Ethical Problems for e-Government: An Evaluative Framework

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Abstract: This paper assesses the assertion that there is a lack of well understood and developed rules and models for ethical behaviour in e-Government. A framework is proposed to evaluate the extent to which types of moral wrongdoing are related specifically to the technologies used. It identifies four categories of ethical issues: those related to electronic environments; those dependent on electronic environments; those determined by electronic environments; and those specific to electronic environments. Furthermore, it suggests the policy perspectives, which governments may need to consider.

Keywords: e-Government; Democracy; Ethics; Information and Communication Technology; Trust.

1. Introduction.

It is claimed that there is a lack of fully developed rules and models of behaviour in the kinds of electronic environments constituted by e-commerce (Wielki, 2001). New ethical issues have arisen as business becomes increasingly bound up with 'virtual behaviour' .The issues, which arise in e-business and e-Government, are intrinsically linked. The failure to develop appropriate ethics for a virtual society may result in disorder overwhelming democratic dialogue and in mistrust undermining commerce (Rogerson 2002). The rapid diffusion of e-commerce in particular has placed existing norms and moral behaviour under pressure and may affect the successful implementation of successive governments' visions of e-Government. The UK government, for example uses a broad definition of e-commerce:

> *"E-commerce is the exchange of information across electronic networks, at any stage in the supply chain, whether within an organisation, between businesses, between businesses and consumers, or between the public and private sector, whether paid or unpaid." (E-commerce@itsbest.uk, 1999)*

e-Commerce is essentially a subset of e-Business (Chaffey, 2002) which the UK Department of Trade and Industry describes as:

> *"When a business has fully integrated information and communications technologies (ICTs) into its operations, potentially redesigning its business processes around the ICT or completely reinventing its business model…e-business, is understood to be the integration of all these activities with the internal processes of a business through ICT" (DTI, 2000)*

The argument of this paper is that we need to understand the ethical consequences of such developments. It is becoming evident that the same problems which beset e-business have also been thought to beset e-Government, i.e. a lack of well understood rules, trust and digital divide. Firstly, we argue that Business Ethics as a field of applied ethics has yet to address this challenge but that the field of Computer Ethics provides valuable approaches to the 'policy vacuums' created by the ubiquity of ICTs. Secondly, we argue that trust and equity in particular may be fundamentally threatened by the rapid growth of e-business and may create difficulties for governments in implementing their visions of e-Government. Thirdly, we propose a framework to evaluate the extent to which types of ethical issues may be new and specific to the use of ICTs. By proposing

such a framework we may be able to more easily identify just where existing rules and models of ethical behaviour may be deficient. The framework also considers from a policy perspective whether it is necessary for governments to consider any special measures.

The framework considers the following issues:

Table 1:

Evaluative framework of ethical problems for e-Government	
Related issues are ones where electronic environment is neither necessary or sufficient for ethical problems to arise	**Dependent issues** are ones where electronic environment is necessary but not sufficient for ethical problems to arise
Determined issues are ones where electronic environment is sufficient but not necessary for ethical problems to arise	**Specific issues** are ones where electronic environment is both necessary and sufficient for problems to arise and thus creates unique new moral issues

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2. The 'spirit of informationalism': A radical view.

Castells (1996) presents a radical and distinctive view of the global and ubiquitous character of information and communication technologies. A 'spirit of informationalism' now animates the 'network society' and constitutes a new ethical foundation for social life in general but more particularly for business and commerce. He writes that in this new ethical and electronic environment:

> *"The network enterprise learns to live within this virtual culture. Any attempt at crystallising the position in the network as a cultural code in a particular time and space sentences the network to obsolescence, since it becomes too rigid for the variable geometry required by informationalism. The 'spirit of informationalism' is the culture of 'creative destruction' accelerated by the speed of optoelectronic circuits that process its signals. Schumpeter meets Weber in the cyberspace of the network enterprise."*

Castells asserts that this vertiginous picture represents not just some new cultural form but many cultures and many values constituted by the multiplicity of participants in the network, by their strategies and their minds, changing simultaneously as other network members. He argues this is not a new culture in a traditional sense of a stable system of values because there can be no such unifying network culture, nor set of institutions. This lack of stability is created by the multiplicity of subjects in the network combined with the very diversity of networks. In other words we are dealing with 'a culture of the ephemeral'. This is a qualitatively new situation for it rests upon a patchwork of experiences and interests rather than a charter of rights and obligations.

