman takes the loss of temporality that occurs in the electronic media and turns it into an advantage to traditional content owners. If implemented, his proposals would allow for greater extraction of profit for accessing works in digital form than would apply were the same work circulated as a hard copy, such as a magazine or book. After the initial purchase of a book, a reader can return to it as often as they choose, and share the one copy amongst any number of people without infringing copyright. Copyright does not prevent the one work being viewed at various times and locations. Lehman's "White Paper" proposes to limit access to an electronic copy of a work to a particular point in time and space, and every access at a different time or space can be separately monitored and costed. These proposals do more than extend copyright onto electronic frontier: they take advantage of the technology to create altogether new opportunities to (theoretically) profit from works.

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[63] Information Infrastructure Task Force, *Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights*, 5 September, 1995. (The NII "White Paper").

[64] Bruce A. Lehman, Statement to *Subcommittee on Courts and Intellectual Property Committee on the Judiciary,* United States House of Representatives and the Committee on the Judiciary United States Senate, November 15, 1995. S. 1284 & H.R. 2441. http://www.uspto.gov/web/offices/com/doc/ipnii/

Lehman argues that these proposals work in the public interest:

"Creators and other owners of intellectual property rights will not be willing to put their interests at risk if appropriate systems -- both in the U.S. and internationally -- are not in place to permit them to set and enforce the terms and conditions under which their works are made available in the NII environment. Likewise, the public will not use the services available on the NII and generate the market necessary for its success unless a wide variety of works are available under equitable and reasonable terms and conditions, and the integrity of those works is assured. All the computers, telephones, fax machines, scanners, cameras, keyboards, televisions, monitors, printers, switches, routers, wires, cables, networks and satellites in the world will not create a successful NII, if there is no content. What will drive the NII is the content moving through it."[65]

This appraisal fails to consider the huge amount of material already made available online from which no profit is directly derived and where "integrity" cannot be guaranteed. It also fails to consider that many poorly funded institutions, including many publicly-funded schools and libraries, would probably have to refuse access to sites where users had to pay to view the content.[66]

Case law examples that attempt to insert mechanisms of control into cyberspace include actions to prohibit hypertextual linking without permission.[67] The point of such mechanisms has not been to profit from the link itself, although where a party might pay for the privilege, this can create a new revenue stream. Generally the point has been to create a legal situation that allows for the maximisation of profit from web advertising, by forcing all those that access a site to browse particular advertising spaces, for example, on the front page. If there is no control over how you can link to a page, links can be designed to bypass front page advertising by linking directly deeper into the site. Another possibility is that rather than a link seeming to transfer you to another site, a party can design its web site so that somebody else's web page can appear like a smaller movie within the site. The linked page is not only reduced in size, but the new framing can feature more prominent advertising, reducing the impact of the ads on the linked page. There are technological means of preventing someone linking to your page without permission. In these circumstances, the motives behind attempts trying to reinvent copyright law to prevent unauthorised linking needs to be questioned.[68] Threats of copyright and trademark actions[69] are attempts to stifle the development of a culture of unregulated access, to slow the velocity of the internet message.

The *right of intellectual property owners* position draws upon ethical arguments in a number of ways. First, the language of "theft" and "property rights" draws upon an investment in traditional arguments for private property: notions of desert, entitlement and freedom of contract. These notions are powerful because they are generally understood and broadly accepted in their traditional context. The conceptual leaps involved in first, applying notions that arose in the traditional circumstance of real property to that of intangible property, and then reapplying

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65 Ibid.

66 For a longer critique of the White Paper see Pamela Samuelson, "The Copyright Grab", (1996) *Wired.*, Vol 4.01. p. 134.

67 See *Shetland Times v Dr Jonathon Wills and Zetnews Ltd* [1997] FSR 604; 'The Shetland Times' case", at http://www.shetland-news.co.uk/appeal.html; Michelle Boccia, "Look Before You Link", at http://www.updateit.com/ifiwereyou/msticket.htm; and PaulAndrews, "Microsoft lawsuits tests Web linking practices", *Seattle Times*, Business News, 29 April, 1997.

68 It should be noted that all the cases refered to in the above articles are either undecided or are in early stages of appeal hearings.

69 Threats of actions against "The Simpsons", and "Star Trek" fan sites are regularly reported on the Net. see http://www.ozemail.com.au/~copy/cright

these concepts the case of intangible property in cyberspace is ignored. Such reapplications abuse the traditional ethical arguments for private property in an attempt to make emotional connections with audiences.

