

National Information Policy: An Insider's View

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Scope of the Paper and Framework

THIS PAPER PRESENTS one individual's view of national information policy in the United States. The paper is not intended as a comprehensive review of information policy; rather it is intended to provide a personal view from someone who has been interested in information policy since 1962 and has had the pleasure of playing a small role in helping to shape it for many of those years. The discussion concentrates on U.S. policy activities within the last decade.

This paper presents a series of trends to set the background and content for a discussion of information policy; discusses the 1976 *National Information Policy (NIP) Report*; reviews clusters of policy issues, including some recent activities of key players; and concludes with a discussion of the implications of policy developments for the library and information community.

Information and Society

In "Information and Society," Edwin B. Parker contends that there are

three basic factors making up our new, largely manmade environment, and hence determining the quality of life. The first is matter,

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the second is energy, and the third is information. The three factors are related....Investment in the production of information (creation of new knowledge) and investment in widespread distribution of knowledge (e.g., through education) may be the only way to permit continued improvement in the quality of life without large increases in consumption of matter and energy.¹

He argues that all of society's expenditure on science, technology, research, development, and discovery in all fields can be viewed as investment in the production of knowledge. He further argues that:

Similarly, all of society's expenditures on education, broadly defined, can be viewed as investment in the distribution of knowledge²....In order to identify the information needs of society, both the information needs of individuals and of society as a whole must be included.

Therefore, when viewed from the perspective of the society as a whole, the social need for information may be greater than the aggregate of the individual needs (or demands).... Thus, a careful analysis of the information needs of the society should also include an examination of the importance of investment in both generation and distribution of information as a means to productivity gains in the U.S. economy....Pessimists may argue that the views of the economic expansionists and the stability-seeking conservationists are irreconcilable. That debate is likely to continue for the rest of this century. But, social investment in information resources in this decade may be the key to eventual reconciliation.³

All policy work should begin with a careful examination of both individual and societal information needs so that policies developed take into account the needs and concerns of the citizens and the society the policies are meant to govern. Of course there are many different needs and these needs are often in conflict with one another. Institutions may pull one way and individuals—or other institutions—another, resulting, for example, in conflicts between a desire by some to provide unrestricted access to most information and a wish by others to restrict access to protect national security or proprietary interests. Policy determination is best described as a question of balance—balancing among concerns and interests. Understanding these concerns, needs, and interests is critical in developing sound policies.

Trends

Influencing individual and societal information needs are changes in U.S. society itself. A brief overview of some of the trends emerging over the last decade provides insights into the information issues resulting from these trends. Dramatic changes have taken place in the United States since the 1960s and, as a result of these changes, several trends are

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clear. These trends relate to population shifts, technological developments, economic factors, changes in the information profession itself, and a renewed emphasis on consumer interests.

Population Shifts

The U.S. population is becoming older, more ethnically diverse, and is shifting geographically. As an article prepared for the U.S. National Commission on Libraries and Information Science⁴ points out, by the end of the decade over 31 million people in the United States will be aged 65 or older. The 1980 census indicates that the four major cultural minority groups in the United States are (1) Black, (2) Hispanic, (3) Asian and Pacific Islander, and (4) American Indian, Aleut, and Eskimo. By the year 2000 almost one-third of the total U.S. population will be composed of these groups.

Another population shift has been geographic, from North to South and East to West. Of the net population expansion during the 1970s, 90 percent took place in the Southern and Western states. Most of this migration was from metropolitan to nonmetropolitan areas. The most rapidly growing counties in the United States are the nonmetropolitan areas in the West. The growth of small towns and rural areas is expected to continue throughout the 1980s with the majority of this growth taking place in the Sun Belt.

These population changes bring with them new and different information needs, such as needs for publications in languages not previously included in databases and library collections and requirements for the integration of technologies to deliver information in new formats to rurally remote areas.

Technology Developments

The most dramatic trends relate to technological developments and concomitant increases in the ease of violating protection of intellectual property or violating privacy. The cliché, "knowledge is power," has taken on new meaning with the increased ability to tap vast databases of information about individuals and organizations. Technology also permits the storage of huge amounts of information, increased ease of manipulating and managing it, and greatly improved delivery mechanisms. These developments have improved society's ability to share resources and to link local area networks to larger national and international networks.

