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Computer and Information Ethics: The Neglect of Moral Issues Associated in E-Commerce

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Abstract

This research explores the ethical and social issues arising from the phenomenal growth of commercial E-Gambling within Europe. The digitised commercial services of a leading European operator is scrutinised using internet research methods from 2003 to 2006 to produce the findings. Internet research methods were selected because they offer interesting insights that have proved difficult to ascertain by others, using alternative approaches. This empirical study highlights some of the social problems associated with E-Gambling, particularly in relation to concerns with the level of problem gambling. In addition, it finds that commercial operators have a contradictory stance in terms of the delivery of their ethical policies in some commercial practices.

Keywords: Ethics, Electronic Gambling (E-Gambling) and Internet Research Methods.

Introduction

E-Gambling commerce has grown to be a global phenomenon for a number of economic, social, political and technical reasons. E-Gambling operations in Europe are extensively offered by established organisations, licensed through national legislation to operate. In addition, there has been a significant growth of new entrants into the market, often based offshore and often unlicensed by national governments. Many within the industry distinguish between the superior ethical standards adopted by licensed operators over unlicensed (StanleyLeisurePLC 2005). It is also worth noting that whilst there may be some truth in such statements, licensing is no guarantee that commercial operators will always act ethically or that such organisations should be less scrutinised.

Traditional forms of commercial gambling e.g. casinos, bookmakers and bingo etc. have always had an ethical dimension, thus the issue of problem or irresponsible gambling is not new. Past legislation, organisational policies and social pressures have resulted in a situation where problem gambling persists but is restricted to a relative small minority, approximately 0.6 per cent of those adults who gamble, according to a detailed U.K. study (Wardle and others 2007). However, whilst there are a number of similarities between E-Gambling and traditional forms of gambling, there are also several key differences that make comparisons (and thus reconstituting ethical norms) somewhat problematic.

Commercial E-Gambling represents a significant departure from traditional forms of gambling in many respects. The first difference relates to advances in information and communication technologies, particularly in relation to home computing e.g. broadband networks, Internet security, the World Wide Web and enhanced processing and graphic capabilities within home personal computers. In addition, the gambling industry has been helped by the growth of the quality of global multi-media and gaming software industries. Such technological developments are increasing consumer accessibility and change the level of interactivity. Internet accessibility changes the provision of commercial gambling to instantaneous access and provision. Although there is little empirical research at this moment in time, the Internet as a commercial channel may also result in changing the consumer demographic for gambling services e.g. changes in gender, age group and social class. In terms of computer to human interactivity, theories continue to evolve. Studies highlight the difference between human interaction (behaviour synonymous with traditional forms of commercial gambling) and computer interaction (applicable to some traditional forms but mostly synonymous with E-Gambling) (McMillan 2002; Stromer-Galley 2004). Others have studied the psychological and social effects of interactivity with conclusions that it can impact on human behaviour, attitudes and cognitive reasoning or capability (Bucy 2004a; Bucy 2004b; Lang 2000; Sundar 2004).

Thus, given E-Gambling's characteristics and capabilities (and our existing knowledge of those characteristics and capabilities), it is reasonable to suggest that E-Gambling has an enormous potential to create new ethical issues and moral vacuums (Moor 1985). The main moral controversy surrounding E-Gambling is the potential to introduce problem gambling to new social demographic groups and to exacerbate existing levels of problem gambling in traditional gamblers. It is beyond the scope of this paper, but it is worth noting that others are more sceptical about the somewhat mono-causal relationship or technological deterministic inference inherent in such assumptions (Adam 2001; Howcroft and others 2004; MacKenzie and Wajcman 1999).

Computer ethics is ultimately normative e.g. leading to the formulation of policy (Adam 2001). However, this research departs from a normative stance and uses a fairly descriptive approach. A descriptive approach is chosen due to the relatively embryonic nature of the development of commercial E-Gambling (discussed later). In others words it is perhaps wise to highlight what exists (in order to clarify) before deciding what ought to exist (Brey 2000; Huff and Finholt 1994; Tavani 2004).

