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ETHICS BUILT IN: A DIALOGIC APPROACH TO MANAGEMENT INFORMATION SYSTEMS ETHICS EDUCATION

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ABSTRACT

The study of ethics is unarguably a key component of Management Information Systems (MIS) education. From the early days of the discipline, concerns abounded that computing and information were fraught with the possibility of misuse, leading the profession to determine that it had an obligation to do its utmost to encourage ingrained ethical practice. I propose a new approach to ethics teaching in Management Information Systems, one that addresses the need to inculcate habits of ethical thought as an integral part of the design, deployment and use of Management Information Systems. Students would learn the necessity of including ethical analysis at the beginning rather than at the end of MIS initiatives because ethics would be presented as “built in”, an essential organic element of major MIS topics. The habits of ethical thought would be supported by introducing students to models and frameworks using a dialogic approach.

Keywords

Management information systems, education, ethics, values, dialogic approach, dialogue-based learning, dialogue-based teaching

INTRODUCTION

Efficiency and effectiveness are not the only messages students of Management Information Systems (MIS) need to hear. Ethics must be foremost, integral, and clearly presented; even further, ethics must be “built in” to the study of MIS as an essential element of every major topic. I argue that students must learn to automatically couple the creation, analysis and dispersion of information with the ethical use of it, and further, they must cultivate habits of ethical thought around every aspect of Management Information Systems, not just information. I suggest that a dialogic approach, using the Platonic ideal of helping students acquire knowledge through learning to ask the right questions, can be a powerful tool for unifying this wide variety of topical elements with a variety of ethical approaches to these elements.

Will offering this type of education to students actually result in lasting changes in the way students think and approach problem-solving? There are indications that it will. Nguyen, Basuray, Smith, Kopka and McCulloh (2008) present findings that suggest that the introduction of ethical theories early in the semester of a business course significantly affects student intent to pursue ethical rather than unethical behavior. An important aspect of this study is that ethical theories (moral equity, relativism, and contractualism) rather than ethical codes of conduct or extant laws were used. The application of theories cannot happen without a dialogue taking place, at the very least within the student’s mind, and at the very best among students inside and outside of the classroom.

BACKGROUND

Ethics in computing is a subject that has gripped the profession since its early days. In proposing his PAPA system of ethics – Privacy, Accuracy, Property and Accessibility – Richard Mason (1986) recognized that the “unique challenges we face in this age of information...stem from the nature of information itself.” Almost twenty years ago an entire ACM conference, *Ethics in the Computer Age*, focused on this topic. Framing their work within the context of the PAPA system, Conger, Loch and Helft (1994) recognized a lack of concern for stakeholders in the ethical decisions made by their subjects. Pulliam (1994) also recognized the expansion of ethics beyond the individual and, in her case, sought to identify curriculum that would ensure that students learned the social implications of ethical computer use. Her conclusion was that incorporating ethics within courses across the curriculum would lead faculty “to squeeze them out of a course to make more time for technical instruction” and so a separate course on ethics within the curriculum was needed. White and Pooch (1994) were concerned with what they perceived as a growing tendency on the part of high school students towards glorifying piracy, hacking and other unethical acts, and concluded that ethics needed to be incorporated within every computer science course. Artz (1994) explored ethical foundations for information systems study, concluding that Aristotelian virtue ethics provided a better

foundation than utilitarian ethics because virtue ethics, founded on the ideal of applying personal morality to decisions, is better suited for the increasingly complex situations fostered by technological progress. At the same time, he advocated that both utilitarian and virtue ethics be taught.

ETHICS BUILT IN: A DIALOGIC APPROACH

Content related to ethics, sometimes in sidebars or vignettes, perhaps consolidated in a single chapter, or at times combined with coverage of current regulations is routinely included in MIS textbooks. However, this approach can send the message that ethics is subordinate to MIS strategies and tactics rather than an essential organic component of the decisions that must be made by managers, users and developers of Management Information Systems. I propose that ethics learning in MIS education should be broadened by integrating ethical frameworks and theories across coursework, in essence expanding the practice that Nguyen, et al, followed. This practice would not only expose students to relevant ethical tools at the beginning of the semester but in addition at the beginning of each major topic in order to achieve the following goals:

- provide students with ethical tools that enrich their understanding of Management Information System topics,
- develop within students the habit of linking ethical considerations with other critical-thinking and analysis, and
- elevate student ability to ethically assess, design, deploy and evaluate management information systems as they enter their professional careers.