An important related trend is that the perceived center for networks is shifting from networking organizations to the individual's work

station; this shift has important economic implications such as the widening gap between information haves and have-nots.

Economic Factors

Economic trends include increasing budget deficits, international trade imbalances, and a growing awareness of the importance of information resources in the economy. With the financial difficulties facing the country coupled with the large portion of the gross national product (GNP) derived from information-related activities, more attention is being paid to information as a valuable resource. The trade imbalances and increased concerns about the need to protect technological information for the nation's defense have led to moves toward protectionism and restrictions on the dissemination of information. In recent years, policymakers within the U.S. government have disagreed over what information should be restricted and what should be disseminated.

Related to this is disagreement over the appropriate role of the government in gathering, managing, and disseminating information. A recent trend has been toward an increasing privatization of information activities previously considered to be inherently governmental. In a recent article, Reinhardt Krause notes:

Balancing the traditional role of government as the collector, organizer, and disseminator of information with the functions of a \$13 billion private industry growing 20 percent annually is getting harder these days....One of the things clear, though is that government is getting out of the publications business. What analogies are appropriate between cooperative agreements instituted with depository libraries with printed material, and what might be necessary now with "on-line" information in a different age needs to be examined.⁵

The current trend in Washington is to increase reliance on the private sector through contracting out of services or by turning activities completely over to the private sector.

The Information Profession

These economic developments are having an impact on the information profession itself. The information profession is changing as the discipline—currently in a period of transition—breaks down into new specialties and combines with other disciplines. In addition, both the public perception of the role of the information professional and the added demands of the job are putting new pressure on educators, employers, and all information professionals to change curricula, improve continuing education, and develop new recruitment programs. With these changes has come an increased awareness of the

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importance of the information profession and the need for heightened attention to ethical issues such as the protection of privacy.

These trends are expected to lead to a stronger role for those information professionals and graduate schools who can survive—and hopefully thrive—under the increased demands placed upon them. We can expect to see continued attention paid to discussion and perhaps the development of a code of ethics for the information profession.

A related trend is the reshaping of the education system for the information profession. Some graduate library and information science programs have shut down; others have dramatically changed their curricula and faculty. Graduate programs in business, computer science, and other disciplines have moved into the information field. A reexamination of the accreditation process is underway. Links are being made with related professions such as records management, archives, business, and data processing. Continuing education programs are becoming more varied and, in some cases, highly competitive with one another. Studies have recently been completed on the competencies needed by information professionals in the years ahead. All of these factors point to dramatic changes in the education of information professionals in the future.

Consumers' Interests

All of these trends relate back to the information needs of individuals and of society as a whole. Emerging from them is a renewed emphasis on the protection of the consumers' interests. Recent suits, such as the Dalkon shield case and the possible relation between aspirin and Reye's syndrome, emphasize the importance of information in health. Information products and services play a critical role in providing information that consumers need to make decisions and in insuring that the effects of products on individuals and society are known and disseminated. We can expect continued demand for information to help individuals make decisions, govern society effectively, and enhance the quality of life.

These trends—population shifts, rapid technological developments, economic factors, changes in the information profession, and a continued emphasis on protecting consumers' interests—have raised a number of issues and have increased the need for information policies.

The National Information Policy Report of 1976

In reviewing the literature since the 1960s, it becomes clear that many, if not most, of the questions and issues raised in the late 1960s and

early 1970s are still facing us today. Also, most of the questions remain unanswered.

First, of course, is the frequently asked question, "Do we need A NATIONAL INFORMATION POLICY, a national information policy, policies for the dissemination of federal information, or none of the above?" The answers are as diverse as the questions. The Rockefeller report on National Information Policy published in 1976 by the U.S. National Commission on Libraries and Information Science, pointedly declares:

To debate whether there should be a national information policy is pointless. There will be such a policy....It will exist whether or not these questions [raised in the report] are arrived at consciously or unconsciously, by commission or omission, carefully or haphazardly, in a comprehensive or in a piecemeal fashion.⁶

We already do have some policies, such as the First and Fourth Amendments to the U.S. Constitution, the Office of Management and Budget (OMB) Circular A-76 which stresses the need for government agencies to contract with and to rely upon the private sector as much as possible, and the Paperwork Reduction Act (Public Law 96-511) which has had a major impact on the gathering, production, and dissemination of government information. Also, the recent OMB Circular A-130 on the management of information resources provides another major set of policies. National and international information policies have been developed and continue to be developed in a piecemeal fashion, some by legislation, others through executive orders, and yet others through circulars, regulations, and guidelines established by individual agencies.

