Computer and Internet Ethics

Part 1

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"For the most part however, the ethical issues have followed, rather than led, technology."

—Johnson, *Computer Ethics*, p. viii

"I will not be pushed, filed, stamped, indexed, briefed, debriefed or numbered. My life is my own."

—Patrick McGoohan as The Prisoner

The Prisoner was a seventeen-part series originally broadcast in the 1960s.[1] The British show has been shown periodically since then and has developed a strong cult following. The premise of the show is a man resigns from his job—exactly what that job was is not made clear. He is spirited away to the mysterious Village, a place where no one has a name and every move is monitored by the ever-changing actors who play the character called No. 2. There is no privacy, no secrets; there is an insatiable need to know why the Prisoner (called No. 6 by the Villagers) resigned. In the sixties the intrusion into his life is limited to bugs, relatively obvious cameras, surreal mind control, and spies.

For decades people have debated the meaning of the show, dissecting each character, the technology used, and the politics behind the show. The high caliber of the acting and the writing provides a great deal for the viewer to ponder. As would be expected in our networked age, there are now Web sites devoted to this show that is over thirty years old. Visiting the Web pages makes one wonder what the leaders of the Village, those unseen people who really control it, could do if they had had the power of the Internet and modern computers in their arsenal.

One of the overriding themes of the show is the sense of identity. The Prisoner refuses to wear his number or respond to his "name" of No. 6. As he states, he is a free man. Today, many of us might argue that we need to fight to maintain our identity over those numbers that are put on us, be they social security, ID, or IP numbers and the myriad log-in names and passwords that seem to define us. In addition, we need to worry about identity theft and an increasing feeling that we are losing our humanity and becoming numbers, not names. We might love our computers and all the things we can do with them, but what about the rules that keep the technology and the people who use this technology in line? What about ethics? Are ethics leading or following the technology?

The number of resources on the various aspects of information, computer, and Internet ethics is staggering. Selecting a few was difficult since so many have so much to offer. This column and the next will highlight a few of them.

I am not a number. I am a free man.

For those who have never formally studied ethics, or did study ethics some time ago, a basic text might be useful. There are dozens of excellent books to choose from. One is *Ethics Applied*, a thorough and readable text that provides the basic framework needed to better understand the subject before beginning a more focused study on information ethics.[2] *Ethics Applied* uses case studies, some lighthearted text, cartoons, and clear descriptions to explain the different perspectives and issues in ethical studies. Scan the book to bring yourself up-to-date, or use as a reference when terminology, issues, or philosophical perspectives are mentioned in other books and need additional explanation.

Written for undergraduates, *Ethical and Social Issues in the Information Age* is a good resource for beginning study.[3] While a little dated, the basics are covered in an understandable text. Of particular interest is the first chapter, "Morality and the Law," which lists some of the major moral codes. These include the Native American Ten Commandments, the Judeo/Christian Ten Commandments, Ten Commandments of Unix, and an interesting set by Carl Sagan that includes the golden, silver, bronze, tin, etc., rules. The book continues with sections on technology, privacy, security, intellectual rights, social issues, soft-

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ware, virtual reality, and more. Since this is a textbook, it includes additional readings and exercises. The book is fast reading and mostly serves as a review or reminder of issues already known. Use this book for a review or for new employees who need a quick overview.

A Gift of Fire was written for students in computer science and those interested in computer technology issues, but it has a great deal to recommend to the general reader.[4] Issues covered include privacy, access to information, civil liberties, law enforcement, freedom of speech, control of content, and others. The author is pro-technology but recognizes there are problems: "The issues are relevant to being a responsible computer user (professional or personal) and member of the public who could serve on a jury, debate social and political issues with friends, or influence legislation."[5] If you don't watch crime shows or read techno-thrillers, you might not know how much of your life is monitored. Things like highway tolls, subway rides, store purchases, and face scans are recorded. There are both practical and ethical issues to this. Some of the examples are amusing (confusion caused by the same abbreviation used for a domestic house cat and a dachshund is funny), but others can be frightening (incorrect identification) or tragic (incorrect medical treatment). The organization of the book is very good with sidebars containing examples, reviews, exercises, good bibliographies for additional study, and pertinent Web sites. Recommended to read the entire book, but if time is an issue, at least read the chapter "Computers and Work."

Computers and Ethics in the Cyberage asks, "Is technology only a grouping of objects for human use—that is, 'value neutral'—such that any questions concerning the ethics of technology are, at best, misguided?"

As I said, one likes to know everything

The short (three pages) historical overview of computer technology and ethics in *Computer Ethics* highlights major advances and their implications to our technological world.[6] Chapters follow covering philosophical, professional, and online ethics, privacy, property rights, accountability, and social implications. Each begins with several scenarios or case studies that provide an interesting and realistic context for the chapter text. Since the book can be used as a textbook, study questions end each chapter. Additional readings and applicable Web sites are included. The book is excellent for basic information, but it is highly recommended for a discussion group. A chapter a week would provide the framework for two months of interesting, informative, and lively brown bag meetings.

