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Comparing Three IS Codes of Ethics – ACM, ACS and BCS

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Abstract

Professional Codes of Ethics serve to embody the commitments made by members of that profession. Such Codes are designed to guide ethical decision-making, yet they provide little assistance in the identification and resolution of ethical dilemmas. In the IS global arena, Codes of Ethics tend to be national in scope, thereby increasing the complexity of international decision-making for IS practitioners. Three major IS Codes of Ethics, each with different but overlapping in jurisdiction, are considered and compared in this paper. The Association for Computing Machinery, the Australian Computer Society, and the British Computer Society Codes of Ethics have much in common, but some significant areas of difference. To expedite this comparison process, a tool has been devised by mapping a grammatical model of ethical analysis onto a rich picture soft systems inspired IS model. The findings have implications for global IS ethics.

Keywords

Ethics, Codes of Ethics, Information Systems, Social Issues

Introduction

Information Systems (IS) professional organizations have developed Codes of Ethics 'as an embodiment of a set of commitments of that association's members' (Anderson, Johnson, Gotterbarn & Perrolle 1993, p. 98). As these authors note, such Codes, consisting of rules and ideals, 'emphasize socialization or education rather than enforced compliance' (p. 98) in demonstrating responsibility to society. When decision-making, the IS professional can check which sections of the Code of Ethics have relevance to the decision at hand and ensure that he or she adheres to these. However, as Wood-Harper, Corder, Byrne, and Hughes (1999, p. 66) have pointed out: '(C)odes of practice assist the IS analyst with 'ethical dilemmas that arise in the course of systems development', but provide 'no clear cut guidelines for recognizing that ethical dilemmas exist'. Sometimes the choice seems to be between a rock and a hard place, or as Mumford (1996, p. vii) puts it: 'between a number of moral principles that may seem equally important'.

This problem of resolving unforeseen ethical dilemmas is mentioned in the three major Codes of Ethics of the developed world: the Association for Computing Machinery (ACM); the Australian Computer Society Code of Ethics (ACS) and the British Computer Society Code of Ethics (BCS). The ACM Code of Ethics and Professional Conduct 'lists a number of ethical principles that apply outside the world of computing, but especially acutely within it because of the technology available to its members' (Weckert & Adeney 1997, p. 18). Its preamble says:

> It is understood that some words and phrases in a code of ethics are subject to varying interpretations, and that any ethical principle may conflict with other ethical principles in specific situations. Questions related to ethical conflicts can best be answered by thoughtful consideration of fundamental principles, rather than reliance on detailed regulations (ACM 1992).

In the ACS Standard of Conduct section of its Code of Ethics, the problem of conflicts is made specific:

> The ACS accepts that the standards are ideal, and may not be achievable at all times in all circumstances. In practice, a member may occasionally find that some standards conflict with other standards, including standards from other sources. On these occasions the member must weigh up the relevant factors and choose to act in the manner which is most consistent with the Code of Ethics, given the circumstances. (ACS 1993)

Likewise, the BCS Code of Conduct is presented to each member as: 'a matter of you exercising your personal judgement in meeting the Code's requirements.' (BCS 2001 Introduction to Code of Conduct)

Not only does the member of an IS professional organization need to act in accordance with its Codes, but, given the international scope of the profession and the implications for global stakeholders, the ethical IS practitioner needs to be guided by the 'spirit' of ethical guidelines.

Here 'ethics' is taken to be 'values in action' (Jackson 1996), living how we ought to live, as Singer (Singer 1994) would put it. Somehow the ethical IS practitioner has to balance the ethical requirements of his or her profession, culture, nation and global perspective. This paper considers some of the differences and similarities in the three Codes of Ethics under consideration. In order to do this, a common way of categorizing the Codes has been developed. This ethical framework relies on a grammatical model for its universality, but is also consistent with a rich picture soft systems approach to IS.