Second, there is an appeal to an ethic of authorship. The suggestion is that authors only make their creative works available because of state-sponsored financial returns that encourage mass distribution: as a society, if we want to access the great works, we need to protect copyright, regardless of the medium of delivery. This position ignores the multiplicity of motivations behind creative work, and the reality that far more than "creative" works are protected by copyright. It thus appeals to a particular cultural value - respect for authors of "great" (undefined) works - and generalises from that circumstance to the case of all authors, for all kinds of works. It also ignores the reality that commercial imperatives can make distribution of a "great work" unviable, for instance where it is judged too *avant garde* for popular reception.

Third, an appeal to an ethic of copyright, can be seen in both the positions above. Copyright is presented as naturally evolving, adapting to technological change, without losing its "natural" direction:

"Intellectual property is a subtle and esoteric area of the law that evolves in response to technological change. Advances in technology particularly affect the operation and effectiveness of copyright law. Changes in technology generate new industries and new methods for reproduction and dissemination of works of authorship, which may present new opportunities for authors, but also create additional challenges. Copyright law has had to respond to those challenges, from Gutenberg's moveable type printing press to digital audio recorders and everything in between -- photocopiers, radio, television, videocassette recorders, cable television and satellites."[70]

Copyright law had to respond to the challenge of the press? In this formulation, copyright is abstracted and reified. It appears as a good in itself. Further, it's evolution is represented as vulnerable to technological innovation and inadequate legal drafting, factors that may can affect the efficacy of copyright, but not its sanctified status.

What is the "natural" direction of copyright? Lehman does not provide illumination on this key point. To suggest copyright actually predates the press reveals his deep reluctance to acknowledge that copyright is a product of history, that it is based upon contested philosophical foundations and, that it has encompassed diverse legislative interests.

The most likely foundation for Lehman's notion of copyright implied by Lehman is an abstract, timeless, appeal to a "natural right" of authors. An enormous number of the theoretical analyses of copyright discuss the case of authors in light of the natural rights implicit in Locke's labour theory of property and/or personality theories of Hegel or Kant. However, the purpose of such analyses is generally to point the reasons for the law's failure to live up to a commitment to philosophical principles of desert and entitlement.[71]

The literature also reveals numerous analyses of British late eighteenth century literary property debates.[72] A large part of this writing traces the cultural currency of the "right of authors" and the influence of romantic theory on case law and

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[70] Lehman, above n 64.

[71] See for example, Linda Lacey, "Of Bread and Roses and Copyright" (1989) *Duke Law Journal* 1532; Margaret Radin, "Property and Personhood", (1982) 34 *Stanford Law Review* 957.

[72] The most influential piece is still probably by Mark Rose, "The Author as Proprietor: Donaldson v. Becket and the Genealogy of Modern Authorship", 23 *Representations,* (1988) p. 51.

nineteenth century legislative reform. However here, too, can be found universal acknowledgment that "Anglo"-derived copyright is ultimately a creature of positive law.[73] Respect for the "natural rights of authors" may have influenced the law, particularly in the late-eighteenth to mid-nineteenth centuries, but this notion has never been the undisputed cause of copyright. Further, in analyses where author's rights are of concern, it is rarely claimed that the author's interest naturally coincides with that of publishers and distributors. In these writings "respect for the author" is often criticised as a notion abused by publishers and distributors who have engaged it for their own advantage, often to the neglect of or at the expense of the author.

Pamela Samuelson concludes her critique of the "White Paper":

"During the first centuries after the invention of the printing press, publishers had considerably stronger monopolies than modern copyright laws grant them. They used these broader rights to charge excessive prices and censor dissenting views. When the English Parliament passed the first modern copyright law, in 1710, it did so in part to stop publishers from oppressing authors, potential competitors, and the public."[74]

From the start, the copyright legislation was controversial because it altered terms of the trade that established London publishers had understood and profited from. However it should also be remembered that:

". . . at the beginning of the eighteenth century it was clear that England and Scotland were to unite, which happened in 1707, be it noted.

"The Act of Union of 1707 created a "common market" of Great Britain, and threw the lucrative English book trade open to the canny entrepreneurs from across the Tweed. These publishers of Edinburgh and Glasgow . . were not subject to the London printing trade.

