Research Professor, School of Information Sciences, University of Pittsburgh

Education

- M.S., Statistics, University of Wyoming, 1960.
- B.S., Statistics, University of Wyoming, 1959.

Awards and Honors

1998	"Pioneer of Science Information," Chemical Heritage Foundation
1997	Honorary Fellow, National Federation of Abstracting and Information Services
1993	Special Recognition, Special Libraries Association
1990	Research Award, American Society for Information Science
1987	Award of Merit, American Society for Information Science
1984-1985	Governor, District 1 in the American Statistical Association
1984	Distinguished Alumnus of the College of Commerce and Industry, University of Wyoming
1983	Elected President of American Society for Information Science
1983	Elected Fellow of the American Statistical Association
1983	Stallman Lecturer, University of Texas
1979	Miles Conrad Award and Annual Lecturer, National Federation of Abstracting and Information Services
1978	Distinguished Lecturer, National Bureau of Standards (now NIST)

General Experience

From 1960 to 1961, Mr. King was with General Analysis Corporation (later C-E-I-R, Inc.), where he served as a statistical consultant. In 1961, he was a co-founder of Westat, Inc., where he continued to work until 1973, serving in the positions of partner (1961-1963), Executive Vice President (1963-1971), President of Home Testing Institute (1971-1972), and Vice Chairman (1972-1973). In 1973, Mr. King worked for Informatics, and from 1974 to 1976, he was Vice President of Market Facts, Inc. and Director of the Center for Quantitative Science, which became King Research, Inc. in 1976.From 1976 until 1991, Mr. King served as President of King Research, Inc. In 1991, the company became a sole proprietorship, and in 1997, he retired to concentrate on lecturing and writing. In 2001, he became Research Professor at the School of Information Sciences, university of Pittsburgh.

His extensive career in research has included work in the areas of economic analysis and evaluation of information systems, survey research, operations research, and statistical consulting. During his 40 years in statistics and information science, he has pioneered in developing quantitative methods, measures, and models. Economic analysis has involved primarily micro-economic analysis of companies and organizations in the information sector. He has authored or edited 15 books (two

award-winning), and has over 300 other formal publications. In the late 1970's, he was named as one of the ten most-cited authors in the information science field. Some details of his scholarly work are given on the following pages.

Development of Descriptions of the Information Community

Mr. King's early work began in evaluation of automated information retrieval systems and development of measures, models, and evaluation methods (US Patent Office, American Psychological Association, Aspen Systems, National Technical Information Service (NTIS), and others). This led to a National Science Foundation (NSF) contract to prepare a book on evaluation (*Evaluation of Information Services and Products*), which broadened descriptions of information services to include several functions and the costs and benefits related to each function. In a later series of studies for the National Science Foundation (*Statistical Indicators of Scientific and Technical Communication*), he and his staff provided a comprehensive description of scientific communication with data observed over nearly 20 years. The indicators include amount of STI and consequences of use. He participated in a 1990/91 update of this STI work for the University of Tennessee under an NSF contract.

Mr. King served as a major participant with the University of Pittsburgh, School of Information Sciences working with Anthony Debons in describing the information-professional community (*The Information Professional: Survey of an Emerging Field*), and, with José-Marie Griffiths, developed information-professional competencies (*New Directions in Library and Information Science Education*), and a characterization of the overall information community (*Structure of Information: A Taxonomy*). They further developed measures, methods, and models for describing libraries and information services (*Keys to Success: Performance Indicators for Public Libraries; A Manual on the Evaluation of Information Centers and Services*; and *Special Libraries: Increasing the Information Edge*). The Keys manual involved adoption of library measures in the United Kingdom, and was the basis for a book on an automated library management information system (*Decision Support Systems and Performance Assessment in Academic Libraries*, Adams, Bloor, Collier, Meldrum, and Ward). Many of the studies over the years emphasized cost analysis (cost finding for Records Management and the three books above).

Mr. King directed a study for the National Center for Education Statistics (NCES) on the extent of library networking and resource sharing, and he directed statewide studies in Massachusetts, New York, Arizona, Pennsylvania, and Delaware. He participated in studies in Wisconsin, Florida, and North Carolina, and also performed several regional and local studies. This work has led to a detailed description of more than 100 such resource-sharing activities and economic models of resource sharing (particularly demonstrating the extent of economies-of-scale of these activities).

Description of the Usefulness and Value of Information Services

The NSF statistical indicators studies led to some early estimates of the value of STI and to a study for the Commission on Federal Paperwork on the value of information. The value measures were used in a series of studies directed by Mr. King on the usefulness and value of the Energy Database, US Census data, engineering materials properties database, information analysis centers, standard reference data services, and to a number of studies of company and government agency libraries and information centers. The latter studies, performed with José-Marie Griffiths, are summarized in the book *Special Libraries: Increasing the Information Edge*.