An important aspect of including models and theories to help students question, dialogue, and come to conclusions about the design, implementation and use of Management Information Systems is that the models reinforce each other. By including ethical tools in the early stages of covering various aspects of MIS, students learn the habit of including ethics in the critical thinking and analysis that is crucial to the success of MIS endeavors.

The following illustrations provide roadmaps for incorporating ethical tools within the teaching of Management Information Systems. These topics are not comprehensive; however, they provide a sense of a direction that can be taken in expanding the teaching of ethics within the MIS discipline.

Power and Ethics

Power underlies much of the discussion of making ethical decisions but is not always explicitly delineated. Because of this, students can lack tools that can help them understand the dynamics of power and how to think about power within an ethical context. The introduction of new technology and the consequent changes to process can profoundly alter existing power structures within a business unit or within a business organization. Williams (2005) provides a tool to identify the ethical implications of these consequences by posing four questions which should be asked before making any changes to a process:

1. Who gains power?
2. Who loses power?
3. What are the intended consequences?
4. What are some possible unintended consequences?

The proactive consideration of these questions during the process design or redesign phase can go a long way to avert serious, though unintended, disruptions that are ultimately ethically questionable.

Referencing Foucault's description of Jeremy Bentham's Panopticon (Foucault, 1979) provides another approach to understanding power within the context of technology; this enables students to then consider how to use power to create an ethically better situation. The Panopticon is presented as an effective coercive architecture ideally suited for prisons. The open cell format that subjects prisoners to surveillance by unseen guards housed in a central tower creates a power imbalance in favor of the guards; all power has been stripped from the prisoners. An analogy to present-day MIS is the use of monitoring devices to track employee productivity. Vowels (2006) contrasts this power imbalance by describing a parking garage imbued with technology to point out that surveillance (lack of privacy) can be converted from an ethical liability to an ethical good by the sharing of information with those who are being watched. The parking garage information system informs customers of open parking spaces and thus allows them to make informed, optimal choices about where they will park. This removes the power of surveillance from that of the watcher and distributes it to all of the participants in the system.

Both of these illustrations involve students in a dialogue. Asking questions and thinking about how to design a system that features the ethical use of power are powerful tools in inculcating habits of ethical thought.

Socio-technical Systems Theory

Some MIS textbooks are already using socio-technical systems theory (STS). In summarizing the work of STS scholarship, Johnson (2006) points out that the emphasis is on creating a “model of the technology-society relationship in which there is valence in both directions”. This duality, coupled with the need to create value to the customer (Errey and Liu, 2006), is an essential aspect in student understanding of the inseparability of technology from those who use and those who are impacted by technology. Johnson provides additional insight into the grounding of information technology within the context of corporate excellence by noting that the way in which technology is implemented both reflects corporate values and impacts corporate morality. Being unaware of this relationship can lead managers to unwittingly implement unethical uses of technology.

A key benefit of using STS theory to support ethical training for students of Management Information Systems is the accessibility of case studies that allow students to question, to challenge, and ultimately to determine their own ethical paths. When lecturing at Bentley University, Johnson (2006) describes *Turnitin.com*, the anti-plagiarism platform, as an example of a technology that has “the potential effect...to undermine the value of trust”. In the question and answer period, she goes on to explain why she considers *Turnitin.com* to be value-embedded: “putting it bluntly, it’s designed to be used by professors to check if their students are lying.” This presents an opportunity for students to begin a dialogue with Johnson’s argument as the starting point followed by answering the power questions posed by Williams to determine if it is possible to implement *Turnitin.com* software in an ethical manner. Using the Vowels illustration of the technology-enhanced parking garage, they are able to see that it is possible to implement *Turnitin.com* software such that power is not retained exclusively by the professor. In fact, educators are studying ways in which to use *Turnitin.com* formatively. Rolfe (2011), in particular, found a positive student response to being able to see the *Turnitin.com* feedback and make adjustments to their drafts. This is a powerful acknowledgement that in some cases the politics of an artifact can be neutralized by the way in which the artifact is used (Winner, 1986). Again, the message is that before making a technical choice, the appropriate ethical argument must be fully explored.

Systems Theory

Open systems theory provides another way for students to anticipate ethical challenges, particularly those posed by the global nature of business. MIS fundamentally consists of intertwined systems of customers, suppliers, labor force, economy, and the like, and the ethical pursuit of creating information systems that enable firms to compete requires an understanding of the environment in which firms compete as well as an understanding of the interacting elements that make up modern organizations.

