Preface

Information technology (IT) has caused and will continue to cause enormous changes in the ways we do things. Very often, the introduction of new technologies results in dramatic alterations in old ways of relating to each other. Examples range all the way from entirely new ways of meeting romantic partners to making travel arrangements; from new ways of connecting with suppliers to entirely new kinds of businesses. It is, therefore, only to be expected that IT produces new challenges and issues for us to deal with ethically. Issues about privacy, security, piracy, and ownership take on new aspects when applied to new IT applications. So far, in discussions of ethical issues of IT, these types of issues have been the most discussed. Yet other important issues that raise difficult ethical problems also need to be addressed, for example, the outsourcing of high-level jobs and the value of information technology itself.

I will be using a framework for ethical problems influenced very much by the late philosopher John Rawls. Rawls is regarded by many political theorists as the greatest social and political philosopher of the 20th century. His importance was perhaps signaled by the fact that his obituary appeared in the News and Review section of the *New York Times* rather than in the regular obituary section. He was my PhD thesis adviser at Harvard, so I had the chance to gain familiarity with his work. This book does not contain a full and accurate account of his work. Its intended audience is IT professionals and IT users who have ethical concerns. A full and accurate account of Rawls' work would take us into the convolutions of professional philosophy, which I intend to avoid.[1]   This is very much a book of *applied* ethics, but I have tried my best to be faithful to the spirit of the ideals of Rawls' work.[2]

The basic idea is that ethical problems arise because there are conflicts between different interests. IT examples include: music downloaders vs. music rights owners; corporate managers or stockholders vs. outsourced professionals; spammers vs. e-mail users. These problems cannot be resolved on the level of individual interests alone. Higher level principles need to be applied. Very often, these higher level considerations are embodied in laws, but laws themselves need to be ethical—we need to know that laws themselves are just. Rawls' main contribution to ethics was a theory of justice based on the idea that justice means fairness to all concerned, plus a method for determining when this is so[3] (Rawls, 1999). As I worked on the various issues discussed in the book, I experienced once again the power of these ideas of Rawls. They are direct descendants of the founding ideas of the United States, so it is perhaps no wonder that they are so attractive.

In Section I, Ethics and IT—The Background, ethics is applied to information technology. Chapter I, Ethical Issues in Information Technology, considers three questions:

- What makes an issue an ethical issue?
- What features of information technology create new ethical issues?
- Who is to say what is right and wrong?

My answer to the question, "Who is to say what is right and wrong?" is the person with the most overall view using the highest level principles.

Chapter II, A Background in Ethical Theory, introduces the underlying ethical principles used in the rest of the book. The basis for deciding on ethical principles is the principle of higher level principles; it is rational to follow a higher level principle to resolve conflicts between lower level principles.

I present some classical theories of right action and a classical theory of value. Then I discuss how higher level ethical principles for institutions arise and outline the social contract theory of justice developed by John Rawls. The basic idea of a social contract is that a justly ordered society is one to which individuals can freely decide to obligate themselves. Rawls believes two principles of justice would be chosen to regulate institutions: Greatest Equal Liberty—all members of society have the greatest equal liberty possible, including fair equality of opportunity; and the Difference Principle—economic inequalities in society are justified by their making the least advantaged better off than if there were no inequality. Finally, Rawls' extension of his social contract theory to a transnational context is explained.

In Chapter III, The Context of IT Ethical Issues, ethical issues within organizations are seen to arise from three points of view: IT professionals, IT users, and general managers. I also discuss *partial compliance,* how to deal with cases where ethical principles are not being fully observed. How to deal with such cases turns out to be important in many of the following chapters.

In Section II, Ethics and IT Professionals, some IT ethical issues within organizations are considered from the point of view of the IT professional. Discussion in Chapter IV is based on traditional theories of right. Chapters V, VI, and VII rely on John Rawls' theory of justice.

In Chapter IV, Professional Duties, I begin by considering the nature of the IT profession and the special ethical duties of the IT professional. My position is that IT has developed a distinctive and robust set of professional ethical standards even without the benefit of formal credentialing and accreditation.

Since ethical behavior for the IT professional is also impacted by the ethics of people and institutions in his or her environment, the rest of the chapters in this part consider the justice of institutions impacting the IT professional. The theory of justice used is the social contract theory developed by John Rawls.

Economic justice is the major focus in Chapters V, Justice in a Market Economy, and Chapter VI, Trust Issues in a Market Economy. These chapters examine the ethical constraints necessary for justice in an efficient market economy. The basis for the discussion is Rawls' second principle of justice, the Difference Principle, which requires social institutions to be arranged to make the worst off in society as well off as possible. Topics discussed include monopoly, the "digital divide," trust in supply chain management and outsourcing, and dealing with unethical organizational behavior.