Information policy has a wide range of connotations to different people. As the *NIP Report* notes:

All of them, however, have one thing in common—they deal with the policies which govern the way information affects our society. To the Federal Communications Commission information policy may mean policy dealing with the regulation of information messages over common carrier facilities; to the Justice Department it may mean policy with respect to the implementation of the Freedom of Information Act; to the National Science Foundation it may mean policy concerning the communication of research results to the scientific and technical community in the public and private sector; to the library community it may mean policy with respect to postal rates for the distribution of books throughout the country; and to the businessman it may mean policy affecting the information reporting requirements imposed by federal and state governments.

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Although the term *information policy* can have different connotations, the various perspectives which are brought to it are all part of a common family of interdependent and intersecting interests. It is this larger context and the expectation that information policy issues will become more pressing in the future which compel a national information policy. The interrelationships which exist between and among information communications, information technology, information economics, information privacy, information systems, information confidentiality, information science, information networks, and information management have signalled the need for a broader, more comprehensive approach to the problem.⁷

The *NIP Report* reviews five clusters of issues: (1) government information collection, transfer, and dissemination; (2) information in commerce: a resource for public good and private gain; (3) the interaction between technology and government; (4) international implications of information policies and developments; and (5) preparing for the information age. A decade later, most of these issues are still unresolved. The report also recommended the establishment of an Office of Information Policy in the Executive Office of the President, but this recommendation was never implemented.

Although no single agency or office exists to develop and implement a single national information policy, over the last decade considerable attention has been paid in the development of policies.

An Overview of the Issues and the Players

A review of some of the major issues makes it clear that the issues are complex, diverse, and strongly interrelated. The issues can be divided, somewhat arbitrarily, into four areas: technological, economic, socio-cultural, and political.⁸

Technological Issues

Technological issues involve those related to the hardware itself or to issues brought about by the hardware. For example, international negotiations about geostationary "parking orbits" for communications satellites or the allocation of spectrum frequencies relate directly to the hardware. The development of international standards to use the technologies raises important related issues such as whether some standards favor certain nations or restrict competition.

Technology has made it much easier to gather and disseminate information, but it has also created new problems in protecting privacy and proprietary or national defense information. Because television

signals and data are easily beamed via satellite, methods are also needed to protect these signals from piracy and to encrypt data.

In the United States, billions of dollars are being spent to develop encryption techniques and protect data and to develop the technologies needed both to disseminate and to protect information. Questions have arisen concerning whether companies previously forbidden from certain types of discussions under antitrust laws should be permitted to collaborate to build new generation computers. Some recent policy decisions have been in the affirmative. The impact of the major policy shift resulting in the divestiture of AT&T continues to be significant resulting in new competition, increases in telecommunication costs for library and information networks, and changes in the U.S. telecommunication system. We can expect technological developments to continue to raise information policy issues in the years ahead.

Economic Issues

All information policy issues have economic implications because of the value of information and because of the importance of information management and technology for increases in productivity and in improving the quality of life. The fundamental question is "Who pays?" Increasingly large portions of the U.S. gross national product (many estimate nearly half) are derived from information-related activities. The higher the proportion of a country's information that is stored and managed outside its borders, the greater the loss to the country of jobs and revenue generated from the information-related activities. Although we have no adequate statistics on the world and U.S. markets for information industries, trends from available data indicate that: (1) the sector has grown enormously and has tremendous potential for continued growth; and (2) competition for U.S. and world markets continues to be fierce.

The United States is losing the trade balance with its competitors. For example, in 1983 exports of communications equipment and electronics components from the United States were \$11.8 billion, and imports were \$19.1 billion. In 1984 the consumer electronics industry represented \$40 billion and 1.5 million jobs in the United States. Estimates of the size of the total U.S. information industry in 1985 range from \$200 to \$300 billion. Clearly this is a sizable industry with great implications for the world's economy.