An example of how systems theory can be used for MIS education can be found with the use of an early article about Google containing David Brin’s famous proscriptive approach to ethics, “Don’t be evil” (McHugh, 2001). McHugh describes several challenges that Brin faced in trying to stay true to his ethical stance. While it was not surprising that web designers would try to game the Google system, many formidable challenges came from unanticipated sources, such as the German National Railroad, the Church of Scientology, and the Chinese government. Brin was so taken by surprise by the Chinese issue that he ended up subjecting himself to a crash course about China and its culture.

How could an understanding of systems theory have helped Brin in his quest to stay true to his ethical values? It could have helped him identify the forces that had the potential to negatively impact Google. While systems theory would not have provided an answer to the Chinese question, if Brin had spent some time meditating about the external systems that he might encounter, he could have been proactive and diligent about researching markets outside of the United States before entering them. He might have realized that other cultures could have differences from the mainstream American perspective on business, and he would have been better equipped to deal with the challenges ensuing from entering the global market. This case also helps students realize that having tools may help mitigate a negative ethical situation but even so, there are not always simple and easy answers to ethical questions; Google is still trying to navigate a successful business relationship with China (Pepitone, 2012).

Other Ethical Constructs

MIS is not just about information, software, people and processes. It’s also about hardware and networks. Regarding hardware, exposing students to the entire life-cycle of hardware challenges them to make ethical decisions about adoption, use and disposition. For instance, reports of human rights violations in Foxconn factories call into question whether or not the use of Apple products such as iPads and iPhones is ethical (Improving Conditions at Foxconn, 2012). Some products have less environmental impact than others – should this matter? Concerns exist about disposition of obsolete hardware without posing a danger to the environment or to the people processing the discarded equipment. In the same way, the introduction of the notion of the digital divide makes students aware that not everyone has the same access to the Internet.

Digging deeper, they can find that the concept of the digital divide is complex. As Epstein, Nisbet and Gillespie (2011) note, inequities can be framed as lack of access or lack of skills; one's perspective on the digital divide can have an enormous impact on strategy.

The triple bottom line (TBL) is a useful framework to help students think meaningfully about these issues. This framework adds social and environmental performance dimensions to traditional financial performance measures (Slaper, 2011). Whether or not one feels that TBL can actually be calculated (Norman and Mac Donald, 2004), the descriptors of the three important aspects that should be taken into consideration – people, profit and planet – are useful in helping students deconstruct problems into pieces that can then be evaluated using other ethical frameworks. The triple bottom line supports student thinking about topics such as the environmental consequences of hardware decisions and the digital divide that separates societies into those that have Internet access from those that do not.

The balanced scorecard developed by Kaplan and Norton (1993) is another construct that is useful for providing students with the sense that the best ethical decisions are not made one-dimensionally. The balanced scorecard, similarly to the triple bottom line, asserts that success cannot be measured solely on short-term financial outcomes (the investor view) but must take into consideration other stakeholders such as customers, employees and business partners. Managers and executives who adhere to this philosophy are more likely to consider the full range of stakeholders in making decisions; students who learn to apply this model are presented with a tool that enable them to add dimensionality to information systems decisions.

CONCLUSION AND OPPORTUNITIES FOR FURTHER RESEARCH

In this paper, I attempted to illustrate ways in which dialogue-based learning of ethical theories and models incorporated topic by topic within Management Information Systems education could be useful in developing ethical habits in students. While this approach would broaden student awareness of the many ways in which ethics is elemental to management information systems, the design of such a course is not without challenges. As Pulliam noted, there is a danger that incorporating ethics teaching within courses across the MIS curriculum leads to the risk that ethics topics would be crowded out in favor of more technical content. Clearly this is a valid concern and one not easily answered. However, the need is apparent and urgent. If we view Johnson's contention that technical choices are moral choices as an analogue to course content decisions, then, difficult though it may be, we are morally required to pursue ways in which to instill within our students the sense that ethical decisions are required elements of expected standard operating procedures.

Viewing this mission as a mandate allows us to view course content innovatively. On the one hand, the rapidly increasing pace of technological innovation creates pressure to include as much current technology as possible in our courses. But what if we examined the problem from a different perspective? What if we acknowledged that we cannot possibly include every aspect of every technology in our introductory courses? Even further, much of what we teach that deals with specific technologies will be obsolete by the time our students graduate or are in the early years of their careers. This suggests that we triage technical content to include only what will best serve as foundational knowledge for our students' future studies and careers, help students learn how to stay current in the rapidly changing world of technology (for example, teaching environmental scanning skills), and use the space created to insert the techniques described in this paper.