The remainder of the paper is structured as follows. Firstly, we assess some of the background issues within the European gambling sector and move on to evaluate the generic business case for E-Gambling. This proceeds to an analysis of computer ethics and a discussion of the potential contribution of internet research methods. This is followed by an evaluation of the features of E-Gambling that are controversial from an ethical or moral perspective. Finally, we present the findings from the case study which leads into a discussion and conclusion of the ethical issues raised.

E-Gambling

The European gambling sector is in a period of transition and diversification. In general, gambling products and services sold through traditional channels are in decline. Ladbrokes, part of the Hilton Group and one of the Europe's leading gambling companies, reported a 9 per cent fall in profits from its retail operations and a 28% decline in profits from telephone betting (Deloitte/Touche 2005; HiltonGroupPLC 2005) In addition, since 1997, the UK National Lottery has struggled to increasing revenues from traditional sources (Camelot 2004). The problem of consumer demand for traditional gambling activity is just one of several reasons why a number of organisations are increasingly diversifying into E-Gambling business. E-Gambling is also gaining momentum for the following issues:

- The potential to increase revenues from attracting global consumers via the use of digital communications such as the Internet. Such technologies are enabling established organisations to move from national to international markets e.g. William Hill, Ladbrokes, Camelot etc. and helping new entrants to quickly establish themselves as major global operators e.g. 888.com (part of 888 Holdings PLC).
- The ability to increase revenues from the rapid and continuous use of E-Gambling products. Witnessed by a move to a greater portfolio of games e.g. online games, poker, roulette etc. available 24 hours a day, 7 days a week.
- The increased viability of E-Gambling as a consumer channel due to the availability and increased social use of digitised information systems and technologies such as; the growth and power of broadband services (screendigest.com, 2006) and electronic cash systems e.g. developed by affiliates organisations such as Intersafe Global Ltd.
- The social and cultural influence of national lotteries, which according to Michael Smeaton of Gamcare in 2004, (a leading charity for problem gambling) kick-started a move towards making gambling more mainstream and socially acceptable
- The general availability of qualitative gaming software and the growth of the software gaming market (screendigest.com, 2006).

For a number of commercial operators such issues appear to taking primacy over the problems associated with E-Gambling such as government legislation, adverse public opinion and the costs of providing information systems security. In addition, a number of operators are persuaded from the increased financial rewards that are now beginning to accrue from the use of E-Gambling. Whilst gambling services sold through traditional commercial channels continue to struggle, E-Gambling is beginning to return impressive levels of profitability (see table 1).

Table 1: Interim Financial Results for E-Gaming Activities – Ladbrokes 2005

Company	Half Year Turnover June 2005 £m	Half Year Turnover June 2004 £m	Annual Increase %	Operating Profit 2005 £m	Operating Profit 2004 £m	Annual Increase %	
Ladbrokes	424.6	281.9	50.6	17.5	12.1 Source: I	44.6 Hilton Group P	LC 2005

E-Gambling and the Consumer

E-Gambling is an ongoing and organic topic. The problems with comparing traditional forms of gambling with E-Gambling have already been highlighted. Thus, it seems logical to seek new thinking in respect of policies towards E-Gambling. UK surveys of gambling behaviour and attitudes often show varying levels of support for certain types of gambling activity. National Lotteries are considered to be less controversial in Europe because their products are available less often than other forms of 'more regular' gambling (Creigh-Tyte and Lepper 2004).

Alternatively, in terms of problem or irresponsible gambling, it has been suggested that E-Gambling can provide a "natural fit for compulsive gamblers" (Griffiths 1999) because of some of the factors already discussed such as accessibility and interactivity but also because of personal and social anonymity, (Griffiths 2001). The Internet is also likely to provide the first exposure to gambling for a number of individuals or groups e.g. young people (previously protected by controls such as age limits) or women and upper social classes (previously deterred by the culture exhibited in traditional gambling environments). In addition, further, exposure to gambling is no longer controlled and limited in time (to opening hours) or space (the high street betting shop or the casino), but literally follows people into their homes and, arguably, wherever they go through the development of mCommerce (commercial activity over a mobile device such as a phone or PDA). This act of "isolating" the consumer ensures that problem gambling is less visible and so reduces the effect of social regulation on gamblers (Goffman 1959). Similarly, as gambling becomes an asocial activity, possibilities for intervention to limit gambling addiction are vastly reduced.