The economic dimensions are significant and raise a number of issues such as those concerning the need to protect intellectual property, whether trade restrictions are needed, and determining the appropriate roles of the government and the private sector (both for-profit and

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not-for-profit) in the life cycle of information. Discussions of the appropriate roles of the various sectors have taken place for several decades in the United States. NCLIS issued a major study on this topic in 1982.⁹

In December 1985, the Office of Management and Budget issued Circular A-130 on the management of information resources. This circular, which includes a number of basic assumption statements, seeks to establish broad policies for the entire life cycle of information from gathering or creation to dissemination. Many consider it to be the single most important information policy document since the Paperwork Reduction Act. Comments on an earlier draft came from more than 350 individuals and agencies with more than half from librarians and several from members of Congress.

The circular seeks to strike a balance between protecting the citizen's right to access and a desire to provide information in the most cost-effective manner. The Government Printing Office (GPO) also has responsibility to insure that government information is disseminated. At the time this article was written, staff at GPO and the U.S. Congress' Joint Committee on Printing were drafting guidelines for executive branch agencies on the depositing of publications in depository libraries. Differences of opinion between the executive and legislative branches over the definition of a publication and possible disagreement over roles and responsibilities will have to be resolved. It is clear that increased attention will be paid to determining the government's responsibility for the entire life cycle of information.

Increased attention is also expected to be paid to questions of foreign competition. Decisions by countries to restrict trade and to support research and development aimed at focusing efforts and leapfrogging technology to dominate the market have resulted in regulatory controls on telecommunications and information activities, protectionist trade barriers, and government funding in cooperation with industry for research and development (R&D). These activities are being watched closely within the United States. The 1985 decision by the Department of State to establish a Bureau of International Communications and Information Policy within the department reflects the increased attention paid by the administration to these concerns. Among possible U.S. efforts in this area, we can expect to see attempts to work with individual nations and international groups to remove trade barriers and improve reciprocal trade and efforts to enhance the competitiveness of export firms perhaps through tax credits for research and development, export tax credits, or increased federal support for R&D in high-risk areas.

Economic issues are expected to receive even greater attention in the months ahead.

Sociocultural Issues

Although many of these issues are international, they must also be dealt with as national issues. When a country's data reside outside its boundaries, national regulatory efforts cannot reach the data and the absence of bilateral or multilateral agreements prevent control by the country over its own data and may limit its return on demand. Such a situation could threaten national sovereignty or even national security. In many countries information products and services have been strongly nationally oriented; the diversity of languages, alphabets, classification schemes, and approaches to organizing information are usually considered assets. Efforts toward uniformity of data storage or the perceived dominance by some countries may be viewed as threatening to national cultural identification and self-images. For example, a proliferation of television programs and advertising from one country may be seen as a threat to another country's culture.

Unrestricted data flows and the location of a nation's data outside its borders lead many nations to fear that they may not have access to their own data when the nation needs them and that the country's cultural heritage may be in jeopardy. Related to these concerns are questions of the preservation of intellectual property rights, privacy issues, and concerns with assistance programs by developed countries for the less-developed nations and their "terms of modernization." The protection of intellectual property and privacy rights has become increasingly difficult because of the power to violate these rights offered by technology. Several ethical issues have been raised concerning the responsibilities of the information profession and are being discussed at conferences of professional societies such as the American Society for Information Science (ASIS).

Determining the kinds of programs for aid needed by less developed countries is equally difficult. Many advanced technologies are unsuitable to meet the needs of developing countries, and databases often have a national cultural bias. Also, shortages of trained experts to implement new programs, the requirement of high capital investments, and countries' concerns about being "locked in" to another country's technology and support requirements all exacerbate the problem of identifying and implementing aid programs.

A final sociocultural issue area relates to the education of information professionals. Determining what our future colleagues need to

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know to perform successfully as information professionals is very difficult. Several efforts are underway in the United States to define competencies and the resources needed for educational programs. The issues concern who should determine the competencies, what they actually are, and who is responsible for education and training. The United States continues to address these problems and to seek bilateral and multilateral solutions to them.

Political Issues

All of the issues discussed earlier, of course, have political aspects. In addition, other major political issues relate to equity of access, especially by developing nations; to information, disinformation, and propaganda as tools of national policy; and to national security functions. Equity of access is one of the most significant issues facing us today. One futurist has predicted a recolonization of the world based on access to information; information-poor nations will be linked with and increasingly dependent on information-rich nations. The concern is also that those who can find and use information effectively will have great power over those who cannot leading to further inequities in society.