Chapter VII, Offshoring as an Ethical Issue, examines the justice of the practice of moving skilled IT jobs to lower wage countries. Rawls' extension of his principles of justice to transnational contexts, which he calls "the law of peoples," is the basis for my analysis. One major concern is that the safeguards of justice present internally in national economies are not automatically duplicated in transnational contexts.

In Section III, Ethics for IT Users, we turn to issues relating to the individual user of IT. These issues include several much-discussed ethical issues such as privacy, security, copyright, and piracy. Some other less usual problems involving the individual are also discussed. These are issues that take on a different cast in an online environment, such as taxing Internet sales equitably and eliminating paper from transactions.

I include these issues here to give some idea of what a Rawlsian treatment of them would look like. I have not been able to include consideration of the very extensive discussions of these issues. Some of the ethical principles involved in this part are not discussed by Rawls, but I believe they are natural extensions of his principles. Of special ethical significance is a very strong individual right to privacy, formulated and discussed in Chapter VIII. The discussion of copyright in Chapter IX also turned out to be the most appropriate place to consider the ethical status of corporations, an issue Rawls does not directly consider.

The range of issues in Chapter X each require different treatment because of their special features. Sales tax is traditionally collected at the location of the infrastructure supporting the business, but there doesn't seem to be any way to apply this to Web-based transactions. Paperless transactions raise the issue of justice for those without access to computers. Spam raises free-speech issues. Finally, although the Internet seems to raise no new ethical issues concerning dating and sex, the difficulty in censoring the Internet does underline its contribution to realizing the first principle of justice—that of Greatest Equal Freedom, especially with respect to freedom of speech.

Section IV, Ultimate Questions, begins in Chapter XI with issues of how to value IT itself. These issues are considered from various points of view: I begin with the point of view of organizations and the economy and then consider the ultimate value of technology and IT from the point of view of the human species, the environment, and *being* itself.

The discussion of IT value from organizational and socioeconomic points of view builds from a discussion of the "productivity paradox" of the early 1990s. Because of the uncertainties involved in assessments of global socioeconomic value, this type of value assessment may not be useful to managers in organizations. Managers are, after all, concerned with whether they can realize value from particular projects. I discuss ways of realizing value in particular projects and barriers to realizing this value.

Chapters XII and XIII consider "ultimate" ethical questions of the value of technology from the point of view of humanity, the ecosystem, and *being* itself. Chapter XII first discusses the value of modern technology per se, and then Chapter XIII discusses to what extent conclusions about modern technology apply to information technology.

My analysis of modern technology is based on Heidegger's view of modern technology as an independent force in human existence, with its own point of view and its own ends, chiefly to build a new and incompatible order for the

purpose of extracting and storing energy for later uses. The ends of technology are expressed in an ethical principle I call the Technology Principle. Two other ethical principles, the Species Survival Principle and the Ecosystem Principle, emerge from a discussion from the points of view of the species and the environment. I argue that these principles have priority over the Technology Principle. To establish this priority, ultimately one must take the point of view of *being* itself.

In the final chapter, I consider whether IT possesses the characteristics of modern technology. I conclude that the answer is quite different for IT hardware and IT applications. IT hardware is a part of modern technology, but IT applications are not. IT as application is not trying to replace the world, but rather to produce a useful simulation of the world, being in this respect like art. At the end, I discuss the ethical implications of these views for managers, the species, the ecosystem, and *being* itself.

Ethics can have two possible emphases: on *judgments* or on *agents*. A judgment emphasis in ethics results in judgments of the behavior or character of others. An agent emphasis in ethics provides guidance for an individual trying to decide what to do. This book has an agent emphasis. My aim is to have produced a book useful for dealing with practical ethical problems of IT—problems faced by professionals and users. But, in any case, ethical solutions must be based on higher level principles, because, in the end, this is the only way we can deal ethically and consistently with the rapidly changing environment presented to us by IT.

References

Rawls, J. (1999). *A theory of justice* (rev.ed.). Cambridge, MA: Harvard University Press.

Rogers, B. (2002). John Rawls. *The Guardian*, November 27.

Spinello, R., & Tavani, H. (2004). *Readings in cyberethics*. Sudbury, MA: Jones and Bartlett.

Endnotes

[1] It seems to me that if Rawls' theory can't be understood without the substantial added complexity of professional philosophy, then it is probably not workable as a practical basis for ethics—or for society.

[2] For a recent collection of professional philosophical work on ethics and IT, see Spinello and Tavani (2004).

[3] Rogers (2002) is an obituary with an excellent summary of Rawls' work.