If Castells is right then there are profound ethical problems and new ethical practices and policies need to be evolved. This reinforces Moor's (1985) view of innovation in computer technology that it constantly outpaces the scope of our ethical norms, creating unanticipated problems and policy vacuums. The traditional fabric of social and moral responsibilities (reciprocal obligations, trust, regulation etc.) underpinning business activity is accordingly put at risk. How do we address these new circumstances and problems?

3. Addressing the Issues: Computer ethics

Business Ethics has been slow to respond to the challenge of the issues indicated by Castells. Even work claiming to address 'contemporary ethical problems of business in a philosophical context' deal mainly with the traditional range of business ethical issues – an examination of corporate ethics, the ethics of the stock market, the morality of take-overs and the problem of business and the environment (Solomon, 1993; Barry, 1998).

It is necessary to turn to another domain, Computer Ethics, to seek some insights into the ethical problems of transactions in

electronic environments. James Moor (1985) in a seminal paper 'What is computer ethics?' defines the boundaries of the domain of computer ethics:

> *"In my view, computer ethics is the analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such policies."*

Weckert (1997) asks is there really a cluster of ethical problems around the design and application of computers and computer networks, which warrants the ascription of 'computer ethics'? He suggests that the domain can be defined in a number of ways. Firstly, a set of ethical concerns specific to computer professionals qua computer professionals; …system reliability, system and data security, software theft and the like. Secondly, there is a broader approach that goes beyond the professional interests and obligations. The case can be made that some ethical issues are raised in a unique way simply by virtue of their context being an electronic environment (Horner, 2001). One of the challenges is to identify the similarities and differences between actions in analogue and actions in digital environments.

> *"…breaking into someone's computer account is in some ways like breaking into someone's house, but there are interesting differences. It is logical rather than physical entering. Unauthorised copying of software is a bit like unauthorised copying of a book, and a bit like taking a television set but there are significant differences."* (Weckert, 1997)

There is a need to determine, therefore, if conducting business in electronic environments creates new and different ethical issues. Consideration should also be given to the ways in which they may be similar to, or different from our everyday moral language and understanding of moral relationships.

Deborah Johnson (2000) argues that ICTs represent a form of the 'instrumentation of human action'. She maintains that such instrumentation can have significant moral implications; actions undertaken in a computer environment are different from those undertaken without a computer. Actions may be of the same type but the very use of the technology changes '…not just the physical events constituting an act, but the moral character of the situation' (Johnson, 2000,). In other words particular characteristics of the technology such as its scope, its potential for anonymity, and reproducibility are morally significant (Johnson, 1997). It is far from clear that business ethicists have recognised this.

Thus computers create new opportunities for action i.e. create new kinds of choices which are ultimately of a moral nature. The task of Computer Ethics, according to Moor (1985), is to address the resulting 'policy vacuums' and to provide frameworks to guide policy and action.

4. Some ethical and policy issues in e-Government

Castell's idea of the 'spirit of informationalism' is founded, as we have seen, on a radical notion of global network enterprises. However, the ethical implications reach into broader areas of trust and social justice, which are important ethical aspects of e-Government and e-business. It has been argued that these ethical aspects give rise to a number of important policy dilemmas and that the '…cultural and social implications of electronic commerce are difficult to define, as they are complex and interrelated' (Pouloudi and Papazafeiropoulou, 2001, p.243). It seems important then to specify as far as possible what is new about the problems or dilemmas with which we are confronted. Are their genuine 'policy vacuums' or is it more traditional ethical problems in new guises?

4.1 Trust

To trust in someone is to have certain expectations that they will behave in certain desired ways that promote (or at least do not diminish) the putative truster's well-being or that of something in which they have an investment. This is linked to feelings of security - a sense of security that expectations will be fulfilled, that, for example contracts will be honoured. In conventional analogue transactions the rules of the game are well established, expectations are underpinned by

established routines. Chopra and Wallace (2003) suggest that an integrated definition of trust recognises the union of three elements: a trustee to whom trust is directed, confidence that the trust will be upheld, and a willingness to act on that confidence, as follows:

> *"Trust is the willingness to rely on a specific other, based on confidence that one's trust will lead to positive outcomes".*

Societal models of trust emphasise its importance to the proper functioning of society. These models provide a functional account of trust, highlighting its role in enabling people to cope with the complexity of society (Luhmann, 1979). System trust is a necessary prerequisite for social mechanisms and institutions such as e-Government and the economy.

