

Editor's Comment

As I start my third and last year as Senior Editor of the *MIS Quarterly*, a matter of personal regret has been my inability to stimulate a flow of articles and manuscripts relating to the broader societal issues of the Information Age. The sole paper appearing in the *Quarterly* dealing with these issues in the past two years was Dick Mason's "The Four Ethical Issues of the Information Age," March 1986, Vol. 10, #1. The literature search for a research project I recently began revealed this was not simply an *MIS Quarterly* issue, but a much broader one. The literature of the 1980s has been quite silent on these topics. [Two notable exceptions are: the work done by Professor Deborah Johnson at Rensselaer Polytechnical Institute leading to her 1985 book, *Ethical Issues in the Use of Computers* and her course, *Computers and Ethics*; the other, the panel organized by Professor John King of the University of California-Irvine at the 1987 International Conference on Information Systems, "Information Technology and the Future of Democratic Government in the United States."]

A subset of these topics that I consider particularly important is the new technology's expanded potential for monopolistic or abusive intrusive behavior.

The societal implications of this topic were extensively studied in the United States during the period 1970-1975. This led to the Privacy Act produced by the House of Representatives in 1974, and the very thoughtful report of the Linowes Commission in 1977. Since that time, however, the topic has largely disappeared from the public agenda, although ironically the technology is vastly more powerful and intrusive today than it was when these topics were first considered. Table 1 catches some of the critical differences between today's world and that of 1977 in this arena.

Table 1. A Changing World

	1977	1987
Interest in Privacy — Professionals USA	Medium	Very Low
Interest in Privacy — Professionals Europe	High	Very High
USA Public Interest	Very Low	Very Low
Information Monopoly Interest	Very Low	Very High
Technology	Mid-size Hierarchical Databases	Very Large Relational Databases
Software Copyrights/etc. Interest	Medium	Very High
Technology Intrusiveness Ethics, Monopoly, Privacy	Medium	Very High

It is an inescapable responsibility of the developers and promulgators of a new technology to rise above the details of the technology and attempt to both assess and shape its likely impact on society. Clearly, social scientists can contribute much to this dialogue; but they come at the problem from a different perspective, often lacking detailed insight into what the technology can and cannot do, and its likely evolution. In another arena, the nuclear scientists in the 1940s and early 1950s constructed a technology of vast destructive potential. During that period, they exhibited only modest concern for how this technology was going to be used and its full societal ramifications, both short term and long term. Over the past 35 years, however, they have been at the very forefront of concerned groups and have contributed in very special ways to shaping the dialogue on its impact.

For the most part, similar attention has not been raised by the MIS community to the broader societal impact of their technology, although what we are doing claws at the very fabric of society. Increasingly, an arena of issues has emerged which is being ignored. The MIS researcher must add a broader societal

dimension to his or her research agenda. Clearly, social scientists also have their special, but different, contribution to make in this area. Society, however, will be better served by a partnership between the two groups. These issues are also important to the business practitioner. Awareness of the broader dimensions of the practitioner's efforts helps the practitioner avoid both inadvertent damage as well as financial damage to individuals and organizations. The asbestos problems of the 1980s are an example of the long maturation period for some of these problems.

The time for such a review in the MIS field is now particularly appropriate.

1. These aspects of the field have remained essentially unstudied for the past decade, during which time a 15-fold improvement has occurred in the cost effectiveness of the technology. Both company experience and the art of the possible technology changes suggest creation of new problems and new ways to think about old problems.
2. The USA institutions and practices in this field are clearly at variance with those of Western Europe (where much more attention has been directed to the topic). The European experience is useful for us to understand.
3. Previous work on these issues has been from the perspective of individuals, government agencies and lawyers. The issues need examination from the perspective of the businessman.
4. Such a humanistic study of the field's issues is important both for the field's development, the development of young scholars, and improved educational programs.

There are many ways to organize the issues in the field. After some considerable contemplation and with no conviction that this is the right one, the following scheme is offered.

1. *Privacy* issues *external* to the firm. This includes topics such as: what data can be shipped to outsiders; the originating organization's responsibility for accuracy of this data; the right of inspection by the individual, etc.
2. *Privacy* issues *internal* to the firm. Today's online databases, electronic files, etc., raise new and important issues for how business can and should be conducted internally. For example, should individuals have privacy of files from their bosses?
3. Information as a new *monopoly*. Existing USA anti-trust laws flowing out of the 19th Century are designed to produce a level playing field for competitors. The examples posed by airline reservation systems and IVANS suggest that new types of monopolies have been created by today's IOSs and expensive software development economics.
4. Property rights to software, patents, copyrights, intellectual property, etc., are all knotty problems.