". . . The real motive behind the first Copyright Act seems to have been an attempt to export copyright control to a region of Great Britain where the Stationers' Company writ did not run."[75]

Whilst London Stationers lost profit opportunities for profit because the Statute limited their "perpetual copyrights" to a term of 14 or 28 years, new opportunities were also provided: the statute extended trade monopolies to an entirely new domain.

This earlier copyright debate heard an equivalent cry to *Information wants to be free.* In *Donaldson v Beckett*[76] Lord Camden claimed:

"Most certainly every Man who thinks, has a right to his thoughts, while they continue to be HIS; but here the question again returns; when does he part with them? When do they become *public juris?* While they are in his brain no one indeed can purloin them; but what if he speaks, and lets them fly out in private or public discourse? Will he claim the breath, the air, the words in which his thoughts are cloathed? Where does this fanciful property begin, or end, or continue?"[77]

That generated the repsonse that "Authors have ever had a property in their Works, founded upon the same fundamental maxims by which Property was originally settled." It was further argued that "The Invention of Printing did not destroy this Property of Authors, nor alter it in any Respect, but by rendering it more easy to be invaded."[78] It can be seen that arguments in the electronic age over the right to access information are far from new. The reality that ethics are tethered to political causes and used and abused in attempts to win public sympathy also has long precedence.

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[73] The strongest proponent of this view is David Saunders, "Dropping the Subject: An Argument for a Positive History of Authorship and the Law of Copyright", in Brad Sherman & Alain Strowel, (eds), *Of Authors and Origins: Essays on Copyright Law,* (1994, Oxford: Clarendon Press) p. 93-110.

[74] Above, n.66 p. 191.

[75] Peter Prescott, "The Origins of Copyright: A DebunkingView", [1989] 12 EIPR 453 p. 454-5.

[76] 4 Burr. 2408, 98 Eng. Rep. 257.

[77] "The Pleadings of the Counsel before the House of Lords in the Great Cause concerning Literary Property. . .", in *The Literary Property Debate: Six Tracts 1764-1774*. (ed) Stephen Parks, (1975, New York: Garland Publishing) at F32.

[78] *The Case of Authors and Proprietors of Books*, as quoted in Rose, above n.72 p. 57.

The issue of access to information is primarily an issue about the construction of the marketplace for knowledge: how is the market to be legally defined?; what rights will be allocated over what and to whom? The role law plays is not all that different in this instance from the role played by law in settling conditions for the right to access technologies. However the rhetoric evoked in each case is different. Historically, the claims of copyright emerged under the banner of private property, even though the law did not wholeheartedly embrace that categorisation. By contrast, once a given technology had been characterised in terms of services, rather than in property terms (ie. as goods), claims of infrastructure were commonly argued in terms of public policy. Legal language makes a powerful contribution to the culture of a new technology. Influencing the direction of that culture also involves reinventing the language of law.

RESPONSIBLE RELATIONSHIPS?

"They say he raped them that night. They say he did it with a cunning little doll, fashioned in their image and imbued with the power to make them do whatever he desired. They say that by manipulating the doll he forced them to have sex with him, and with each other, and to do horrible, brutal things to their own bodies. And though I wasn't there that night, I think I can assure you that what they say is true, because it all happened right in the living room - right there amid the well-stocked bookcases and the sofas and the fireplaces - of a house I've come to think of as my second home."

Julian Dibbell[79]

The above is an account of a virtual rape that took place in "LambdaMOO" MUD (Multi User Domain). In a MUD the way a player "looks" and "behaves" depends upon the textual information forwarded by the creator of the identity. Biological and cultural constructions of the body (gender, race, class, age) can be manipulated in an atmosphere of privacy and anonymity, allowing a great deal of freedom and playfulness with respect to identity formation. In the LambdaMOO case, the perpetrator, "Mr Bungle", wrote a subprogram (the voodoo doll). This allowed him to write the actions of other people's characters, making them behave as he wished. "Mr Bungle" was a student from New York University. Eventually he was stopped from interfering with other characters in the MUD when a more experienced player, Zippy, created another program that allowed him to detain Mr Bungle in a cage and stopped his ability to exercise power over other characters. The crisis that ensued was about how to deal with Mr Bungle. Had he committed any wrong? And if so, what should be done about it?

