

Relevance of a Moral Minimum to Information Systems

Shirley Wheeler

School of Accounting and Information Systems
University of South Australia
Adelaide, South Australia
Email: shirley.wheeler@unisa.edu.au

Abstract

Ethics is embedded in all Information Systems theory and practice, although this is not always clearly seen. Aspirational and regulatory frameworks, such as those codified in professional standards and legislation, are insufficient as a moral minimum for the discipline of Information Systems. While the literature reveals an unfulfilled need for a universal set of basic moral standards for use in business, it may be that the multi-faceted discipline of Information Systems can provide a most suitable location for the investigation of a suitable moral minimum for business in general. A set of pragmatic headings for a moral minimum is proposed.

Keywords

Ethics; Ethical issues

INTRODUCTION

This paper aims to generate awareness of the possibility of embedding an ethical dimension in all aspects of Information Systems (including: policy, design, development, implementation, use, evaluation) so that this dimension can be identified and monitored by stakeholders. Here, stakeholders is taken to include: 'employees, financiers, customers, employees and communities' (Hartman 1998, p. 180). A context is provided in the paper by an overview of: the nature of Information Systems together with some ways in which ethical dimensions are already embedded in IS practice; and the difficulties of identifying normative ethical practice in the global business context, of which the field of Information Systems is a subset. Some ideas relating to the concept of a moral minimum are then explored, including: the commonality of certain values in various shared aspects of society; the necessity for a moral minimum of some kind; possible requirements for a moral minimum in business; and the relevance of a moral minimum to Information Systems.

NATURE OF INFORMATION SYSTEMS

According to Checkland and Holwell (1998, p. 62), information systems is 'the orderly provision of information in (and between) organizations using IT, this being a part of on-going organizational change, the purpose of which is to influence action'. Information Systems is viewed as a discipline area in many universities, but it fits a wider definition of a field of study that includes many disciplines (e.g. Bacon & Fitzgerald 1999, p. 1). Keen (1998) identified the following features of information systems: a focus on the relationships within institutions and the design of information infrastructures to meet identified communication priorities; dependable communication in an institutional setting; communication on any topic; a trans-disciplinary

scope; with the interests of many communities being served. The information technology (IT) used in the discipline of Information Systems has physically shaped the world in which we now live (Checkland & Holwell 1998, p. xi). The so-called 'hard' strand of information systems employs technological means to assist the teleological or goal-orientated decision-making functions of an organisation, while the 'soft' strand focuses on the relationship managing nature of organisations.

An information systems analyst may be deemed as using mostly technical skills in a positivist tradition, and thus perhaps concerned largely with the ethics inherent in complying with the law, together with any corporate mission or code of professional conduct that may apply. Goles and Hirscheim (2000 p. 4) define 'positivism' as based on the pillars of: '(1) Unity of the scientific method; (2) Search for Humean causal relationships (philosopher David Hume rejected all but the strictest proof of cause and effect); (3) Belief in empiricism; (4) Science (and its processes) is (viewed as) value-free; and (5) The foundation of science is based on logic and mathematics'. However, this can be deceptive, as 'analysts who accept a technical orientation (with presumed ethical neutrality) accept the implied ethical stance of the methodology that they use', and that of those who fund such methodologies (Wood-Harper et al. 1999, p. 66). As well as the ethics embedded in their professional methodology, IS analysts operate in various contexts: their department; corporation; family, community, State, system (capitalism, etc.), and the global environment, all of which include both explicit and implicit ethical norms. Within the workplace, the information systems analyst can make a difference to the ethical implications of his or her actions, beginning with taking 'a more self-reflective and self-critical attitude on moral issues' (Walsham 1993, p. 13). Yet, it is at the global level, the level at which multi-national corporations operate, as well as the level at which internationally acceptable professional standards are set, that consideration of a moral minimum has most value.

Soft systems approaches to Information Systems involve the construction of 'a "rich picture" depicting the technical (hard areas) facts and social/cultural/ethical realities (soft areas)' (Wood Harper et al. 1999, p. 68). This opens up the perspectives of all the stakeholders in IS decision-making, identifying the conflicts and issues that can inform best practice. It is proposed by Wood-Harper et al. that 'ethics' be added to the six components of a soft multi-view approach to information systems. The new seven components for consideration in the multi-view approach thus become:

- *Owner – the eventual system owner*
- *Worldview – the assumptions*
- *Client – the system's beneficiary*
- *Actor – the individual(s) involved in the system*
- *Transformation – intention of the project*
- *Ethics – which involves evaluating ethical considerations and redressing injustices*
- *Environment – the situation in which the system will be developed*

(Wood-Harper et al., 1999, p. 68)

Any universal moral minimum would need to accommodate the stakeholders and perspectives from all of these seven components of a multi-view approach to information systems. Goles and Hirscheim (2000, p. 7) go so far as to use a multi-view metaphor of "many flowers blooming",

seeded by the 'various and sundry research methods and philosophies intrinsic to the information systems field.' According to this metaphor, the qualities of the common requirements of soil, water, warmth, and air may possibly have some analogy to a moral minimum that is necessary for the flowers of information systems to flourish.