The following paragraphs elaborate on the first three of these topics. The subject of property rights is sufficiently different that its discussion will be deferred to a later editor's comment.

Personal Privacy

A critical cluster of issues focuses around personal privacy and what constitutes a violation. In thinking about this, there is constant tension between the civil libertarian view and the notions of societal protection costs and efficiency. This topic can be usefully divided into a discussion of issues external to the firm and internal to its operations.

External

This action raises the question of what type of files firms should keep. Should the filee be notified that such a file exists? People who say "no" pin their defense heavily on the fact that people "know what is going on." The reality, however, is that often they have no idea.

Passing data files between organizations is a complicated issue. If they can be passed between organizations, should it be done only with the advice and consent of the individuals involved? Can individuals object and stop the transfer? A thornier issue relates to the type of files involved. For example, should we think differently about employee personnel files complete with performance assessment data vs. private customer files which show buying and lifestyle performance vs. credit files which highlight one's abilities to meet financial obligations, etc.? Should files maintained by the government, which in the past could be inspected, still be openly accessible? Paper files in the Town Hall showing one's tax bill and purchase price for a home were relatively benign data. When the same files are cast into electronic form and are cross correlated with other files (both public and private) it suddenly becomes much more intrusive. Should we think differently about how government agencies approach this problem vs. how firms in the private sector approach it?

Do issues change when dealing with files on groups? Is there a difference between the notion of group privacy and individual privacy? Conversely, is a vendor using a group mailing list to sell a product providing a value added service to the group or alternatively executing an unwarranted intrusion? Is it appropriate to monitor a person without notifying that person that he or she is being monitored? For instance, automobile engines now record driver performance data. Not only does this facilitate better diagnoses of car performance (for maintenance work), but also provides clear insight on driver misbehavior, thus indicating why a warranty should not be honored. How should we think about "big brother in the car?"

Internal

Issues regarding the use of data inside the firm are also troubling. Under what circumstances is an employee allowed to keep personal files totally confidential? Are there differences in handling confidentiality between one's peers and one's boss? Should one's boss be able to browse through one's personal files at leisure?

Accuracy

Associated with both the issues of internal and external privacy is the question of liabilities regarding inaccurate data. Under what circumstances should organizations bear responsibility for the dissemination of erroneous data? Should data received from other organizations be handled in specific ways to ensure that if a mistake is identified in the data, it can be quickly corrected? Can we define procedures which can be effectively enforced? How does the accuracy issue vary depending on the type of data? Are employee medical data, credit data, and customer buying behavior data, equally damaging if incorrect, or can we articulate clear gradations?

Monopoly

A third cluster of issues flows from the potential of today's technology to create new kinds of monopolies in an "Information Age."

- Can the handling of information be construed to unfairly control a channel? Airline reservation systems pose troubling questions in this area.
- Is it appropriate to allow small players to pool their purchasing power and develop a coordinated approach to channel control to counter the moves of the major firms? If not, are these firms doomed in some industry settings?
- Can we talk sensibly about these issues in advance or are they so heavily situationally dependent that only a limited number of generalizations can be addressed today?

Are we dealing with the Information Age's equivalent of Standard Oil in the 1880s?

- What is the frequency with which these issues will arise? What settings are most likely potential problem areas? Can we identify patterns that can be discussed in advance?

Property Rights

The issue of intellectual property rights and pragmatic ways to protect and defend them are thorny. To date, this field has been the special province of lawyers. However, these are practical problems to protect both the developer and user. For example, software developers' rights have been carefully studied, and efforts have been made to ensure their interests are protected. The problems and issues faced by the users, where whole operations and viability may come to depend on this software, have been less carefully studied. These administrative issues, as opposed to the purely legalistic ones, need more careful analysis.

This somewhat extended Editor's opinion is offered with the hope that it will both stir some discussion and controversy, but more important, stimulate a broader agenda of research.

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As of December 31, 1987, Jack Ahlin, John Bennett, Daniel Couger, Mary Culnan, Daniel Robey, Dennis Slevin, Ananth Srinivasan, and James Stuber completed their three-year terms as Associate Editors of the *MIS Quarterly*. I want to take this opportunity to thank them for the many hours they have expended in the vital function of manuscript reviews and preparation of detailed feedback to the authors. I am pleased to announce the appointments, effective January 1, 1988, of the following new Associate Editors: Maryam Alavi, Michael Ginzberg, Jeffrey Hoffer, Lynne Markus, Jon Turner and Jim Emery.