Areas of further research include further exploration of ethics systems pertinent to the teaching of Management Information Systems, identification of ways to balance technical content and dialogue-based ethical learning, an evaluation of teaching modes that can be most effective in presenting this type of material, and validation that this approach will result in students ready to enter into their careers armed with the tools that they need to preserve their integrity.

REFERENCES

1. Artz, J.M. (1994) Virtue vs Utility: Alternative Foundations for Computer Ethics, in *Proceedings of the conference on Ethics in the computer age (ECA 94)*, November 11 – 13, 1994, Gatlinburg, TN, USA, ACM Press, 116-21.
2. Conger, S., Loch, K.D. and Helft, B. L. (1994) Information technology and ethics: An exploratory factor analysis, in *Proceedings of the conference on Ethics in the computer age (ECA 94)*, November 11 – 13, 1994, Gatlinburg, TN, USA, ACM Press, 22-27.
3. Epstein, D., Nisbet, E. C. and Gillespie, T. (2011) Who's Responsible for the Digital Divide? Public Perceptions and Policy Implications, *Information Society*, 27, 2, 92-104.
4. Errey, C. and Liu, Xi (2006) Socio-technical systems: There's more to performance than new technology. Viewed at <http://www.ptg-global.com/PDFArticles/Socio%20technical%20systems%20-%20There's%20more%20to%20performance%20than%20new%20technology%20v1.0.pdf> on February 12, 2013.

5. Foucault, Michel (1979) *Discipline and Punish: The Birth of the Prison*, Random House, New York
6. Improving Conditions at Foxconn (2012) *The New York Times*, December 26, 2012, viewed at <http://www.nytimes.com/interactive/2012/12/27/business/Improving-Working-Conditions-at-Foxconn.html> on December 31, 2012
7. Johnson, D. G. (2006) Corporate excellence, ethics and the Role of Information Technology, *Lecture Monograph*, Bentley University Center for Business Ethics, February 13, 2006, viewed at <http://cbe.bentley.edu/node/15#johnson> on February 10, 2013.
8. Knobel, C. and Bowker, G. (2011) Computing Ethics: Values in Design, *Communications of the ACM*, 54, 7, 26-28.
9. Mason, R. (1986) Four Ethical Issues of the Information Age, *Management Information Systems Quarterly*, 10, 1, 5-12.
10. McHugh, J. (2001) Google vs evil, *www.wired.com*, viewed at http://www.wired.com/wired/archive/11.01/google_pr.html on December 28, 2012.
11. Mingers, J. and Walsham, G. (2010) Toward ethical information systems: The contribution of discourse ethics, *MIS Quarterly*, 34, 4, 833-854.
12. Nguyen, N.T., Basuray, M.T., Smith, W.P., Kopka, D. and McCulloh, D. (2008) Ethics perception: Does teaching make a difference? *Journal of Education for Business*, 84, 2, 66-75.
13. Norman, W. and MacDonald, C. (2004) Getting to the bottom of “Triple Bottom Line”, *Business Ethics Quarterly*, 14, 2, 243-262
14. Pepitone, J. (2012) Google blocked in China as government leaders meet. *CNNMoney*, November 9, 2012, viewed at <http://money.cnn.com/2012/11/09/technology/google-china-blocked/index.html> on December 31, 2012.
15. Pulliam, S.C. (1994) A social implications of computing course which “teaches” computer ethics, in *Proceedings of the conference on Ethics in the computer age (ECA 94)*, November 11 – 13, 1994, Gatlinburg, TN, USA, ACM Press, 80-84.
16. Rolfe, V. (2011) Can Turnitin be used to provide instant formative feedback? *British Journal of Educational Technology*, 42, 4, 701-710.
17. Slaper, T.F. (2011) The Triple Bottom Line: What is it and how does it work? *Indiana Business Review*, Spring 2011, 4-8.
18. Vowels, S.A. (2006) Space Enhanced: An interdisciplinary look at a parking garage, in *Systems Research in the Arts, Volume VIII: Music, Environmental Design and the Choreography of Space*, edited by George Lasker, Jane Lily and James Rhodes. Baden-Baden, Germany
19. White, G. and Pooch, U. (1994) Computer ethics education: Impact from societal norms, in *Proceedings of the conference on Ethics in the computer age (ECA 94)*, November 11 – 13, 1994, Gatlinburg, TN, USA, ACM Press, 170-174.
20. Williams, M.(2005) Ethics, information systems and a steel ax, *Graziadio Business Review*, 8, 2, viewed at <http://gbr.pepperdine.edu/052/itmatters.html> on December 28, 2012.
21. Winner, L. (1986) *The whale and the reactor: a search for limits in an age of high technology*, University of Chicago Press, Chicago.