WHAT IS ETHICS?

Ethics is usually divided into three main approaches (Hartman 1998; Beauchamp & Bowie 1997):

- *Motivational*, which is linked to a moral agent's virtues of character, such as honesty, wisdom, loyalty, congeniality and courage; which identified virtues can vary from culture to culture;
- *Principle guided*, or deontological ethics, which focus on the ethical 'means' employed, such as: principles, duties, laws and rules (e.g.: Immanuel Kant's influential categorical imperative which gives value to all people by requiring that actions towards others be universalisable; and the rule of law); and
- *Consequentialist ethics*, or teleological ethics, which refer to the ends, results or goals of behaviour, the most well known example of which is 'utilitarianism', or the goal of achieving the greatest happiness for the greatest number of those involved, as was championed by Jeremy Bentham and John Stuart Mill in the 18th and 19th centuries.

Given that an ethical individual, and by extension an ethical corporation, can operate on different planes, such as: the physical, emotional, mental and spiritual planes, it is arguable that the three ethical approaches above can also be applied on these four different planes. For example, by espousing the 'golden rule' of doing unto others what one would have them do unto you (deontological, mental plane), the emotional and spiritual dimensions can also be involved, as well as the ethical physical outcomes which result from acting according to this principle. It should be noted that rule-based behaviour alone is unable to invariably yield consistent ethical outcomes. Gödel's Theorem of Incompleteness has proved that 'paradoxical results are an inherent inevitability in the operation of every system' (Hartman 1998, p. 427). Ethical and moral practice require more than a deontological moral minimum. Here, 'ethics' is used as 'a general term referring to both moral beliefs and ethical theories', that latter of which 'concerns the philosophical reasons for or against the morality stipulated by society' (Beauchamp & Bowie 1997, pp. 1 & 3), and 'morality' is 'concerned with the practices defining right and wrong' (Beauchamp & Bowie 1997, p. 1).

Whether ethical behaviour has absolute aspects or is merely relative to different cultural environments, is raised in the notion of 'moral relativism', which advocates the view: 'When in Rome, do as the Romans do'. The practice of 'moral relativity' becomes particularly problematic when multiple cultural contexts and stakeholders present conflicting ethical expectations. This is a problem of the multinational corporation in a global market, with numerous stakeholders as well as many legal, cultural and linguistic contexts to accommodate. One obvious solution to such a complex ethical challenge is for a corporation to opt for 'ethical egoism', in order to maximize its own self-interest while minimizing any obvious harmful effect it may have on others (Hartman 1998, pp. 8-9). Yet, according to the stakeholder theory of the modern corporation (Freeman in Hartman 1998, pp. 171-181), managers 'bear a fiduciary relationship to

the stakeholders' (Freeman in Hartman 1998, p. 171). Corporations should thus be managed in the interests of relevant stakeholders, and not just the owners. This raises the question of whether there are universal ethical virtues, principles and desirable outcomes that can produce the best ethical outcome for *all* business stakeholders.

RELEVANCE OF ETHICS TO INFORMATION SYSTEMS

Highlighting the relevance of ethics to information systems, Wood-Harper et al. (1999, p. 70) propose some over-arching principles that may assist ethically located information systems development:

Principle 1: Ethical reasoning should be conducted throughout the life of an information system, including, inception, testing, distribution (implementation), modification and termination/withdrawal

Principle 2: Every IS should improve the ethical actions of its users

Principle 3: The benefits from an IS should be distributed to ALL people who have an ethical need for its use, in other words there should be 100 percent saturation of ethical users

Principle 4: The design of every IS should include:

- a) the design of its ethical use*
- b) the design of its ethical distribution*
- c) the design of its ethical risk*
- d) the methods of justifying ethical criteria*

These ethical principles cover all aspects of information systems:

- all the information systems themselves (what);
- throughout all their usage (when);
- all users (who); scope of distribution (where);
- methods of justifying ethical criteria (why);
- design of ethical use, distribution and risk (how).

A moral minimum, if such can be identified, would assist in defining the meaning of ethics in information systems, and the overarching values that can assist in streamlining the complexity of ethical decision-making in the field.