To those who see MUDS as fantasy realms, Mr Bungle's transgressions may seem no more heinous than discovering a cheat in middle of a game of Scrabble. However to the "victims" in this case, the offence was not so much in the placing of unauthorised texts, but in the way text/action was used:

"while the *facts* attached to any event born of a MUD's strange, ethereal universe may march in straight tandem lines separated neatly into the virtual and the real, its meaning lies always in that gap. You learn this axiom early in your life as a player, and it's of no small relevance to the Bungle case that you usually learn it between the sheets, so to speak . . ."[80]

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79 "A Rape in Cyberspace; or How an Evil Clown, a Haitian Trickster Spirit, Two Wizards, and a Cast of Dozens turned a Database into a Society", in Ludlow, above n. 35 p. 375.

80 Ibid, p. 381.

Debate about what to do with Mr Bungle took place inside and outside of LambdaMOO, with many public postings appearing on internet fora. Discussion did not focus on the "corruption" of a game but engaged with the nature of sexual assault and harassment, models of governance, policing and ethical conduct. Whilst many of the aspects of the Mr Bungle case are peculiar to LambdaMOO, the reaction to the case also encompassed a broader debate over the legitimacy of privacy, remailing and anonymity on the internet, responsibility for moderating MUDS, internet-relay chat (IRC), news groups, list serves, bulletin boards, overseeing email, censoring messages and web pages, and cancelling a "trouble-maker's" accounts.

The "gap" Dibbell sees as connecting real and virtual worlds is mediated by language, it is mostly, English, enhanced by a large array of signs and symbols specifically developed to convey feelings via typed internet communications.[81] Quoting Lyotard, Michael Beuabien argues that:
"meaning is created socially through participating in language games, in which the rules defining a game are "agreed on by its present players and subject to eventual cancellation"."[82]
Beuabien suggests that the trouble at LambdaMOO reflects uncertainty as to the language rules that apply in cyberspace, where technology mediates all communications.

For those who saw language as constitutive of identity, and those who invested a great deal of energy and thought into developing an online persona(s), a "virtual" assault could cause real distress. The harm was not only borne by the character, but also its author. However the ensuing discussion was not conducted in terms of the "ownership" rights to a character, akin to a moral rights argument in copyright where the author is vested with the authority to protect the integrity of his [sic] creative work. Rather the discussion viewed the problem as the merging of identities of author, reader and subject, leading to a shared sense of injury amongst many of the inhabitants of LambdaMOO. Damage was not understood in terms of an abuse of property rights, but in terms of the infliction of psychic harm upon the collective. Dibbell notes that discussion of sexual assault often addresses victim damage as both physical and psychic.[83] Participants in the debate distinguished between the respective gravity of what happened in LambdaMOO and a sexual assault or harassment offline; however many participants, including some nominated as survivors of sexual assaults, felt that appropriate mechanisms were needed to redress virtual sexual offences that harm virtual communities and can distress participants.

Throughout the discussion there was little interest in considering the use of law because of the "virtual" nature of the incidents and implications for online free speech. In any case, criminal assault posed problems in establishing language as a cause of criminal injury[84] as well as connecting any such crime with a real (as opposed to a virtual) victim. Inother cases legal intervention in the form of a tort action for nervous shock, defamation or legislation prohibiting the making of obscene "phone calls" have been suggested as possible remedies for inappropriate online conduct.[85] In this example however, the issue was generally characterised as

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[81] See Elizabeth Reid, "Communication and Community on Internet Relay Chat: Creating Communities", in Peter Ludlow, above n.35 p. 397ff.

[82] "Multi-User Dungeons and Social Interaction in Cyberspace", in (eds) Lance Strate, Ron Jacobson & Stephanie Gibson, *Communication and Cyberspace*, (1996, New Jersey: Hampton Press) p. 185.

[83] Dibbell, above n.79 p. 381.

[84] This concept is not unknown to criminal law but generally it relates to specific, controversial pieces of legislation that proscribe free speech such as racial vilification laws.

[85] See Cotton Ward, "Sympathy for the Devil", *.net*, Issue 35 August 1997, p. 53.

one of establishing appropriate ethics for the LambdaMOO community - developing standards of civility, rather than enforcing criminal or civil laws.

To discuss the possibility of community-based sanctions and specifically the "toading" of Mr Bungle,[86] a meeting was called in LambdaMOO. At this point the "real" nature of virtual communities became apparent. To enforce decisions about the future of Mr Bungle, the LambdaMOO community would need assistance from a "wizard", a programmer of the MOO. Prior to the Mr Bungle incident, Pavel Curtis, the chief architect of LambdaMOO, had decided that wizards should not become involved in disagreements between players over the use of the domain. His "New Direction" document, left in the living room of the MOO for all participants to see, stated that wizards were only technicians who would implement decisions as reached by the whole community.