UK studies of E-Gambling have concluded that there is little evidence of problematic gambling behaviour associated with the Internet (Griffiths 2001; Wardle and others 2007). However, such surveys were conducted before many of the leading companies offered E-Gambling services or before the impact of such a new phenomenon could be reasonably evaluated. Other studies have pointed to the substantial increase in the amount of gambling opportunities offered on the Internet and the ensuing problems (Smeaton and Griffiths 2004). E-Gambling is an issue of great concern in relation to the social and psychological problems of addiction. Not only does the technology make gambling more freely available, feeding addictions with an incessant supply, but it raises an entirely new potential addiction; technological addiction (Griffiths 1996). The combination of

technological addiction and gambling addiction which online gambling presents may raise some difficult social issues.

In the light of these concerns recent research has addressed the issues of protection of vulnerable groups, such as adolescents and problem gamblers, and the socially responsible practice of online gambling companies. (Smeaton and Griffiths 2004) compiled a list of recommendations for good practice among E-Gambling operators. Inherent in this list is the conflict and congruence of good commercial practice and the social responsibility of online gambling operators. The study concluded that E-Gambling operators were failing to recognise or formulate effective ethical strategies in order to protect vulnerable consumers.

The Problems Associated with Studying Consumer Behaviour in the Gambling Industry

Studying consumer attitudes and behaviour within the gambling sector is a highly complex activity. Previous studies have highlighted several problems associated with using certain research methods such as case study or action research. Problems include; the reliability of collecting data from gambling consumers, industry attitudes to external inquiry and a range of methodological issues facing the particular researcher (Parke and Griffiths 2002). Parke and Griffiths have found that some gambling consumers may offer misleading statements because they like their anonymity, some are often too engrossed in their pursuits to participate in such research, some often fail to recognise the benefits of such work and finally, because of a guilt arising from the social stigma surrounding gambling, some tend to underestimate their participation or overstate their gambling prowess or financial returns. The study also highlights that the gambling industry tends to perceive academic research as anti-gambling and that such views may have a negative effect on consumption. Finally, the paper highlights a range of problems that are research specific including; the problems of gaining access within such environments without becoming a participant, distraction resulting from the need to participate whilst trying to facilitate covert observation, the knowledge required to understand the range of gaming services, understanding the unique social and cultural norms associated in such environments, e.g. protocols, language or terminology, the problems of gaining trust from either overt or covert observation, the problems of subjective sampling or representation of the range of consumers and the problems of a acquiring quantitative data. The paper highlights some practical advice but also concludes that such research methods will always be problematic. In light of such problems and because of the nature of E-Gambling e.g. such consumer channels are available to scrutinise in the public domain, this research uses internet research methods to further our understanding of the ethical issues involved.

Computer and Information Ethics

The literatures on computer and information ethics continues to grow and evolve with a number of complexities, however, despite some divergent views, many consider its study

to be of significant interest, worthy of human attention (Moor 2001; Tavani 2002). It is primarily focused on the moral issues arising from the design, implementation and use of computer-based information systems (IS). Thus, the purpose of computer ethics is to raise awareness of moral controversies in order to find socially acceptable policies for dealing with them (Moor 1985).