Another critical selection, Baird, Ramsower, and Rosenbaum's *Cyberethics*, provides a collection of essays that discuss the topics of cyberspace and morality, anonymity, privacy, ownership and community, citizenship, and democracy.[7] As with other titles that follow this format, it is possible to select a few essays with more relevance to our professional needs. These include "Should Computer Programs Be Owned?", "Protecting Intellectual Property in Cyberspace," and "Intellectual Property in Synchronous and Collaborative Virtual Space." Yet all of the essays are informative, challenging, and applicable to some extent since we all live a significant part of our professional and personal lives in the virtual world. If time and interest allow, explore the two essays by James H. Moor, "What is Computer Ethics?" and "Toward a Theory of Privacy in the Information Age," Scanlan's "Does Computer Ethics Compute?", Sherry Turkle's look at the virtual self in "Who Am We?", and workplace privacy and the gathering of personal information as reviewed by Marie A. Wright and John S. Kakalik in "The Erosion of Privacy?". The book is fascinating and worthwhile reading that adds to the overall understanding of information ethics.

Computers and Ethics in the Cyberage asks, "Is technology only a grouping of objects for human use—that is, 'value neutral'—such that any questions concerning the ethics of technology are, at best, misguided?"[8] Is it a tool for good or harm? Hester and Ford edit this must-read anthology on the debate about information technology that proposes to "recognize the hyperbole, the politics, and the basic desires expressed on both sides of the debate. Once we get by this hype, then we are better able to ask the important questions concerning the impacts and underlying values associated with these technologies."[9] The selection of readings is excellent. Authors range from Howard Rheingold, Lewis Mumford, and Theodore Roszak to Kurt Vonnegut and Al Gore. The sections of the book are a look at computers and values, quality of life, uses, abuses, and social consequences, and evolving technologies. Each of the sections has an intriguing series of subtopics (artificial intelligence, hacking, privacy, alienation, developing countries). Individual papers are all worthwhile and challenging reading. Rather than highlight any particular articles, try reading one per workday and consider the points addressed and how they impact your work or personal life. Two months later the book will be finished but the impact will last much longer. One of the most highly recommended books of this column.

Sooner or later you'll tell me

The preface of *Computers, Ethics, and Society* provides an accurate description of the purpose and content of the

book.[10] "Too often, good people do things with computers that disturb other good people. Our ethical standards and social institutions have not yet adapted, it seems, to the moral dilemmas that result from computer technology." "Unlike computer technology itself, which quickly becomes dated or obsolete, essays on the ethical questions surrounding technological advancement can remain relevant for decades. These questions are always complex, requiring careful examination from historical, philosophical, and sociological vantage points." To understand these points the authors address "moral problems that arise due to computerization," "give students a deeper understanding of the nature of moral choices," and help them to "understand the social, economic, legal, and cognitive effects of technology."[11]

The following twenty-four essays cover philosophical ethics, professional ethics, and historical, cultural, and social contexts. These are reprinted from a wide range of original sources, including the Institute of Electrical and Electronics Engineers (IEEE), Association for Computing Machinery, National Academy of Sciences, and a number of books and journals. There is not one essay that is not worth reading, though they can be very challenging. The authors freely refer to philosophers, pioneers of computing technology, and milestones of technological advances, sending the reader to other reference resources for clarification. However, readers will be both better informed and most likely curious enough to continue to investigate these issues after reading the book. While it is recommended that all essays be read, if that is not possible, there are a few that stand out. Read "Using Computers as Means, Not Ends," "Technology Is a Tool of the Powerful," "Informing Ourselves to Death," "Why the Future Won't Need Us," "Gender Bias in Instructional Technology," and "Activism, Hacktivism, and Cyberterrorism," and see if that doesn't encourage you to read the rest. References and URLs for additional readings are included.

Written for both students and professionals in public sector management, *Social, Ethical and Policy Implications of Information Technology* is worthwhile reading.[12] While not directed at libraries (the word library is not in the short index) much of the book is pertinent. Some chapters obviously have an impact on the libraries. These include "'Digital Orphans': Technology's Wayward Children" on technological obsolescence, "Copyright Law in the Digital Age," and "Compliance with Data Management Laws." However, even when not directly related to our work, many of the chapters provide the broad perspective and detailed information needed to understand the intertwined issues of the new technologies and the networked world around us. The section on ethics itself could earn this book its place in this bibliography. Take a close look at "A Contrarian's View: New Wine in Old Bottles, New Economy and Old Ethics—Can it Work?", a historical look at change and ethics in which Jennings states, "We have been here before and can simply put this new technology into an old framework of values and still enjoy progress, but with the peace of virtue."[13] She concludes with "these new ideas just need to be bottled more carefully, along with the wisdom of age and experience."[14] Another must-read is the concluding chapter, "The Central Problem in Cyber Ethics and How Stories Can Be Used to Address It," that notes "the central problem in Cyber Ethics is: how do you establish ethical standards in a professional field that is defined by a rapidly evolving technology where the consequences of the technology and the impact of any ethical standards cannot be known in the time frame in which the standards must be established?"[15] He answers this question with stories, an interesting idea applicable for both the instruction librarian in the classroom and for staff training. A fascinating series of essays, this book is highly recommended.