Chopra and Wallace (2003) identify four domains in the context of electronic environments where the question of trust is relevant:

- Information: Can we trust the information we obtain from the Internet or other electronic sources?
- Information Systems: Are the computing systems upon which we rely trustworthy?
- e-Commerce: Can we trust the people with whom we form relationships through electronic communities, such as chat rooms, forums, and discussion groups?

It may be the case that electronic environments present new challenges to the creation of trust and the development of a sense of security. Individuals, corporations and institutions have forms of identity on the Internet, for example, and engage in a variety of activities where it may not be clear who may or may not be held accountable. Does this imply there is a need to create new systems of trust? Castells (1996) argues that society is experiencing something of a qualitative change here moving from a charter of rights and obligations to patchwork of experiences although it is just hard to see how a 'patchwork of experiences and interests' can in any way substitute for trust and reliance to make relationships workable.

Lack of trust in online commercial transactions has been identified as an important barrier to the diffusion and adoption of e-commerce and e-business. This arises both in the context of relationships within the business community and between the community and end users (customers). There is considerable evidence that consumers view on-line purchasing as a 'risky business' (Shinnie and Mullen, 2001). In widening the scope of potential commercial relationships electronically mediated transactions may attenuate a sense of trust. The answers to questions, such as 'Can I trust this person?' or 'Can I entrust my X to this person?' may become more difficult to answer in a new environment. On the creation of trust may be predicated the probability of trading partners' willingness to expand the volume of their transactions.

In computer mediated environments a number of factors may contribute to this: limitation of interactions to textual exchanges and no prior knowledge whatsoever of others' lives. Similarly lack of physical presence, the ease of impersonation in text and the lack of familiar frameworks of social relationships by reference to which in the analogue world come to trust people make judgements of trust more difficult. Added to this is a general level of uncertainty in the reliability and integrity of the technology (Johnson, 1997).

According to Pouloudi and Papazafeiropoulou (2001) problems of trust give rise to a number of policy dilemmas.

- Where should priority be given: to protection of personal data or to competitiveness?
- Who is better suited to act as trusted third party for electronic transactions?
- Are public or private organisations more trustworthy in the eyes of (a) companies (b) consumers and (c) public authorities?

Policy needs to resolve the tension between protection to secure systems on the one hand and encouragement to trust in their technical integrity on the other. What are the characteristics of the main approaches to enhancing trust and what factors most influence trust-enhancement outcomes e.g. why is centralised government information and validation accepted in the U.S. and not in the U.K.?

4.2 Social justice and 'the digital divide'

An important ethical issue of social justice arises where access to electronic services is in some sense discriminatory. There is a wide spread concern that citizens are not able to have equal access to online services, either because they do not have the technical means, or the necessary knowledge and expertise. As Hamelink argues:

> *"The moral standard of equal entitlement represents the ideal of an egalitarian society in which all people can claim access to those basic services that are essential to participate in social life."* (Hamelink, 2000, p.105)

It may be argued that the current dispensation, the prevailing commercial environment for the development of cyberspace resources '…collides with the standard of equal entitlement'. E-business benefits from the global nature of electronic environments in promoting free-trade, free-choice and free expression. The negative aspects of the balance sheet suggests that it is founded on inequalities, promotes forms of cultural imperialism, threatens local economies at lower levels of technological development, concentration in the control of internet activities.

For example, it has been reported that the rollout of high-speed access to the web and other Internet services had been a 'relative failure' and emphasised the disparity between different groups in the UK. (Greenhalgh, 2001)

How do our conceptions of democracy and of democratic values relate to ICTs? Barber (1999) tries to answer this question in relation to the concepts isolation, speed, simplicity and information. Democracy emphasises the active participation of all citizens who must come together in public deliberation. If computers are connected to isolation, then the democratic process will be endangered rather than stimulated. This would be the case if people spend more time in front of their computers, rather than with other people. The characteristic of ICT to favour speed and simplicity might endanger the process of public deliberation, e.g. when the Internet is used for polls on questions of current political interest. The Internet is a place where immense amounts of information can be found but there is a risk that citizens could be overwhelmed with information, rather than transforming it to personal knowledge. Indeed access to information does not in itself guarantee an increase in democracy (Collste and Holmqvist, 2004). It is the transformation of information into personal knowledge that makes it possible for use in the democratic process. Of course, e-Government appreciates that IT is a democratic means for transparency and openness, and as a consequence, a means for limiting corruption and fraud.

According to Pouloudi and Papazafeiropoulou (2001, p.242) a range of dilemmas arise in the context of 'digital democracy':

- Is governance about protection or restriction?
- What is more important property protection or the free exchange of ideas and data?
- Should self-regulation prevail in various industry sectors or should regulation be the responsibility of national governments or international organisations?
- Should governments give priority to national competitiveness or to international compliance and protection of national identity?
- Should governments promote their own interests or provide assistance to developing countries?