What did the community think?:

"Parliamentarian legalist types argued that unfortunately Bungle could not legitimately be toaded at all, since there were no explicit MOO rules against rape, or against just about anything else - and the sooner such rules were established, they added, and maybe even a full-blown judiciary system complete with elected officials and prisons to enforce those rules, the better. Others, with a royalist streak in them, seemed to feel that Bungle's as-yet- unpunished outrage only proved this New Direction silliness had gone on long enough, and that it was high time the wizardocracy returned to the position of swift and decisive leadership their player class was born to.

"And then there were what I'll call the technolibertarians. For them, MUD rapists were of course assholes, but the presence of assholes on the system was a technical inevitability, like noise on a phone line, and best dealt with not through repressive social disciplinary mechanisms but through the timely deployment of defensive software tools. Some asshole blasting violent, graphic language at you? Don't whine to the authorities about it- hit the @gag command and the asshole's statements will be blocked from your screen (and only yours). It's simple, it's effective, and it censors no one."[87]

Dibbell notes that blocking out what happens to your character does not really work when offences take place, as these did, in full view of all the other players.

Perhaps such a diversity of views should be expected, given the newness of the medium, the fluid nature of MOO culture and the ability of participants to hide their real identities. Also if the MUD is interpreted as primarily a reading culture, then perhaps the opinion diversity is a standard characteristic. In contrasting the culture of the printed book with that oral culture, Elizabeth Eisenstein notes that:

"By its very nature, a reading public was not only dispersed; it was also more atomistic and individualised than a hearing one. To catch the contrast, Walter Ong suggests that we imagine a speaker addressing an audience equipped with texts and stopping at one point with a request that a textual passage be read silently. When the readers look up again, the fragmented audience has to be reassembled into a collectivity. . . To be sure, bookshops, coffeehouses, reading rooms provided new kinds of communal gathering places. Yet subscription lists and corresponding societies represented relatively impersonal group formations, while the reception of printed messages in any place still required temporary isolation - just as it does in a library now."[88]

In the bookshops and coffeehouses,[89] whether the focus was serious political discourse or fun and entertainment, works were read aloud, debated and discussed. There, texts recovered some of their fluidity and textual meaning was constructed by

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86 Whereby the "wizards" who adminster the MUD turn Mr Bungle into a toad, effectively erasing the online identity.

87 Dibbell, above n.79 p. 384.

88 Elizabeth Eisenstein, *The Printing Revolution in Early Modern Europe,* (1993, Cambridge: Cambridge University Press) p. 95.

89 Habermas notes the significant political and social role reading societies and coffeehouses played in the 17th to the 19th centuries. Jurgen Habermas, *The Structural Transformation of the Public Sphere,* (1992, Massachusetts: MIT Press).

many voices. In some ways the more informal interactions in these clubs is analogous to that in today's online communities.[90]

MUDs can be seen as both connecting and disconnecting participants: "readers" can also be "writers", if they choose; the meaning of the text continues as long as anyone remains interested. Some cyber-theorists suggest that the keyboard is simply a mechanical extension of the cyborg body.[91] Given these possibilities, it is perhaps not surprising that an amnesiac attitude can develop so that players forget that individuals participate from various locations, and that their experiences are mediated by a machine and its sensory limitations. These mediating and sensory qualities are said to transcend the notions of individuality that inhere in more traditional text based media.

Nevertheless not all participants have equal typing dexterity. Interactions suffer from time delays and, partly because of that, conversations can have multiple, disjointed threads. Whilst the analogy with conversation is well recognised, Pavel Curtis notes that coherence is affected by constant interruptions. He argues however, that these interruptions are simply less significant on MUDs than they are in real life.[92]

The diverse culture of participants and the perceived nature of the medium affected the outcome of the LambdaMOO meeting. Despite nearly all participants voicing strong disapproval about Mr Bungle's conduct, there was no resolution: "The perspectives were just too varied, the meme-scape just too slippery. . . People started drifting away".[93] One of the wizards acted on his own initiative and quietly erased Mr Bungle. Since then, the archwizard has built into the database a system of petitions and ballots so anyone can seek a popular vote on social schemes that require wizards to implement them.

In this fantasy realm where "real world" laws are seen as inapplicable, engagement with the ethical implications of virtual relationships has led to the creation of a system that mimics a familiar political and legal forum: a virtual public sphere where ethical responses can be debated and decisions formally executed, as the need arises. Such a solution reveals a sensitivity to the interest of diversity within these communities as well as to the power of those members with privileged technological access.