NEED FOR NORMATIVE STANDARDS IN BUSINESS ETHICS

As well as IS field specific ethical benefits, there is a need for global ethics in order to preserve the business environment. Rushworth Kidder of the Institute for Global Ethics (<http://globalethics.org/ethics.html>) lists some of the reasons why ethics is necessary. The exponentially advancing power of technology means that ethically embedded decisions have wider impact: 'poor ethical judgment has produced the grounding of the Exxon Valdez, the meltdown of reactor #4 at Chernobyl, and the failure of the Barings Bank'. The benefits of ethics in the workplace are manifold, and include: a good reputation for the organisation and its workers; avoidance and limitation of disasters; assistance in earning greater income (by attracting

customers and investors) and financial efficiencies (by avoidance of theft and bribery costs); as well as higher staff morale resulting in more stable and efficient organisational management (Ritchie 1993, pp. 8-15).

As attested by the common appearance of corrupt business behaviour in media exposés, many modern business corporations face a major challenge in identifying and practising ethical behaviour at all, let alone in the complex global context. Some of the ethical problems for modern business are:

- *Motivational*
‘It has been argued by several recent authors that the virtues of business – competitiveness, individualism, economic self-interest – are destructive, and, in particular, destructive of a sense of community’ (Solomon in Frederick 1999, p. 33). This counters the 18th and 19th century views that business is ‘a dominant factor in economic well-being, that supports and encourages social harmony’ (Solomon in Frederick, 1999, p. 33). The different business environments of the 20th and 21st centuries are surely a major factor in explaining these opposing viewpoints. Factors such as: environmental degradation, corporate corruption and global inequities in resource distribution illustrate reasons for the fall from community popularity of market driven businesses. A clear need for nobler motivations in international business than financial gain has been identified (e.g. Enderle 1999, Stackhouse 1995).
- *Principle-based* – There is uncertainty as to which principles, if any, apply in any particular situation and/or which, if any, apply in all business situations (Bowie & Vaaler 1996; Enderle 1999; Stackhouse 1999).
- *Consequential* – There are problems with identifying and/or reconciling the goals of all of the stakeholders concerned (Freeman in Hartman 1998, pp. 171-181).

There is thus an identified need for a universally usable, scientific, non-contradictory foundation for a global business ethics (Bowie 1996, Stackhouse, 1999), where ethics is taken as ‘values in action’ (Jackson, 1996). In this context, the *International Encyclopedia of Business and Management* (1996) refers to ... ‘a certain loss of confidence in modern society of any fixed or reasonably recognisable ethical markers’ (p. 480). Hartmann (1998, p. 2) notes the pressure for ethical compromise in the modern business environment where, although the law provides useful guideposts for minimum behavior, no clear moral guidelines have emerged.’ Nash (1996, p. 212) reiterates the problem of identifying how values and performance are connected in the corporate world, which connection, she says, is ‘yet to be scientifically proved to anyone’s satisfaction’, despite common sense observations and experience. The search for some overarching global ethical principles or norms does not in any way diminish the accommodation of the full range of perspectives of all of the stakeholders involved in any ethical decision.

COMMON VALUES

According to Solomon (in Frederick 1999, p. 37), some of the areas in which common ethical values and virtues may apply are ... ‘in those aspects of society that are necessarily shared’. He gives ‘the need to cooperate and live together, the need to protect society against foreign intruders and natural disaster, the need for dependable communication within society’ as examples. In all of these areas, information systems can play a significant role.

Ethical awareness is valued as a quality of university graduates, and this is the case in information systems, as a recent survey of information systems courses has revealed (Snoke & Underwood 1999). This survey demonstrates the importance of the generic competency 'valuing the ethics of the Information Technology profession' in Australia. Such a competency is also valued in the information systems profession as a whole and is included in professional codes of practice. Such codes of practice are yet rather piecemeal (Wood-Harper et al. 1996, p. 76), with a national focus (e.g. from the British, American and Australian Computer Societies) rather than global in nature. The globalizational context of information systems may require more commonality of agreed codes in the near future. Globalization is defined as the: *growing economic interdependence among countries as reflected in increasing cross-border flows of three types of commodities: goods and services, capital, and knowhow* (Govindarajan & Gupta 2000, p. 2).