In deciding on appropriate policy responses to these kinds of dilemmas it is important to define the extent to which they are bound up with the question of what's new or unique about commercial activities in electronic environments (Weckert, 2000). Unless we can determine this we cannot easily identify the relevant moral concepts, principles, rules or criteria that might be applied.

5. Classifying moral issues in electronic environments.

To address this we propose an analytical framework that may help to categorise the relative novelty or otherwise of particular ethical issues. Can we identify types of wrongdoing that are specific to electronically mediated relationships or transactions?

Johnson (1997, p.61) argues:

> *"The ethical issues surrounding computers are new species of generic moral problems…The generic problems involve privacy, property, drawing the line between individual freedom and (public and private) authority, respect, ascribing responsibility and so on."*

Jeroen van den Hoven (2000) proposes a typology of moral issues in relation to the Internet. We adapt and expand this approach to embrace transactions in electronic environments more generally. This may help us to define not only 'new species' of generic moral problems but also possibly a new genus of moral problem.

Thus we can ask to what extent is the fact that transactions take place electronically sufficient and/or necessary for ethical issues to arise? On this basis, four types of ethical issues can be defined: related; dependent; determined; and specific. The assumption here is that the identification of policy options is likely to be harder if it is indeed a case where existing rules or models of behaviour do indeed require radical revision.

Table 2: Classifying moral issues in an electronic environment

Related		**Dependent**		**Determined**		**Specific**	
Truthfulness Honesty	Deception Wrongful appropriation Negligence	Viruses Hacking Spamming And Flaming Illegal access	System Disruption Theft	Reliability Of Information Equality of Access Information disclosure	Trustworthiness Quality and Completeness	Intelligence and Autonomy	Unknown

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5.1 Related issues

Issues related to electronic environment are ethical issues where the fact that transactions are conducted electronically is neither necessary nor sufficient for the ethical issue to arise. Van den Hoven argues that examples of this category of wrong doing concern advertising on the Internet and fraud in e-commerce transactions. The contention here is that the morally problematic character of the behaviour online arises in exactly the same way offline. The moral characterisation of the action is independent of the fact that it takes place in an electronic environment.

> *"The fact that push media or portals are involved or Electronic Data Interchange protocols, does not add to the moral problem as such."*
>
> (Van den Hoven, 2000, p.133).

The moral judgement here rests on truthfulness and honesty. These are characteristic expectations of offline business environments. There is an expectation that advertising per se is honest, decent and truthful. Similarly, when the goods are not delivered, the ethical issue is one of 'deception', 'wrongful appropriation' or 'negligence'. Again these are all recognised ways of identifying and characterising business transactions irrespective of whether or not they occur in electronic environments. There is nothing specific in the nature of ICTs that is sufficient or necessary for such moral wrongdoing to arise. In that sense, as van den Hoven argues, this represents the 'lowest grade' of ethical problem in which electronic environments may be involved.

From a policy perspective then this suggests that, it may not be necessary, in these cases to look for any special measures. The conventional constraints on wrongdoing may be relied upon, rather a requirement to develop wholly new policy. Electronic environments free of such behaviour may well be envisaged.

5.2 Dependent issues

Dependent issues arise where the fact that transactions are conducted electronically is a necessary but not a sufficient condition. Here the argument is that information and communication technology is a necessary condition for a

moral issue to arise. In other words without the existence of electronic environments a particular moral problem or forms of wrongdoing could not take place. Some examples of behaviour in this category are the launching of viruses, unauthorised hacking into systems, spamming and flaming. The very idea of an electronic virus is logically dependent on the idea of software and on the idea of software that causes a computer to perform operations, which the owner did not instruct it to execute. Viruses reproduce themselves through networks but the appropriate technology is a pre-condition for their existence and spread. These forms of wrongdoing do, however, have their analogies in the analogue business environment – involving, as they do, various kinds of 'trespass' into networks. We might, for example, wish to compare hacking to illegal access, which may involve a form of theft. Equally we may consider the introduction of a virus as a kind of vandalism – a kind of vandalism only made possible by the existence of the network society.