The Framework

A grammatical framework is used to cover all of the different roles of IS development , and all of the stakeholder categories that will be affected by the IS. The main part of speech are covered by the reporter or storyteller's seven question words: 'who', 'what', 'when', 'where', 'why', 'how', 'how much?' (or 'to what extent?'). These map onto all of the main areas and tools of ethical enquiry as follows (Wheeler 2003):

WHO	**STAKEHOLDER ETHICS**
WHAT	**VIRTUE (CHARACTER) ETHICS**
WHEN	**CONTRACTUAL ETHICS**
WHERE	**MORAL RELATIVITY**
WHY	**TELEOLOGICAL ETHICS**
HOW	**DEONTOLOGICAL ETHICS**
EXTENT	**ETHICAL DECISION-MAKING**

Table 1. Grammatical categories and applied ethics tools

Stakeholders are those 'that can *affect* as well as *be affected by* an individual's, group's, organization's, or institution's *policy* or *policies*' (Mitroff & Linstone 1993, p. 141). Virtue ethics focuses on 'the excellences which are the virtues and which sustain the prospering of rational societies' (Pence in Singer 1991, p. 251), such as honesty, reliability, loyalty and courage. Moral relativity is about the cultural adaptation that can result in different contexts, and is exemplified by the maxim: 'When in Rome, do as the Romans do'. Contractual ethics refers to agreed commitments, usually, but not exclusively, that have been 'explicitly and publicly formulated' (Kymlicka in Singer 1991, p. 193). Teleological ethical relate to outcomes or goals of ethical action, such as consequentialism and utilitarianism, the goal of

achieving the greatest good or happiness for the greatest number of people. Deontological ethics refers to ethical means, the duties, rules, and principles that inform action, such as Kant's categorical imperative: 'Act only on the maxim through which you can at the same time will that it be a universal law' (O'Neill in Singer 1991, p. 177). Deontological ethics focuses on 'the letter of the law' and thus its adherents may look for loopholes in the law, knowing that they will not be legally punished for taking advantage of these. Ethical decision-making is what the IS practitioner does as a member of the human race and as a professional, particularly those belonging to a professional organization.

Stakeholders

In CATWOE mnemonic of a soft systems approach to IS, the **C**ustomer, **A**ctor, **T**ransformation, **W**orldview, **O**wner and **E**nvironment are considered as those affected by an IS (Checkland & Holwell 1998, p. 212). These amount to stakeholder categories in the sense defined above. Depending on the point of view one takes, each of these stakeholder categories has a grammatical role to play. For example, the actor, such as an IS analyst, can become the 'who', designing an IS transformation (what), for the customer (why), under a contract to a corporate owner (when), using a world view that includes certain methodologies (how) and in a certain environment (where). In this case, the 'how much', or 'to what extent' is missing. This missing heading can be regarded as an ethical monitoring category that considers how to balance the all the demands into the best and most satisfactory result for all the stakeholders. Wood-Harper et al. have identified this additional category as a heading of 'ethics' (Wood-Harper et al. 1999, p. 68). Wheeler (2003) has changed this 'ethics' heading to that of 'accountability', in order to avoid any charge of tautology, in that the overall aim is ethics, and the accountability role is a subset of this.

Changing the order somewhat, the mnemonic for IS stakeholders to be used in this paper becomes: O W C A T A E. It is claimed that this set of stakeholders categories can cover all eventualities in the IS arena, as it reflects the seven essential grammatical categories. Thus, educators can be those who influence the worldview, or lobby for the environment, or whatever other role they might play in a given situation. Managers and administrators might be actors or they might be clients, part of the corporate environment, or even monitors of the worldview or of the transformation required. As with soft systems methodology, the rich picture is gained by considering a range of viewpoints and adapting to the changes in these viewpoints and the roles of stakeholders in varying situations and roles over time.

Virtue Ethics, Deontological Ethics and Teleological Ethics

Using the grammatical categories as a framework, these three bastions of ethical theory can be mapped together as follows (Wheeler 2003):