Perhaps more commonly "wizards" (or the system equivalents) simply resort to "kill" commands in respect of identities they find troubling, or "censor" disturbing

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[90] Such as in the gentleman's club called *The Sublime Society of Beef Steaks*. The motto was "liberty and beef". As Boswell puts it, the purpose of the society was to enjoy wine and punch in plenty and freedom, accompanied by a number of songs. See James V. Schall, "Duty and Sacrifice", *An Address to the Fifth Annual Symposium on Public Monuments on "The Firefighters' Legacy", The Public Monuments Conservancy* by James V. Schall, S. J., Professor, Department of Government, Georgetown University, at Time-Life Building, Rockefeller Center, New York City, republished at http://www.georgetown.edu/schall/wsjvs6a.htm#1
LIONEL: Did you think I should put in the note about Hogarth et al? I thought it would be good, but maybe the note is getting too long? Feel free to add at will.

[91] Elizabeth Reid, "Text-based Virtual Realities: Identity and the Cyborg Body", in Ludlow, above n.35 p. 328.

[92] See "MUDding: Social Phenomena in Text-based Virtual Realities", in Ibid p. 362.

[93] Dibbell, above, n.79 p. 388.

discussion by "archiving" the topic.[94] These interventions can be interpreted as a refusal to engage in an ethical discourse about the best interests of the online community and the rights of those who share internet access. Operators can also avoid ethical discourse by taking a passive stance, leaving those who claim to be suffering harassment or abuse to their own devices, refusing to offer technical help or other mechanisms for resolving disputes. Passivity can often be justified by an indiscriminate appeal to the "free speech" or the "privacy" rights of users. Whilst it is open to users to relocate to more friendly service providers and/or internet communities, some harassers make a point of tracking quarry to their new homes. Where the ethics of such situations are not dealt with on site, it is important to consider the role played by more traditional, powerful regulators, such as federal policing agencies. Generally such organisations become involved on a selective basis, as in the Church of Scientology cases.[95] For all the rhetoric about the democracy of the internet, there are no "real" rights for citizens of cyberspace, apart from those granted by and to members of virtual communities with an interest in enabling ethical conduct.

CONCLUSION: ETHICS AND LAWS

"The Three Laws of Robotics
1. A robot may not injure a human being or through inaction allow a human being to come to harm;
2. A robot must obey the orders given it by human beings except when such orders would conflict with the First Law;
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law."

Isaac Asimov (1941)

Asimov's three laws imbue technology with human-centred ethics, however in essence his "robot stories" problematise the ability to predict the complexity of interactions between humans and their technologies. His tales convey a tension between desire for "good" behaviour and the unanticipated results that follow the application of ethics as rules.

It is not true, however to say that all rules are unworkable in cyberspace. Despite questions of jurisdiction and conflict of laws,[96] there is ongoing pressure to "harmonise" laws that impact on global trade. In reinventing the markets for and in cyberspace, acceptance that there are major problems in refashioning laws is uneven: "our insertion into an increasingly electronic and digitised life-world occurs in modalities that are *both* technologically "transparent" (that is, the technology is effortlessly and unproblematically "incorporated" into our very being) and "hermeneutic" (that is, the technology is seen as something other than ourselves and thus in need of interpretation)."[97]
The possibilities for law reform have to be considered in light of the specific cultures of the internet technologies concerned, and in the context of the history of the development of the various legal categories involved. Some laws can incorporate the changing temporality, spatiality, embodiment and subjectivities of cyberspace technologies better than others.

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[94] For a discussion of the use of this tactic on WELL, a renowned haven for democratic discourse, see humdog, "pandora's vox: on community in cyberspace", in Ludlow, above n.35 p. 440.

[95] See http://www.eff.org/pub/legal/Cases/Scientology_cases/

[96] See David Post, "Anarchy, State and the Internet: An Essay on Law-Making in Cyberspace", (1995) *Journal of Online Law*, Art.3

[97] Sobchack, above, n.40 p. 80.

But, in the absence of workable rules and appropriate rule-makers for cyberspace, ethics take on a more intense importance. Their significance derives from their status as outcomes of an evolving, contextual process of community formation, not from their position as positivist law, abstract rules of correct behaviour. This is ultimately the point underpinning the three laws of robotics, and whilst they were envisioned for a different technological future, the message and the metaphors still resonate.