Computers and Privacy in the Next Decade

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To Lara

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Preface

Alan Westin has characterized three phases of awareness and action on the privacy/data bank issue: the early warning phase, the study phase, and the regulatory phase. I would like to suggest that these phases are parts of a series of historical waves.

The controversy over the proposed national data bank in 1967 was one of the first events in the early warning phase of the first wave. We then moved on to the study phase, and here the most notable reports were those of the National Academy of Sciences Project on Computer Data banks, the Report of the HEW Secretary's Advisory Commission on Automated Personal Data Systems, and the report of the Privacy Protection Study Commission.

The study phase overlapped the regulatory phase, where the most significant actions so far have been the passage of the Privacy Act of 1974 and the new executive branch initiatives on regulatory action.

At the same time, we are in the early warning phase, historically, for the next wave; its herald is the inexpensive microcomputer system.

We have learned a lot about computers, organizations, and privacy in the last decade; hopefully, we shall be able to take advantage of some of our past experience in facing up to the challenges and problems that will arise in the next decade. It remains to be seen whether computers are any different than automobiles or nuclear energy with respect to unanticipated effects or the problems involved in putting a new technology into place.

The material presented herein is the product of two meetings supported by National Science Foundation Grant MCS 78-25753 to the American Federation of Information Processing Societies. The goals of the project are to highlight the most pressing issues in the field and to suggest creative methods of attack on the research issues involved. Special thanks are due to Dr. Fred Weingarten, then at the National Science Foundation, for his foresight and encouragement in sponsoring this work.

Contents

List of Contributors and Participants xi

Preface xv

I
A Privacy Agenda for the 1980s

A Research Agenda for Privacy in the Next Decade 3
Lance J. Hoffman

II
Invited Papers and Comments

Privacy and Information Technology—The Years Ahead 9
Keynote Address
Willis H. Ware

Microcomputers: Legal Approaches and Ethical Implications 23
George B. Trubow

Comment by
Steve E. Kolodney 31

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The Personal Computer versus Personal Privacy 35
Portia Isaacson

Privacy in Electronic Funds Transfer, Point of Sale, and Electronic Mail Systems in the Next Decade 39
Susan Hubbell Nycum

Comment by
Paul Armer 43

Comment by
Carole Parsons Bailey 45

Privacy Cost Research: An Agenda 51
Robert C. Goldstein

Comment by
Oliver R. Smoot 57

Comment by
Irwin J. Sitkin 61

Preserving Individual Autonomy in an Information-Oriented Society 65
James B. Rule, Douglas McAdam, Linda Stearns, and David Uglow

Comment by
Kenneth C. Laudon 89

Comment by
Abbe Mowshowitz 97

Stressing Design Rather Than Performance Standards to Ensure Protection of Information: Comments 103
T.D. Sterling

Privacy Implications of Transborder Data Flows: Outlook for the 1980s 109
H. P. Gassmann

Comment by
Rein Turn 119
Comment by 125
Robert Lee Chartrand
Comment by
Oswald H. Ganley 133
Comment by
Lucy A. Hummer 137

Nonuniform Privacy Laws: Implications and Attempts at Uniformity 141
Gordon C. Everest

Comment by
Elmer R Oettinger 151
Comment by
David Johnston 163

The Long-Term Implications of Computers for Privacy and the Protection of Public Order 167
Alan F. Westin

Comment by
Charles W. Joiner 183
Comment by
Jerome J. Daunt 187
Comment by
Carol G. Kaplan 193

Biographical Sketches of Contributors 199

Subject Index 209

I

A Privacy Agenda for the 1980s

A Research Agenda for Privacy in the Next Decade

Lance J. Hoffman

Introduction

"Privacy" is a complex notion involving the social contract between individuals and the society in which they live. It invites clashes between individuals and institutions, and between privacy protection and free access to information. This paper presents an agenda which attempts to outline research priorities that can lead to reasonable resolutions of these conflicts. However, even if all its projects are undertaken, the agenda suggested here cannot permanently resolve these problems, since values are in constant flux and differ across societies and across historical time periods.

Most of the projects listed can be undertaken from philosophical, psychological, press, behavioral, economic, legal, sociological, computer–communications, or public interest vantage points. Each of these perspectives contribute to a comprehensive dialogue. Research is needed both from a historical viewpoint (where we have been) and from a policy research viewpoint (where we ought to go).

The major areas on our research agenda are historical research, needed institutional mechanisms, needed technological mechanisms, policy questions, privacy versus alienation, area-by-area analysis of laws and regulations, and assessment of new technological developments.

Historical Research

The time has come for experience with the first wave of privacy legislation—both federal and state—to be systematically evaluated. The Privacy Protection Study Commission, operating under tight time constraints, did this to a limited extent. Researchers today, however, have the benefit of

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several more years of experience with the relevant laws and administrative procedures.

An interdisciplinary group of experts should examine the experiences to date of government and private organizations that have had to comply with privacy constraints and Freedom of Information Act or public record requests. The effects of federal and state legislation on system development, information exchange, and interagency information flows should be understood and evaluated. The parts of the legislation which have worked well should be identified, as should the parts which have remained unused.

Finally, the implications of omnibus versus specific legislation can be studied, as can the use of privacy as a shield for restraint of trade or for other interests.

Needed Institutional Mechanisms

The 1979 Asilomar workshop on computers and privacy emphasized the utility of interaction among and between various disciplines. Multidisciplinary deliberations should be conducted on a broad scale. A continuing group should meet periodically to exchange information and discuss current national and international questions related to privacy and information policy. This group should have a broad membership (including the public) and one of its tasks should be a continual updating of the research agenda. This group (or a separate entity) could be a clearinghouse of information on privacy, information policy, and public opinion.

Informed critics have long been concerned with the vulnerability of computer systems which affect people. Electronic funds transfer systems have been cited as an example of an area where not enough is known about potential risks. Therefore, research concerning the development of "early warning systems" to alert policymakers and technologists to potential risks and harm is called for.

Needed Technological Mechanisms

One of the weakest areas in computer systems is the auditing mechanism. Knowledge of appropriate techniques is improving, but probably not faster than the increase in computer crime, nor faster than the complexity of computing systems that must be understood by auditors. Additional research into improved auditing techniques and their associated costs is important.

Technological mechanisms may have to be developed to allow a "free port" capability to deal with transborder data flows carried over international networks. These mechanisms should be responsive to international guidelines

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