REQUIREMENTS FOR A MORAL MINIMUM

What is required for a 'moral minimum' in business practice, and for information systems in particular? According to the famous view of nobel prize winning economist Milton Friedman, the social responsibility of business is to increase its profits for its shareholders and, in so doing, increase the community wealth (e.g. Hartman 1998, pp. 246-251, Coady & Sampford, 1993, p. 16). This Friedmanite view assumes that business operates within a social and legal context which provides the morally minimal requirements for ethical business conduct. As well as providing a framework for minimally acceptable behaviour, the law can also be used 'to push institutions into fulfilling the purposes that justify them' (Coady & Sampford, 1993, p. 16, pp. 75-82). Yet, the law is insufficient for determining moral conduct (Shaw 1996, p. 9, Beauchamp & Bowie 1997, p. 6), as the law is 'the public's agency for translating morality into explicit social guidelines and practices' (Beauchamp & Bowie 1997, p. 4). A motivational feature of the law is its stipulation of punishments for legal offenses (Beauchamp & Bowie 1997, p. 4), yet the law does not fully define even a minimum of the motivational, principled and consequential aspects of morality, let alone all possible right and wrong behaviour ' (Beauchamp & Bowie 1997, pp. 1, 4). Clearly, allowing the legislators to decide a moral minimum for business conduct is unworkable. This is underlined by the complexities of determining ethical conduct in the international market, where business norms differ from country to country (Beauchamp & Bowie 1997, p. 514). A similar problem arises with the regulatory aspects of professional codes of conduct, in that misdemeanors may not be easily identified, nor offenders deterred.

Various contenders for a universal set of minimal ethical requirements have been proposed, especially in recent literature. There are: the Universal Declaration of Human Rights, the Caux Principles, and Donaldson's Fundamental International Rights (Hartman 1998). Küng (in Enderle 1999, pp. 109-128) explores global ethics and concludes with a need for a global commitment to four adaptations of the well known principles which decry: lying, stealing, killing and committing sexual immorality. Yet, obviously these four are not sufficient to preserve the global environment and remove unethical behaviour. Neesham, in a draft unpublished PhD thesis, proposes that a moral minimum would contain the realms of: 'equality, justice, freedom, opportunity, security, and welfare', which 'limit each other in order to retain intersupportive rather than conflictual elements' (Chapter 3). All of these elements, while abstract in nature, would support and encourage a basic level of social harmony, a role that business was accorded in the nineteenth century, before its corporatisation and globalisation combined with greed and

unethical behaviour, leading to a different reputation (Solomon in Frederick 1999, p. 33). Yet they seem rather general and possibly influenced by political rhetoric. For example, which society has ever produced equality for all its members? Is the information systems analyst on an equal footing with the chief executive officer of a corporation? Whose justice is being considered? Are all stakeholders equally accommodated in all information systems decisions?

Assuming the seven pointed approach of the multi-view approach to information systems mentioned earlier in this paper, a seven pointed ethical model that covers all of these aspects of IS praxis, may be of particular relevance. Such a possible moral minimum exists in the form of the set of seven ancient Noahide laws, named after the Noah of worldwide flood fame. These seven laws are purported to provide a universal basis for a comfortable, sustainable society (the very name 'Noah' means comfort). It is surprising how these seven ethical laws map onto the seven components of the multi-view approach to information systems, given that the Noahide laws are thousands of years old and were purportedly used in the first international globalised society. The seven Noahide laws, which are derived from the laws listed in the bible up until the time just after the story of the flood, are covered in the following list (multi-view connection is in brackets):

- Avoid Idolatry, which relates to consistency with the highest goals of business leadership, however these are perceived (respect for highest ownership conceivable)
- Avoid Blasphemy, which relates to avoiding unnecessary offence in business norms and culture, as well as objectives (worldview assumptions and respect for this)
- Avoid stealing, which relates to respect for stakeholder's property and wealth (respect for client's territory)
- Avoid sexual immorality, which relates to staff culture and stakeholder relationships (respect for all the actors involved in the interactions)
- Avoid murder, which relates to business strategies and respect towards stakeholders, particularly those who may seem obstructive (transformational intent on improvement, rather than destruction of opposition)
- Administer a Justice System, which relates to the evaluation of business practice, such as in annual reports and internal reporting procedures together with appropriate means and procedures for the redress of unethical behaviour (evaluation of ethical practice)
- Avoid Cruelty to Living Animals, which extends ethical consideration to the humblest creature in the business environment, including habitat needs and environmental quality (respect for the environment)

The Noahide laws are designed as hierarchical and logically consistent. They do not require any religious beliefs and can be interpreted in a secular way, with idolatry being interpreted as disloyalty to one's highest goal, and blasphemy referring to consideration for the reputation of authorities or stakeholders whose office deserves respect. It is suggested that these laws are

worthy of consideration as a possible moral minimum that can be mapped onto other ideas of a moral minimum, and also neatly fit a multi-view concept of information systems. It is beyond the scope of this paper to discuss this practical connection any further, but the discovery of a possible workable moral minimum that fits the broadly inclusive multi-view paradigm of information systems means that the idea of a moral minimum has increased practical relevance to the IS field (see Wheeler, forthcoming PhD thesis).