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Into this long list of books that are recommended as a must-read, *The Social Impact of Computers* should be added.[16] Computers are now so integrated into the lives of so many that it might be easy to overlook how they impact our society. Rosenberg has provided a long, thorough book that investigates this integration, covering computers and the arts and imagination, medicine, crime, government, employment, business, intellectual endeavors, and more. Each chapter begins with an interesting quote and ends with additional references and Web sites. In between is a text that is easy to read and very interesting with examples from a number of sources. No matter how widely read you are in the field, you are sure to learn something of value in this book—and enjoy doing it. Take the time needed to read this extensive book.

How should cyberspace, that bastion of laissez faire be governed? Should it even be governed? Hamelink states he believes "the governance of CyberSpace should be driven by compassion for humanitarian concerns."[17] He argues that traditional ethics do not apply here. The last five chapters begin with a quote from the Universal Declaration of Human Rights and cover topics about decent society, equal entitlement, risks and security, free speech, and knowledge and democratization, all within cyberspace. Well-referenced, Hamelink's book presents important ideas in a detailed, scholarly treatise. It provides an amazing amount of information and enough issues to ponder for many weeks. If it is accepted that traditional ethical rules are not adequate for Internet use, nor will they suffice for the growing role of

cyberspace in our lives, then a new ethical framework is crucial, and Hamelink provides a place to begin the study and discussion. Very heavy reading and not directly applicable in our everyday life, *The Ethics of Cyberspace* is recommended for those very interested in the topic or desirous of reading a fascinating treatise by one of the most respected scholars in the field. It will be worth the effort.

What gives you the right to poke your nose into my private business?

Three articles from the journal *Ethics and Information Technology* provide an informative overview of computer ethics past, present, and future. The five minutes it will take you to read "Computer Ethics: Its Birth and Its Future," are well worth it, as Bynum provides over sixty years of major ideas in computer ethics.[18] For example, he quotes one computer scientist as saying "that when people entered the computer center, they left their ethics at the door."[19] The article, "Computer Ethics: Future Directions," provides a good overview of the status of computer ethics with everyday examples to illustrate its points.[20] Subjects covered include privacy, data mining, employee monitoring and equity issues. Concerning computer ethics Weckert states, "Simultaneously there must be a closer liaison between theoreticians and practitioners. Computer ethics without theory is mere consciousness raising–useful but not sufficient on its own. Theoretical studies remote from professional practice can be mere intellectual exercise, again useful, but insufficient if they do not engage in real-life issues. If computer ethics is to be taken seriously and is to affect real life, there must be a rigorous and theoretically sound examination of practical problems, and it must propose answers within the parameters of the available technology."[21] Rounding out the trio of articles is James Moor's "The Future of Computer Ethics: You Ain't Seen Nothing Yet!" which reminds us that good policies are needed with reasonable justifications.[22] "Computer ethics has to draw on traditional ethical concepts of justice, rights, informed consent, etc. for it to be understood and effective as a field of applied ethics. And yet the application of ordinary ethical notions to computing may do as much to adjust and fine tune the meaning of the ethical concepts as to control computing technology."[23]

As would be expected with this topic, there are a number of Web sites. Ethics in Computing is administered by Dr. Edward F. Gehringer at North Carolina State University.[24] It provides a very usable interface to information on privacy, commerce, social and justice issues, speech, computer abuse, risks, and intellectual property. EthicsWeb.ca has a long list of links on computer ethics, as does the Electronic Frontier Foundation's Computer and Academic Freedom page.[25] Bookmark all three.

A historian who becomes Dean of Undergraduate Education and Student Affairs at MIT, Rosalind Williams admits in *Retooling* that she brought a different perspective to the job.[26] This book is based on her observations of the computer culture at one of the great technological universities of the world. She states, "The point of the book, however, is not to describe MIT, but to use MIT as a local example of a larger society devoted to technological innovation . . . Technology-driven change also defines, in a way unprecedented in history, human desires, anxieties, memories, imagination experience of time and experiences in space."[27] Part history, part sociological treatise with a dash of personal story, *Retooling* is a human look at our technology and our world. Nothing in the book will have a direct influence on helping us do our jobs better. Instead, it might make us better people and users of technology as it provides many ideas that will cause us to put the book down and think, gazing into the distance and stretching our minds before we pick it up again. Take the time to read this treasure.

Each of these books, articles, and Web sites will provide a challenging view of the ethical implications of our use of computers and the Internet. They remind us of our interconnections and of the possibilities that our activities have some affect on others. They remind us that we are not alone. We are, to a large part, exposed to many other individuals, often without even realizing it. While we have not been dragged physically away from home and friends to a strange village that we can't escape, and we have not been stripped of name and identity, there are aspects of our networked life that mirror the reality of *The Prisoner* in a virtual way. How much of our persona is debriefed, changed, filed, and indexed may not be known. However, this is an important issue–both for practical and for ethical reasons. Better understanding is necessary. We'll continue to look at this in the next column.

Author's note: Headers taken from The Prisoner.

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