Grammatical			

Category	Virtue Ethics	Deontological Ethics	Teleological Ethics
WHO	The character of the people responsible	Rule, principles and duties that relate to the overall integrity of the people with responsibility	The ethical goals of the people responsible
WHAT	The virtues involved in carrying out the tasks involved	The ethical rules, duties, principles that apply to the means used	The ethical results produced by the means
WHEN	The virtues involved in the timing	The duties, rules and principles that relate to timing factors	The outcomes that are time related
WHERE	The virtues involved in adapting to the situational factors	The deontological factors that relate to cultural and situational adaptation	The teleological factors that are related to cultural and situational adaptations
WHY	The virtues that are related to the outcomes	The rules, duties and principles that relate to the end results or outcomes	The teleological aspects
HOW	The virtues involved in the process mechanisms	The process rules, principles and duties	The results of the choice of processes
HOW MUCH	The virtues involved in the selection of the widest possible range of influence	The decision-rules for balancing all the possibilities	The degree of ethical effect

Table 2. Grammatical categories linked with virtue, deontological and virtue ethics

Contractual Ethics, Moral Relativity and Ethical Decision-making

The contractual ethical requirements usually relate to a mandate to act at a particular time in a particular situation. The work contract is a prime example. An employee signs a contract with an employer and does work for clients in particular locations at particular times, that eventually come to an end for various reasons, including death, if for no other reason. There is also the social contract, which can come into play when there is a conflict between workplace practices and social norms, possibly even justifying 'whistle-blowing' in the extreme case.

Moral relativity relates to situational ethics, and is practised by us all to some degree. There are different requirements to being a parent, an employee and an incapacitated hospital patient, for example. It is not possible to adapt completely in every way to every new situation, particularly on the global stage, so a choice must be made. In ethics, the question of ethical norms arises. What do we choose to retain as a constant and what are we prepared to change and in what contexts. It is generally accepted that a 'professional attitude involves a moral stance' (Weckert & Adeney 1997), but just what moral stance is to be taken? It is here that ethical decision-making comes into play and Codes of Ethics have a major part to play in the professional life of the IS practitioner.

Comparing the three Codes of Ethics

All three Codes of Ethics have a strong focus on the overall social and ethical role of the profession, linking in especially with the role of the owner, at whatsoever level this is manifested (e.g. the actor needs to internalize this ethical perspective of the owner). The 'Who' grammatical role of IS is well represented in the three Codes of Ethics by deontological, teleological and virtue ethics aspirations. The virtues mentioned are not usually spelt out in the Codes, but can be extrapolated from what is specified. Those with an interest in modifying the Codes may wish to compare the exact wording of each of the Codes, as each has its own points of difference to offer. Detail provided is to illustrate main points.

The following table format is adapted from the analysis of the ACS Code of Ethics by Wheeler (2002). Use of this format relates the Codes into a narrative of overarching ownership values, consideration of the world views that influence the IS, effective workplace culture, respect for the client, patiently accommodating the transformations involved, evaluating and improving processes, and considering the requirements of the environment.

Grammatical Heading and its perspective	Deontological and teleological aspects of ACM, ACS and BCS Codes of Ethics	Associated virtue ethics cluster examples from ACM, ACS, and BCS Codes of Ethics
WHO - Relates to integrity in relation to the highest goals of business leadership, and responsibility for all the stakeholders	**ACM** ACM 1.1 e.g. 'Contribute to society and human well-being', to … 'protect fundamental human rights and to respect the diversity of all cultures' To 'minimize … threats to health and safety' ACM 1.2 , 2.1, 2.2, 2.3, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 3.6 **ACS** 4.1. ,4.1.c, 4.1d, 4.3.6, 4.5.1, 4.5.2, 4.10.8, 4.10.9 e.g. 4.1 'uphold and advance the honour, dignity and effectiveness of the profession of information technology' in keeping 'with high standards of competence and ethical conduct', maintaining the integrity of the profession **BCS** 'The Public Interest' section BCS 1., BCS 2., BCS 3., BCS 4., BCS 13., BCS 14., BCS 16, BCS 'Professional Competence and Integrity' section, BCS 18., BCS 19.	*ACM, ACS, BCS* *Integrity, honour, dignity, professional effectiveness and survival, safety considerations, loyalty, wisdom, understanding, knowledge, sincerity, consideration for reputation in community, service orientation* e.g. **ACM** ACM 1.1 e.g. 'Contribute to society and human well-being', to … 'protect fundamental human rights and to respect the diversity of all cultures' To 'minimize … threats to health and safety' ACM 1.2 , 2.1, 2.2, 2.3, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 3.6 **ACS** ACS 4.1., 4.1.b, 4.1.c, 4.1.d, 4.5.1, 4.5.2, 4,3.6, 4.10.8, 4 10.9 **BCS** 'The Public Interest' section BCS 1., BCS 2., BCS 3., BCS 4., BCS 13., BCS 14., BCS 16, BCS 'Professional Competence and Integrity' section, BCS 18., BCS 19.