During the last decade, the literature on information ethics has focussed on a number of issues such as; morality (Gert 1998); (Pojman 2001) and (Triplett 2002), deontological or utilitarian theories (Johnson 1999); (Johnson 2001; Tavani 2004) and more recently on a discipline debate e.g. that information ethics is fairly unique (Baskerville and Myers 2002; Floridi and Sanders 2002; Maner 1996; Nuyen 2004), that it is not unique (Basse 2003; Gorniak-Kockikowska 1996; Himma 2003; Johnson 1999) or that it has some unique features with influences from other ethical fields (Marturano 2002; Marturnano 2002; Moor 1985). A review of the literature associated with computer ethics highlights a relative scarcity of certain topics. Given its economic, social and political significance, one such neglected topic is that of the ethics of E-Commerce. This paper is thus fairly innovative because of its use of internet research methods to interpret the ethics of E-Gambling commerce.

Internet Research

Empirical studies have highlighted the significance of internet research in a number of established disciplines e.g. business, library and information science and sociology (Rice 2005). However, others have highlighted its absence in other disciplines e.g. economics and psychology (Baym 2005). In addition, few would disagree that the Internet has global significance or that it has economic, social, political and cultural importance (Hine 2005; Jones 1995; Wellman and Haythornthwaites 2002). The general consensus is that despite being of enormous interest, internet research is yet to recognised as a reference discipline (Jones 2005; Sterne 2005). However, many highlight the interdisciplinary or transdisciplinary nature of the topic (Hunsinger 2005; Jones 2005; Monberg 2005). Also those who engage in internet studies often have shared interests and common identities (Markham 2005; Shrum 2005).

This paper uses internet research methods because of the problems associated with alternative methods and because of the potential opportunities available. The problems with traditional research methods have already been highlighted however the opportunities presented by internet research are that E-Commerce, particularly E-Gambling commercial channels are in the public domain and thus, available for greater interpretation and wider scrutiny.

The Case of E-Lot Co

This research evaluated the E-Commerce operations of a leading European gambling organisation from 2003 to 2006. For the purposes of the paper, a researcher registered on

the web site as a consumer which allowed access to a range of services and corporate documents including instructions, games and reports on ethical policies and social surveys. In addition, the researcher participated as a consumer by playing a number of the online games from the vast portfolio. In terms of fairness to the company chosen for this research its identity has been disguised and given the pseudonym of 'E-Lot Co'. Our initial research found that the ethical standards at E-Lot Co were some of the best within an otherwise problematic industry.

E-Lot Co exclusively trades in gambling products and presently provides a range of E-Gambling commercial activities, including a national lottery. E-Lot Co is a licensed company and regulated by national legislation. This seeks to ensure that; its activities are managed in an appropriate manner (with due propriety), its proceeds are maximised to provide for a range of 'good or charitable causes' and to pay lottery duties to the national government. In terms of due propriety, E-Lot Co tries to ensure that the interests of vulnerable groups are protected. Thus, the company claims that it does not encourage or allow anyone under the age of 16 to participate and that they try and reduce participation from people who have, or who may have, an addition to excessive gambling. In addition, the company promotes its own research that highlights strong social approval for several of its activities.

When E-Lot Co began commercial operations, it retailed just one product, a once weekly lottery draw, which raised revenues of approximately 3,000 million euros per annum. In 2003, they introduced a strategy to try and increase sales revenues. The strategy incorporated; an extension and diversification of its existing product portfolio, an increase in the number of sales channels and a targeting of such channels to make them more accessible to a range of diverse customers. The companies commercial gambling portfolio now includes several lottery draws and an extensive range of non-lottery games, distributed (or about to be distributed) through a growing number of intermediaries and sales channels, including; retail outlets, the Internet, digital television and mobile technologies. In 2003/4 the diversification and accessibility strategy helped to increase sales to over 6,600 million Euros.

In 2005, the diversification strategy included a range of renowned games at various prices. Since the launch of online instant games, the number and pricing of such games has significantly increased. Consumers are allowed to manage their own accounts and set their own participation rules (which can be amended relatively easily). Products are based on the concept of fairly familiar board games as well as adaptations of popular television shows. All games are accompanied by clear instructions and free demonstrations to help consumers play. In contrast to the once-a-week lottery draw (which societies tend to perceive as fairly acceptable), digitised formats of instant games represent a different scenario. Digitised instant games can be played in isolated environments, where consumers are free from any social or cultural norms that may influence their participation. Interactive features are deployed by the company, presumably to enrich the user experience. The products e.g. games available are designed to be accessible with clear language and simple imaginary. They are offered to consumers instantaneously with unlimited availability where the pace of duration is rapid. In addition, our research

observed the use of 'near win' experiences deployed in many of the instant games which some believe can encourage repeat gambling (Griffiths 1999). Finally, such forms of gambling can only be facilitated by electronic cash.