Pricing of Information Systems

In the 1960's, Mr. King performed a major pricing study for NTIS on the price of government documents. Since that time, he has performed pricing studies for scientific journals (including price of subscriptions and page charges), and he explored pricing for multiple products and services produced from single information sources or databases. He also performed a study of federal legislation, regulations, and policies concerning pricing of government information services and products. In this study, Mr. King attempted to arrive at a philosophical basis and rationale for pricing such services. More recently, he has performed research and published extensively on pricing of scholarly journals.

Copyright

Mr. King directed the first major study involving the 1976 Copyright Law, and set forth recommendations leading to the Copyright Clearance Center. He also participated in the first five-year follow-up study. He directed a major study of the costs and benefits of copyright formalities—a study that contributed to new legislation leading to US participation, for the first time, in the Berne Convention. He also has performed intellectual property studies for OTA, and three proprietary copyright studies.

Automated Systems and Electronic Publishing

Mr. King was involved in a series of evaluations of automated information retrieval systems for the US Patent Office, American Psychological Association, Aspen Systems Corp., American Institute of Physics, and others. He evaluated CIRCOL, a full-text search system. In the early 1970's he directed a major study of the International Cancer Research Databank that led to CANCERLINE and several other ongoing cancer information systems. He and José-Marie Griffiths recently completed a history of information retrieval research, development, and use. He also directed several studies involving early examination of electronic publishing of journals. Two of these studies, sponsored by NSF, involved editorial processing centers and electronic alternatives to paper-based publishing (*Scientific Journals in the US: Their Production, Use and Economics*). He and José-Marie Griffiths performed a study for ADONIS, and they developed a planning process for technologies in public libraries. Mr. King participated in an assessment of a knowledge base system (Viral Hepatitis) at the National Library of Medicine. These studies all emphasized in-depth economic, operational, and technical feasibility analysis and they addressed new technologies.

In recent years, he and Carol Tenopir developed 20-year trends in authorship, readership, libraryrelated services, and economics of scholarly publishing and assessed how electronic journals are likely to affect scholarly publishing and scientific communication (*Towards Electronic Journals: Realities for Scientists, Librarians, and Publishers*).

Other Fields of Study

During the 1960's, Mr. King performed several operations research studies. For example, he developed a model for determining the amount of snow removal equipment necessary to insure that certain levels of snow accumulation would not be exceeded (in Canada). He also conducted a number of national surveys on education resource requirements (NCES), military and National Guard recruitment (Department of Defense), importance of automobile attributes (Department of Labor), safety of several consumer products (Consumer Product Safety Commission), and benefits and likely

adaptation of the metric system in the US (National Bureau of Standards). While president of HTI, he helped develop new survey methods and updated a panel of 120,000 households ("a living database"). In addition to product use surveys, the panel was used to establish the quality of television program viewing (TVQ) to complement Nielsen ratings. He initiated a study of the effects of demographics and psychographics on viewing and the relationship of viewing and advertising effectiveness. During this time, he conducted a study on attitudes toward abortion that was the focus of a documentary narrated by Barbara Walters on NBC, and he developed weekly opinion surveys that were reported each Friday by Harry Reasoner and Howard K. Smith on the ABC Evening News. In the early 1970's he conducted a series of studies for the Office of Consumer Affairs to determine how the federal government could improve responsiveness to consumer complaints. During this time, he worked with W. Edwards Derning to develop a national master sample for household surveys.

Service to the Information Communities

Mr. King has been a member of ASIS (ADI) since 1962. During the 1960's, as a volunteer, he conducted a series of annual surveys that evaluated annual meetings, arranged and chaired a special meeting on Innovations in Communications (more than 600 participants), initiated a special meeting on computerized photo-composition, served as President of the Potomac Valley Chapter, and served on several committees. In the 1970's, as a volunteer, he conducted a survey of ASIS membership, served as Chair of the Marketing Committee, wrote an extensive Marketing Plan for ASIS (with input from Larry Berul and Bill Sanders), participated in a special planning committee, and served as Editorial Advisor on ASIS Bulletin. In 1981, Mr. King chaired the Annual Meeting in Washington, DC. Using marketing methods presented in the Marketing Plan, this meeting attracted about 2,500 attendees (believed to be the largest in ASIS history). He was President of ASIS from 1983-84. During his tenure, he helped initiate a process of staff management by objectives, developed a planning process, negotiated a difficult controversy with Knowledge Industry Publications, and represented ASIS at conferences in Egypt and Taiwan. As a volunteer, he wrote an early contribution to ARIST (Volume 3), a recent chapter, and served many years as an ARIST reviewer. He also edited or co-edited four ASIS books (Key Papers in the Economics of Information, Key Papers in the Design and Evaluation of Information Systems, Telecommunications and Libraries: A Primer for Libraries and Information Managers, and Innovations in Communications). He has contributed seven articles for the ASIST Bulletin and two articles for JASIST Perspectives.