What are the implications form a policy perspective? Again as van den Hoven (2000, pp. 133 – 134) points out it is logically possible not to have these moral problems but yet have forms of network technology:

> *"The online world could be free of them… New technologies offer additional options for morally wrong behaviour, but these forms of moral wrong doing – if that is what they are – do not occur as a matter of course."*

These remain matters of individual choice -the perpetrators, the hackers, the originators of viruses, of spam etc., could have done otherwise. Technical fixes may be available (such as software to scan for viruses) but more important may be the moral education of those who would disrupt systems.

5.3 Determined issues

Issues determined by electronic environments are moral problems where the fact that transactions are conducted electronically is sufficient for particular ethical issues to arise. In this category are those ethical issues, which are bound to arise, given the use of the relevant technology? For example, moral issues relating to equality of access to public and commercial services arises can be located here. Given that information and communication technology comes into routine use particularly for services to consumers inevitably there are problems of access as the foundation of digital democracy. The UK government has committed itself to addressing the social and ethical problems of the so-called 'digital divide'. In this category also fall issues of moral responsibility relating to the quality of information. When a person discloses information of a private nature to an organisation or the government, accuracy is obviously an ethical issue. Should not every citizen be able to gain access to the information that is held in a database? Similarly there are tensions between access, ownership and security.

Electronic environments create a new type of marketplace distinct from the traditional, physical marketplace. This digital marketplace creates possibilities for moral problems simply by its very nature such as problems of the trustworthiness and reliability of information particularly for consumers in online transactions.

However, these problems also occur in non-digital environments. The issues of the quality and completeness of information is also a feature of traditional marketplaces especially where complex, technically sophisticated products are involved. Thus use of electronic networks for transactions is not necessary to create these types of ethical issues. Again, as van den Hoven argues, the same moral problems of access and information quality arise in non-digital contexts – in fact one might argue, in any form of the collection, storage and dissemination of information. The policies that might be invoked to counter problems of social inequality in the use and access of information and communication technologies, on this basis, need only be those, which are traditionally used to combat social division and deprivation. In that sense the 'digital divide' is simply a mapping on to electronic environments of existing problems of social justice.

5.4 Specific issues

Issues specific to electronic environments come about where the peculiar electronic nature of the transaction is both necessary

and sufficient for the ethical issue to arise. Here the use of technology creates unique moral issues. In other words moral problems are characterised:

- negatively by not occurring outside electronic environments in a specific form;
- positively by their appearance as soon as the relevant technological applications are invoked.

We can imagine the creation of 'autonomous agents' or 'softbots' released into electronic environments, which would possess degrees of intelligence and autonomy, which would confront us with some genuinely new ethical questions.

> *"If we could create artificial agents (rich, robust and resourceful avatars) and mental states in computational artefacts, that would surely land us in the middle of the most peculiar set of moral problems that we can imagine. We would be dealing with agents that might decide to do things on their own."* (Van den Hoven, 2000, p.136)

It might be argued that to some extent this state has been achieved with the implementation of sophisticated, expert systems making life or death decisions. Johnson and Powers (2004, p.422) have argued that computers already may be regarded as surrogate agents and thus in possession of at least some minimal moral agency:

> *"We argue that human surrogate agency is a good model for understanding the moral agency of computers. Human surrogate agency [e.g. a tax account, stockbroker etc.] is a form of agency in which individuals act as agents of others. Surrogate agents pursue the interests of clients in much the same way that computers take up the interests of their users."*

In other words computer systems perform tasks that may have moral consequences and such consequences may directly impact upon human interests. If it is right that technological artefacts do exhibit a kind of intentionality, a key component of moral agency then we are confronted with 'hard cases' where genuinely unique moral issues may arise. We may, in such circumstances, have to decide on the application of moral concepts and ideas of wrongdoing to machine intelligence.

6. Conclusion

This paper proposes a framework to evaluate the extent to which ethical problems or dilemmas faced may be related specifically to the technologies used. It identifies four categories of ethical issues: those related to electronic environment; those dependent on electronic environments; those determined by electronic environments; and those specific to electronic environments. Such an approach may be helpful in clarifying appropriate policy responses to moral problems occurring in electronic environments generally and in e-business specifically. The paper also shows the extent to which, ethical issues arise, which are new and distinctive, may be exaggerated. In essence, the ethical situations in which computers, digital technology and electronic environments are involved do not require a totally innovative ethical approach. Similarly the steps needed to address the varieties of moral wrong doing in electronic environments may already be part of existing policies for the regulation of the business environment or in promoting ethical cultures and corporate responsibility. However, there is a specific category where new issues may need to be added or new ethical issues may need to be addressed and it is our intention to develop a new range of ethical benchmarks in this area, as the next stage our research

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