Discussion

The empirical findings highlight several moral controversies involved in licensed E-Gambling. The E-Lot Co case supports the main findings of an earlier study (Smeaton and Griffiths 2004) that, in general, companies have a contradictory ethical stance in relation to conducting commercial activities. Whilst E-Lot Co has detailed policies to encourage responsible gambling and they are keen to promote their social credentials, observations taken from their web site and the use of semiotics reveals that such principles are not always evident in practice e.g. in the consumer products and services on offer. An example of this contradictory stance is highlighted by the organisations promotion of its ethical credentials by citing favourable (and often inappropriate) social research. The research cited is based on findings of social attitudes before the organisation embarked on E-Gambling. At the time of this study, independent research of social attitudes since the proliferation of E-Gambling is scarce.

From a social perspective, the marketing of games is interesting for the specific reason of the type of language and imagery that is used and what language and imagery is less prominent or excluded. This research reviewed the web-based board games and observed the following. Such products are marketing as 'instant win games' when the generic odds of winning a prize are less than 20 per cent, thus, in reality such products are 'instant games'. This somewhat distorted use of terminology is also evident in the display of the jackpot prize. The banner is larger than many other images on the web page, it is in a prominent yellow colour and underneath it states the term 'real cash real quick'. Also it prominently advertised the top prize of £10,000 when again this does not represent the norm or the full range of prizes, which start at the modest stake prize (the most frequent win). The company also prominently uses cartoon imaginary throughout its web pages to promote its online games, despite the potential appeal to children and despite the claim that the company does not encourage gambling to those under 16 years of age.

In relation to the ethics of E-Gambling, the following issues are highlighted. This research highlights the potential for an increase in problem gambling due to the improved availability offered by instantaneous gambling, the usability and interactivity of such products, the problems of perceptions of reality in the use of electronic cash and the removal of social influence (through isolated participation) and the reliance on self restraint. Whilst many operators are keen to promote their ethical policies, none are claiming that such developments will actually decrease existing levels of problem gambling. Thus, it is a reasonable criticism that at best, E-Gambling helps to maintain the status quo (where a significant number of people have a problem with gambling) and at worse may result in the causing harm to more individuals. In addition, E-Gambling can be viewed in light of extending a tradition of human beings being treated as a means to an end e.g. for the maximisation of organisational profit.

Many licensed operators claim to adhere to policies that discourage problem or irresponsible gambling. E-Lot Co is itself keen to promote its morals by the social good that comes from being a major employer, the income it generates for a range of social causes and that it returns to shareholders and government. However, there is a reluctance to acknowledge that its social support is based on surveys conducted before the proliferation of E-Gambling and that commercial interests often take precedence over ethical considerations and social responsibilities.

Conclusion

The literatures on computer and information ethics continue to evolve by focusing on a range of diverse topics. However, there is a neglect of studies focussed on the ethical issues associated in E-Gambling commerce. The main objective of this research was to make a contribution to this void.

This paper highlights the significance of E-Gambling commerce and details why it has become such an economic, social, political and technological phenomenon. Many European gambling organisations are increasingly diversifying into E-Gambling and such commercial activities are increasingly important in terms of business growth.