Mr. King has been active in information policy issues, having reviewed all 3,500 state and local resolutions and developed themes and issues papers for the first White House Conference on Libraries and Information Services. He served as a member of the Commerce Technical Advisory Board, chaired its advisory committee for NTIS, and chaired the Information Policy Roundtable for most of the 1980's. He has testified before Congress concerning OMB Circular A-76 and scientific and technical information concerns, and has testified several times before the Copyright Commission.

In the 1980's, there was considerable concern in the statistical field about the deterioration of statistical surveys. To address these issues, Mr. King helped found the Council of American Survey Research Organizations (CASRO), and served as Director for several years. He performed a study on statistical surveys for the Commission on Federal Paperwork, and conducted (*pro bono*) annual workshops for several years on statistical surveys (these workshops were sponsored by the Washington Statistical Society and several federal agencies).

Mr. King served for several years on the Board of Copyright Clearance Center, the Board of Engineering Information (Ei), and other organizations. He has written several articles and chapters in books concerning information and statistical policies.

Teaching

- 2001- Research Professor, University of Pittsburgh School of Information Sciences
- 1990-1996 Adjunct Faculty, University of Tennessee School of Information Sciences, including courses on Economics of Information, Information Policy, and Scientific Communication.
- 1981- Board of Visitors, School of Information Studies, University of Syracuse
- 1981- Advisor on Library School Curriculum, McGill University
- 1970-1972 Adjunct Faculty, University of Maryland
- 1970- Lectured at:
 - University of Pittsburgh
 - University of Michigan
 - Syracuse University
 - Drexel University
 - University of California at Berkeley
 - University of Sheffield, England
 - San Jose State College
 - Leicestershire University, England
 - Simmons College
 - Clarkson College

1965-1998 Nearly 50 day-long workshops on a variety of topics

Organization Participation

- 1981-1991 Member of the Board of Directors, Copyright Clearance Center
- 1984-1988 Member of the Board of Directors, Institute for International Information Programs
- 1978-1986 Member of the Board of Directors, Engineering Information, Inc.
- 1978-1990 Trustee, Engineering Information, Inc.
- 1975-1979 Member of the Advisory Board, Chemical Abstracts Service

Government

- 1994-1997 Member of National Academy of Sciences, Committee on "Bits of Power"
- 1979-1985 Member of CODATA, National Research Council, National Academy of Sciences
- 1978-1981 Member of the Commerce Technical Advisory Board and Scientific and Technical Information Policy Group
- 1972-1974 Member of the National Business Council on Consumer Affairs, which was created by Executive Order of the President and consisted of chief executives of 120 leading businesses
- 1966-1968 Observer to a COSATI task group on the dissemination of information
- 1966-1967 Member of National Academy of Science Committee on Maritime Commission

- 1966- Advisor, reactor, or member of the oversight committee on the following projects:
 - 1991 White House Conference on Libraries and Information Services
 - · White House Conference on Federal Support of Library and Information Services
 - Innovations Guide (Capital Systems Group)
 - Z39 standards
 - Study of the production and use of scholarly literature in libraries (University of Pittsburgh)
 - Study of information transfer involving engineers (The Futures Group)
 - A networking workshop for the footwear industry (Department of Commerce)

Societies

American Society for Information Science and Technology

- President, 1983-1984
- Board of Directors, 1982-1985
- Chairman, 1981 Annual Meeting
- Chairman of Marketing Committee, 1980
- President PVC, 1969
- Member of numerous other committees

American Statistical Association

- Elected Fellow, 1983
- Council of Governors, District 1, 1983

Special Libraries Association

• Member, November 1992-1997

Washington Statistical Society

• Representative-at-large, Board of Directors, two terms, 1981-1983

Council of American Survey Research Organizations

- Co-founder
- Member of the Board of Directors, 1975-1976

Publishing

- 1977-1983 Advisor to the Annual Review of Information Science and Technology
- 1978-1986 Consulting Editor of the Bulletin of American Society for Information Science
- 1978-1982 Member of the Editorial Board of the Journal of Information Science
- 1968-1983 Reviewer for the Annual Review of Information Science and Technology
- 1974-1978 Member of the Advisory Board of the Bulletin of American Society for Information Science
- 1980-1982 Member of the Advisory Board of Electronic Publishing Review