Grammatical Heading and its perspective	Deontological and teleological aspects of ACM, ACS and BCS Codes of Ethics	Associated virtue ethics cluster examples from ACM, ACS, and BCS Codes of Ethics
WHAT – Relates to the stakeholders with assumptions that influence a computer project are highlighted. The worldview heading can be seen as relating to the need to avoid unnecessary offence in business speech and culture, as well as the worldview assumptions and related objectives of management and colleagues.	**ACM** ACM 3.5 'Articulate and support policies that protect the dignity of users and others affected by a computing system.' It is ethically unacceptable to either 'deliberately to intentionally demean individuals or groups', but instead personal dignity should be enhanced by an IS. **ACS** ACS 4.3. 'I must act with professional responsibility and integrity in my dealings with the community and clients, employers, employees and students' ACS 4 3.2 'I must place the interests of the community above those of personal and sectional interests.' ACS 4 3.6 'I must enhance … the respect of (the IT professions's) members for each other.' ACS 4 8.4 'I must endeavour to understand, and give due regard to, the perceptions of those affected by my work. **BCS** BCS 12. 'You shall have due regard for the possible consequences of your statements on others' ... 'not make any public statements in your professional capacity unless you are properly qualified and, where appropriate, authorised to do so.'	*Diplomacy discretion, honour, respect, patience, compassion, consideration, politeness, deference, understanding, wisdom* **ACM** ACM 3.5 **ACS** ACS 4 3.2, 4 3.6, 4 8.4 **BCS** BCS 17

Grammatical Heading and its perspective	Deontological and teleological aspects of ACM, ACS and BCS Codes of Ethics	Associated virtue ethics cluster examples from ACM, ACS, and BCS Codes of Ethics
WHEN - Relates to work culture and stakeholder relationships	**ACM** ACM 1.4 'respect for others, and the principles of equal justice' ACM 1.7 'Respect the privacy of others.' **ACS** ACS 4.3.4, 4.3.6, 4.5.3, 4.8.1, 4.8.2, 4.10.1, 4.10.4 4.8.5 'I must attempt to increase the feelings of personal satisfaction, competence, and control of those affected by my work' 4.10.3 'I must not attempt to enhance my reputation at the expense of another's reputation.' **BCS** BCS 1., BCS 2., BCS 3., BCS 4. 'Have regard to basic human rights and shall avoid any actions that adversely affect such rights.' BCS 13, BCS 15, BCS 16	*Respectfulness, deference, helpfulness, service orientation, consideration, congeniality, faithfulness, conviviality, pleasantness, communicativeness, educativity* **ACM** ACM 1.4, 1.7 **ACS** ACS 4 3.4, 4.3.6, 4.5.3, 4.8.1, 4.8.2, 4.8.5, 4.10.1, 4.10.3, 4.10.4 **BCS** BCS 1., BCS 2., BCS 3., BCS 4., BCS 13., BCS 15., BCS 16.
HOW - Relates to respect for client's property and wealth	**ACM** ACM 1.2,1.3 'Be honest and trustworthy', ACM 1.5, 1.6, 1.7, 2.5, 2.6, 2.8 **ACS** ACS 4.3.2, 4.3.3, 4.6, 4.7, 4.8.2 4.10.1, 4.10.2 **BCS** BCS 3, 6, 7, 8, 10, 11, 12, 14, 16, BCS 'Professional Competence and Integrity' heading	*Honesty, competence, trustworthiness, reliability* **ACM** ACM 1.2,1.3 'Be honest and trustworthy', ACM 1.5, 1.6, 1.7, 2.5, 2.6, 2.8 **ACS** ACS 4.3.2, 4.3.3, 4.6, 4.7, 4.8.2 4.10.1, 4.10.2 **BCS** BCS 3, 6, 7, 8, 10, 11, 12, 14, 16, BCS 'Professional Competence and Integrity' heading