The use of internet research methods has highlighted a range of ethical and social issues associated with E-Gambling commerce that previous studies using case study or action research methods occasionally did, but mostly did not. However, the study of E-Gambling is, in many respects, still problematic, particularly in terms of deriving representative empirical evidence from consumers involved in such an isolated or more private activities. The ability to subscribe and participate in a range of commercial E-Gambling activities has also contributed to our understanding of the potential to exacerbate the risks of problem gambling, the ability to consume products on an instantaneous and rapid basis, a shielding from social stigma by gambling in isolated environments e.g. the home, the reluctance to impose rigid participation controls on consumers e.g. cancelling accounts, the impact of interactive content e.g. potential excitement or addiction from near win experiences, the problems of reality displacement from the use of electronic cash and the unethical marketing and promotion of such products e.g. the use of cartoon imagery, distorted claims and filtered language.

The development of E-Gambling commerce and of its ethical dimension is still at an embryonic stage and more research (particularly social survey) is needed. This research is ongoing and future work will consider in greater depth some of the specific aspects raised by the ethical and social impact of new forms of interactivity and accessibility.

References

- Adam A. 2001. Computer Ethics in a Different Voice, Information and Organization 11(4):235-261.
- Baskerville RL, Myers M, D. 2002. Information Systems as a Reference Discipline. Management Information Systems Quarterly 26(1):1-14.
- Basse S. 2003. A Gift of Fire: Social, Legal, and Ethical Issues in Computing: Prentice Hall, Upper Saddle River, NJ.
- Baym NK. 2005. Introduction: Internet Research as It Isn't, Is, Could Be and Should Be. The Information Society 21(4):229-232.
- Brey P. 2000. Disclosive Computer Ethics. ACM Special Interest Group: Computers and Society 30(4):10-16.
- Bucy EP. 2004a. Interactivity in Society: Towards a Theory of an Elusive Concept; 2004; New Orleans, L.A.
- Bucy EP. 2004b. The Interactivity Paradox: Closer to the News but Confused. In: Bucy EP, Newhagen JE, editors. in Media Access: Social and Psychological Dimensions of New Technology Use: Lawrence Erlbaum Associates, Mahwah, NJ. p 47-72.
- Camelot. 2004. Media / Press Reports (http://wwcamelotgroup.co.uk/media/press2.jsp) (28/09/2004).
- Creigh-Tyte S, Lepper J. 2004. Survey of Participation in, and Attitudes Towards, Gambling: Key Findings from the 2004 NOP Survey. Department for Culture, Media and Sport. 1-15 p.
- Deloitte/Touche. 2005. Announcement of Interim Results (http://miranda.hemscott.com/ir/wmh/pdf/interim results2005.pdf (10/10/05). p 1-17.
- Floridi L, Sanders JW. 2002. Mapping the Foundationalist Debate in Computer Ethics. Ethics and Information Technology 4(1):1-9.
- Gert B. 1998. Morality: Its Nature and Justification: Oxford University Press, New York.
- Goffman E. 1959. The Presentation of Self in Everyday Life. New York: Doubleday: Garden City.
- Gorniak-Kockikowska K. 1996. The Computer Revolution and the Problem of Global Ethics. Science and Engineering Ethics 2(2):177-190.
- Griffiths M. 1999. Gambling Technologies: Prospects for Problem Gambling. Journal of Gambling Studies 15:265-283.
- Griffiths MD. 1996. Gambling on the Internet: A Brief Note. Journal of Gambling Studies 12:471-474.
- Griffiths MD. 2001. Internet Gambling: Results of the First Prevalence Study. The Electronic Journal of Gambling Issues(5/10/2001).
- HiltonGroupPLC. 2005. Interim Report 2005 (http://213.131.169.243/pdf/Interimreport2005.pdf) (10/10/05).
- Himma KE. 2003. The Relationship Between the Uniqueness of Computer Ethics and its Independence as a Discipline in Applied Ethics. Ethics and Information Technology 5(4):225-237.
- Hine C. 2005. Internet Research and the Sociology of Cyber-Social Scientific Knowledge. The Information Society 21(4):239-248.
- Howcroft D, Mitev N, Wilson M. 2004. What We May Learn from the Social Shaping of Technology Approach. In: Mingers J, Willcocks LP, editors. in: Social Theory and Philosophy for Information Systems: John Wiley and Sons.
- Huff C, Finholt T. 1994. Social Issues in Computing: Putting Computing in its Place: McGraw-Hill, New York.
- Hunsinger J. 2005. Toward a Transdisciplinary Internet Research. The Information Society 21(4):277-279.