Simon, Powers and Gunneman (in Beauchamp & Bowie, 1997, p. 52, pp. 61-66) propose a moral minimum in which 'society can legitimately insist that corporate activities not cause harm and that corporations therefore must take active steps to prevent potentially harmful activities.' This results in a modification of Friedman's view that the purpose of the corporation is to make a profit and so contribute to the enrichment of the society. 'On this amended view the purpose of the corporation is to seek profits for stockholders while acting in conformity with the moral minimum.' (Beauchamp & Bowie, 1997, p. 53). This view is a start, but it does not cover all the possible areas needed to sustain a global community and all the ethical interest groups and business stakeholders as they maintain social harmony.

According to Dunfee and Thomas Donaldson (who developed some universal model business principles) (in Frederick 1999, p. 41), the narrowly interpreted business ethical view of Milton Friedman and the 'stakeholder theory' are the only generally accepted paradigms in business ethics, apart from 'contractarianism'. The idea of a social contract between employees and institutions permeates the business world. 'The attempt to classify classical traditional philosophical ethical theories, such as consequentialism, to business problems has been handicapped by the generality of the theories and the difficulty in applying them to the "artificial" environment of business, i.e. an environment that is largely created by economic participants in contrast to being a product of nature' (Dunfee & Donaldson in Frederick 1999, p. 41). The result of this artificial contractual nature of business means that wide variation of business structures and cultures exist. For example, bribery is a norm in some developing nations, but not in most western nations. The intractable nature of cultural variation in business ethics, makes the idea of an overarching moral minimum, through which all the cultures can ethically interact, more valuable, as well as more challenging to achieve.

An analogy can be drawn with the Australian multi-cultural society. Within some basic legal and cultural requirements, including a commitment to Australia, there is tolerance and appreciation for a wide range of cultural norms that enrich the Australian social fabric and contribute to political stability and intellectual creativity. A sound over-arching set of ethical requirements can support a wide range of cultural ethical pluralism, and would be of benefit to information systems which uses, for example, enterprise wide application products over a range of cultures, and group decision-making technologies (such as electronic meeting rooms and web-based work groups) that must accommodate a range of cultural perspectives as well as common working norms.

A MORAL MINIMUM APPLIED TO COMMON IS ETHICAL ISSUES

Davison, R. M. (2000) lists four fundamental ethical issues for information systems: codes of ethics; intellectual property rights; professional accountability; and data protection. Codes of ethics have aspirational and regulatory aspects, and a moral minimum could be linked to the latter so that corporate survival requirements are enforced. As well, a moral minimum could guide the

areas in which moral improvement is desired. The need to consider the value of stakeholders' system stored data and creative work is part of a moral minimum requirement for integrity and respect for others' property. Professional competency is the very reason IS staff are employed and accountability in this area is a way of demonstrating that high-quality work is valued, to ensure safety, risk minimisation and success for institutional endeavours. It is arguable that high-quality work for another (such as owner, client or stakeholder) requires a moral minimum to underpin its successful ethical outcomes for all involved. Finally, a moral minimum can assist in the determination of the boundaries, the methods employed, and the security requirements of any data that is stored on stakeholders. This admittedly brief overview of how a moral minimum could have relevance to key ethical issues in information systems is but a general indication, and could obviously be developed in much greater detail, according to the complexities of particular cases.

CONCLUSION

Information systems includes a wide range of discipline perspectives, such that its most useful paradigms speak of multi-view and multi-flower approaches. This wide range of contributory disciplines makes information systems ideally situated for the investigation of a possible moral minimum for validating and improving ethical decisions and outcomes in the global business arena. DeGeorge (in Frederick 1999, p. 241) claims: 'as business becomes more and more international, some believe that the ethical and other values necessary for its efficient development will emerge with time, just as it has in the material level of most of the developed countries of the world'. Yet, he also adds: 'Whether this is the case remains to be seen.' In the meantime, much work is being done by 'various corporations, industries, groups, academics, governmental organizations, international organizations of many kinds' ... as well as interested individuals, ... 'to clarify applicable ethical norms for international business, to provide incentives to ethical behaviour on the part of international business ... and to help implement the background conditions necessary to support and sustain the ethical development of international business' (DeGeorge in Frederick 1999p. 242). For the IS practitioner, a moral minimum, especially one linked to the multi-view model, can provide a tool for making the ethical decisions that can arise from the ethical dimensions of all IS practice.

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