| | BCS 19, 20, 22. | BCS 19, 20, 22. |

Grammatical Heading and its perspective	Deontological and teleological aspects of ACM, ACS and BCS Codes of Ethics	Associated virtue ethics cluster examples from ACM, ACS, and BCS Codes of Ethics
WHY - Relates to stakeholders in a situation of change and possibly some stress, particularly those who may seem obstructive	**ACM** Involvement in some training programs that require discipline, but not very explicit. **ACS** ACS 4.3.5, 4.5.3, 4.8.6, 4.9.1-3 4.10.5 'I must distance myself professionally from someone whose membership of the Society has been terminated because of unethical behaviour or unsatisfactory conduct.' **BCS** BCS 1., 2., 3, 4, 9, 13, 22. 'avoid any situation that may give rise to a conflict of interest between themselves and their client.'	*Self-restraint, self-discipline, courage, patience, resourcefulness, caring, loyalty* **ACM** None in particular **ACS** ACS 4.3.5, 4.5.3, 4.8.6, 4.9.1-3 4.10.5.' **BCS** BCS 1, 2, 3, 4, 9, 13, 22.
HOW MUCH - Relates to the evaluation of business practice, such as internal and external reporting procedures together with redress of identified unethical behaviour	**ACM** ACM 1.2, 2.5 Report any signs of possible harm 'to those who have the opportunity and/or responsibility to resolve them.' ACM 1.2 Whistle-blowing may be necessary if one's superiors do not act to curtail a reported danger. ACM 1.4,1.7, 2.3, 2.4, 2.6, 3.4 **ACS** ACS 4.5.5, 4.5.6, 4.8.3, 4.10.6, 4.10.7 **BCS** BCS 3, 5, 8, 19, 21	*Fairness, sincerity, correction, restitution, judgment, impartiality, justice, mercy, harmony, decisiveness, courage, strength of character* **ACM** ACM1.2, 2.5, ACM 1.4 'Be fair and take action not to discriminate.' 'The values of equality, tolerance, respect for others, and the principles of equal justice govern this imperative.' ACM 1.7, 2.3, 2.4, 2.6, 3.4 **ACS**

		ACS 4.5.5, 4.5.6, 4.8.3, 4.10.6, 4.10.7 **BCS** BCS 3, 5, 8, 19, 21

Grammatical Heading and its perspective	Deontological and teleological aspects of ACM, ACS and BCS Codes of Ethics	Associated virtue ethics cluster examples from ACM, ACS, and BCS Codes of Ethics
WHERE - Regards habitat needs and environmental quality	**ACM** ACM 1.1 'human well-being includes a safe natural environment. Therefore, computing professionals who design and develop systems must be alert to, and make others aware of, any potential damage to the local or global environment.' ACM 1.2 Avoiding harm to others includes: 'unwanted environmental impacts.' **ACS** ACS 4.5.6 'Conscientious objections' could involve implications of IT work on the environment **BCS** Possibly BCS 4 adhering to laws and standards may sometimes involve the environment	*Kindness, patience, humanity, courage, stewardship* **ACM** ACM 1.1 **ACS** ACS 4.5.6 **BCS** 4?

Conclusion

From this analysis, the main points of difference are that the ACM Code has a section on whistle-blowing and the environment, whereas the other two do not. There are areas of extra detail that may reflect culture: for example, the ACS requires IS practitioners to place society's interests above their own (ACS 4.3.2) and the BCS emphasizes avoiding problems (e.g. BCS 4, BCS 22). There is much similarity between these three Codes of Conduct, as

would be expected from three developed western countries. The Codes seem to suggest seeking professional advice from the societies involved if an ethical conflict cannot be solved by the IS practitioner. Yet, there is no means of addressing an international conflict of interest, except by a nationalist or personal interpretation of the 'spirit' of the law or Code. At present, far from all members of the IS profession belong to a professional organization, nor are they officially subject to a professional Code of Ethics. A fully ethical approach requires that: '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' (Wood-Harper et al., adapted from Churchman, 1999, p. 70). Perhaps it is time to consider the formulation of overarching global ethical professional Codes of Ethical practice in IS.

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