- Johnson D. Computer Ethics in the 21st Century; 1999; Rome, Italy.
- Johnson DG. 2001. Computer Ethics (3/e): Prentice-Hall, NJ.
- Jones S. 1995. Cybersociety: Sage Publications, Newbury Park, CA.
- Jones S. 2005. Fizz in the Field: Toward a Basis for an Emergent Internet Studies. The Information Society 21(4):233-237.
- Lang A. 2000. The Limited Capacity Model of Mediated Message Processing. Journal of Communications 50(3):46-67.
- MacKenzie D, Wajcman J. 1999. The Social Shaping of Technology (2/e): Open University Press, Buckingham, Philadelphia.
- Maner W. 1996. Unique Ethical Problems in Information Technology. Science and Engineering Ethics 2(2):137-154.
- Markham AN. 2005. Disciplining the Future: A Critical Organizational Analysis of Internet Studies. The Information Society 21(4):257-267.
- Marturano A. 2002. The Role of Metaethics and the Future of Computer Ethics. Ethics and Information Technology 4(1):71-78.
- McMillan SJ. 2002. Exploring Models of Interactivity from Multiple Research Traditions: Users, Documents, and Systems. In: Livingstone S, editor. Handbook of New Media: Sage Publications, Thousand Oaks, CA. p 163-182.
- Monberg J. 2005. Science and Technology Studies Approaches to Internet Research. The Information Society 21(4):281-284.
- Moor J. 1985. What is Computer Ethics? Metaphilosophy 16(4):266-275.
- Moor JH. 2001. The Future of Computer Ethics: You Ain't Seen Nothin' Yet! Ethics and Information Technology 3(2):89-91.
- Nuyen AT. 2004. Lyotard's Postmodern Ethics and Information Technology. Ethics and Information Technology 6(3):185-191.
- Parke J, Griffiths MD. 2002. Slot Machine Gamblers Why Are They So Hard to Study? The Electronic Journal of Gambling Issues 6:1-8.
- Pojman LP. 2001. Ethics: Discovering Right and Wrong (4/e): Wadsworth Publishing Co, Belmont CA.
- Rice RE. 2005. New Media/Internet Research Topics of the Association of Internet Researchers. The Information Society 21(4):285-299.
- Shrum W. 2005. Internet Discipline: Two Approaches to Making a Field. The Information Society 21(4):273-275.
- Smeaton M, Griffiths MD. 2004. Internet Gambling and Social Responsibility: An Exploratory Study. CyberPsychology and Behavior 7:49-57.
- StanleyLeisurePLC. 2005. Corporate Social Responsibility Review. 24-27 p.
- Sterne J. 2005. Digital Media and Disciplinarity. The Information Society 21(4):249-256.
- Stromer-Galley J. 2004. Interactivity-as-Product and Interactivity-as-Process. The Information Society 20(5):391-394.
- Sundar SS. 2004. Theorizing Interactivity's Effects. The Information Society 20(5):385-389.
- Tavani HT. 2002. The Uniqueness Debate in Computer Ethics: What exactly is at Issue, and Why Does it Mattter. Ethics and Information Technology 4(1):37-54.
- Tavani HT. 2004. Ethics Technology: Ethical Issues in an Age of Information and Communication Technology: John Wiley & Sons, NJ.
- Triplett T. 2002. Bernard Gert's Morality and its Application to Computer Ethics. Ethics and Information Technology 4(1):79-92.
- Wardle H, Sproston K, Orford J, Erens B, Griffiths MD, Constantine R, Pigott S. 2007. British Gambling Prevalence Survey 2007. National Centre for Social Research. 1-154 p.
- Wellman B, Haythornthwaites C. 2002. The Internet in Everyday Life: Blackwell, Oxford.