

ANNUAL REPORT
Of The
RESEARCH PROGRAM IN TELECOMMUNICATIONS
AND INFORMATION POLICY

Graduate School of Business
Columbia University

September 1984

COLUMBIA UNIVERSITY

RESEARCH PROGRAM
IN TELECOMMUNICATIONS
AND INFORMATION POLICY



GRADUATE SCHOOL OF BUSINESS

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Columbia University Seminars on Telecommunications Policy, Spring Semester, 1984 - Synopses

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Telecommunications Alumni Directory - Preliminary Copy

and

List of Regular Invitees to the Monthly University Seminar, "Telecommunications Policy"

SUMMARY

The Research Program in Telecommunications and Information Policy, in its first year of operation, has created an effective administrative and research structure, and has conducted and initiated a series of Program activities, including:

1. A three-day conference on "Rivalry Among Video Transmission Media: Assessment and Implications"
2. Seven forthcoming one- and two-day conferences:
 - "Beyond Ratings: New Directions in Audience Measurement Research"
 - "Tracing New Orbits: Satellite Issues Facing North America, Western Europe, and Japan"
 - "The Impact of Information Technologies on the Service Sector"
 - "Electronic Banking and the Monetary System"
 - "Unions, Employment, and New Telecommunications Technologies"
 - "Information Networks: The Economics of Domestic and International Markets"
 - "Alternative Sources of Financing Universal Services"
3. Regular monthly seminars of New York area telecommunications experts on diverse and timely policy issues. The present list includes about 250 invitees from all affected constituencies.

Seminar topics included:

 - "Costs and Benefits of Long Distance Telecommunications Regulations"
 - "Maintaining America's Technology Pre-eminence"
 - "Risk, Required Return and Regulatory Rules: The Case of AT&T Communications"
 - "The Problem of Access in Electronic Publishing and Cable Television"

"The New Video Marketplace and the Search for a Coherent Regulatory Philosophy"

"International Organizations and U.S. Telecommunications Policy"

"The Future of Television Networks"

4. The Program has involved an increasing number of faculty in telecommunications research. Among the research output are a working paper series of almost fifty research papers on a wide variety of telecommunications subjects, and several published or forthcoming books.

Administrative Program activities during the year included:

5. Establishment of a Board of Advisors of outside experts, under the honorary chairmanship of U.S. Senators Frank Lautenberg and Robert Kasten, and the Chairmanship of George Shinn.
6. Broadening the base of financial support to eighteen organizations with a wide variety of interests, and the laying of foundation for further support.
7. Creation of an alumni association of about 200 Columbia Business School alumni in the telecommunications field, and planning alumni events.
8. Establishment of an extensive research library.
9. Acquisition and update of a data bank on cable television.
10. Establishment of contacts with a wide variety of research institutions, telecommunications and broadcasting authorities, and firms in the U.S. and abroad.

The Program is the only Business School-based telecommunications center in the country. It is well on schedule and a wide array of activities is forthcoming.

I. ADMINISTRATION AND ORGANIZATION

A. GENERAL

The Program was officially announced by the University in the Fall of 1983. Because it was the year for laying the foundations, a significant number of organizational steps were undertaken.

B. ADVISORY BOARD

We assembled a distinguished Board of Advisors in order to facilitate communication between the Program, its sponsors, and other institutions. Honorary chairmen of the Program are U.S. Senators Frank Lautenberg (D-N.J.) and U.S. Senator Robert Kasten (R-Wisc.); both are alumni of the Columbia Business School, successful business managers, and involved in telecommunications issues in their Senate committees.

Chairman of the Board is George Shinn, Chairman-Emeritus of the First Boston Corporation, formerly President and C.O.O. of Merrill Lynch, and presently Executive-in-Residence at the Columbia Business School. In consultation with Mr. Shinn, we invited to the Board a broad range of experts, many of whom had previously shown interest in our activities, and including a number of representatives of affiliated organizations. We intend to involve our affiliates on a rotating basis. We will account to the Board for the activities of the first year and ask for guidance for the future.