The potential of information and communications technology to create a global communications network is being realized but with the network comes awareness of a conflict between the information ideologies of the developed nations (often conflicting ideologies) and those of the developing nations. Many developed nations advocate the unrestricted broadcast of most information across national boundaries along with the unrestricted access of a private press to all parts of the world with uncensored reporting of whatever the private press wants to report. Recently we have seen some questioning of these principles by the governments of some developed nations. Most developing nations also appreciate the value of information technology yet may wish to maintain some control to avoid an inundation of broadcasting over which they have no control. In part this concern derives from a feeling that reporting is biased and may reflect "developed-nation imperialism." The debate between the need for a "New World Information and Communications Order" and the need for a firm stand against control of the press is likely to continue in the near future.

National security issues have placed the United States in a bit of a quandary. Although we champion the unrestricted flow of most information, we find ourselves being asked to restrict certain kinds of information, particularly technological information identified as being of strategic importance. Senior officials from the Department of Defense

may disagree with those from the Departments of Commerce or State, or with the academic community on determining what information should be disseminated.

Related to this issue are the problems of encryption for secure networking including the availability of encryption and decryption programs and the setting of related standards. Some data must be protected to insure privacy, protect proprietary interests, or safeguard national security. Determining what should be protected, from whom, and how are important issues to be resolved in the years ahead. This overview highlights some of the major information policy issues confronting us in the future. Other articles in this volume deal with some of them in greater detail.

Implications for the Future

Some of the implications of these issues have been discussed earlier, in particular the need to examine and resolve these issues, the changes in the information profession itself, the dramatic developments in education, and the need for a code of ethics. Information professionals will be called upon to take the lead in these areas and in developing policies. Although many policies have been developed, other policies and perhaps changes in current policies, are needed. In this author's personal opinion, a single National Information Policy is not desirable. Policies for all phases in the life cycle of *government* information are needed.

Determination of these policies must begin with a clear definition of what kind of information is covered by the policy. The NCLIS Public Sector/Private Sector Task Force developed the somewhat awkward but correct phrase *governmentally distributable information* to mean:

Information brought together for governmental purposes from information in the public domain or within the scope of "fair use," or owned by the government itself, or that the government has obtained rights to distribute, or that is distributable under the Freedom of Information Act, subject only to the statutory limitations (such as national security, personal privacy, etc.).¹⁰

This distinction is critical to insure that information to which access must be restricted—such as personal information about an individual—is treated differently from that which can and should be made widely available.

In describing the possible content of information policies, the *NIP Report* offered a series of principles as a starting point for debate:

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- Encourage access to information and information systems by all segments of society to meet the basic needs of people, to improve the quality of life, and to enable the responsibilities of citizenship to be met.
- Safeguard the use of personal information about individuals and protect their right to personal privacy.
- Encourage systems that foster the creation and dissemination of knowledge.
- Maintain adequate control over the power information provides to government either through checks and balances, through diffusion of control, through decentralization, through federal/state consortiums, or by other means.
- Encourage efficient resource allocation in the development of introduction systems and efficiency in their use through consistency in standards, practices, and procedures, and through encouraging quality and accuracy.
- Maintain pluralism in information systems and strengthen the private sector so that, through competition, innovation can be encouraged.
- Adopt rules which will have some permanence and general applicability so that the private sector will be encouraged to invest in new systems and methods.

Given a clear definition of what information is included, these principles could still serve today as a good starting point for debate. Many will question the need to strengthen the private sector. The question of the appropriate roles and responsibilities of the private sector (both for-profit and not-for-profit) and the government, at all levels—federal, state, regional, and local—deserves much greater attention and debate. In addition, many other principles should be added to this list.

Conclusion

What should information professionals do about information policy? First, become familiar with the issues; read about them; and discuss them, especially with people from different viewpoints. Second, information professionals should make their views known to policymakers, members of Congress, industry leaders, and others who are developing policies. Third, information professionals should work on the actual development of policies. Expert advice from information professionals is needed; and policies will be developed with or without the participation of information professionals. To have effective, realistic policies

requires the active participation of knowledgeable information professionals from all sectors.

Note: The comments reflect the author's own views and do not necessarily represent those of the U.S. National Commission on Libraries and Information Science (NCLIS) or the U.S. Government.

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