The following is a list of our Advisory Board members:

Honorary Chairman
Hon. Frank Lautenberg
United States Senate

Honorary Chairman
Hon. Robert Kasten
United States Senate

Chairman
George L. Shinn
Chairman and C.E.O.
Emeritus
First Boston Corporation

Elizabeth E. Bailey
Dean
Graduate School of Industrial
Administration
Carnegie-Mellon University

Walter Baer
Director of Advanced
Technology
Times Mirror Company

Richard S. Bower
Professor of Finance and
Managerial Economics
Amos Tuck School of Business
Dartmouth College

Nina W. Cornell
Cornell, Pelcovits & Brenner
Economists, Inc.

Everette E. Dennis
Director
Gannett Center for Media
Studies
Columbia University

Gerald Faulhaber
Associate Professor and Director
Fishman-Davidson Center for the
Study of the Service Sector
The Wharton School, University
of Pennsylvania

Joseph Fogarty
Partner
Weil, Gotshal & Manges

Leonard Forman
Director of Planning and Chief
Economist
The New York Times Company

Henry Geller
Director
The Washington Center for
Public Policy Research
Duke University

John K. Hopley
Assistant Vice President
New York Telephone Company

Robert Lear
Visiting Professor and Former
Executive-in-Residence
Graduate School of Business
Columbia University

Mitchell L. Moss
Associate Professor
Graduate School of Public
Administration
New York University

Alfred C. Partoll
Executive Vice President
AT&T Communications

Robert Rosencrans
Former President
United Artists Cablesystem
Corporation

Richard E. Schuler
Professor
Department of Economics
Cornell University

Theodore L. Simis
Senior Vice President
E.F. Hutton and Company, Inc.

Burton B. Staniar
President
Group W. Cable, Inc.

Paul Strassman
Vice President
Information Products Group
Xerox Corporation

Juergen Wickert
Representative to the United
Nations of the
Friedrich Naumann Foundation

C. ADMINISTRATIVE STAFF

The Program Director is Professor Eli Noam. During the past year he received no financial compensation or released time for his directorship.

The first Executive Director was John Chapman, a Ph.D. candidate at the Columbia Business School with broad legal and business experience in the computer and telecommunications field. During the year it became clear that his dissertation and other obligations could permit only a limited time commitment; he has therefore scaled down his administrative activities, though he remains involved. The functions of Executive Director are now being undertaken by Roberta Tasley, previously the Administrative Director of the NYU Interactive Telecommunications Program, and the holder of a Masters degree on the subject. Ms. Tasley is assisted by several part-time secretaries and research assistants, usually full-time Columbia students. Among them are Jonathan Kadis, previously an engineer with radio and television stations and active in matters of videotex and telephony, who is in charge of computer systems, alumni affairs, and financial records; Tim Searight, part-time secretary, administrative assistant and long distance swimmer; Chip Gagnon, research and administrative assistant and international affairs student with knowledge of six languages; Mark Nadel, a lawyer and teacher at New York Law School and Cardozo Law School, with a variety of responsibilities in the Program, including the collection of library materials.

D. ALUMNI ORGANIZATION

We set up an alumni association of Business School graduates in the telecommunications field for the purpose of creating a network of alumni that links them with each other, the School, and its students. About two hundred alumni have already responded with interest to our first targeted letter --which went to those alumni recorded as employed by clearly identifiable communications firms. Many of the alumni hold a variety of senior positions in the industry. We have compiled a directory, sent it to all respondents, and scheduled a first meeting for the Fall. A preliminary directory is attached.

To the best of our knowledge, this is the first specialized alumni group of the School for any industry. Though our emphasis is on Business School alumni, in a few instances Law School or College graduates with relevant management responsibilities have also been contacted with positive response.

We have made it clear to alumni that we do not plan to solicit them for donations; a good number of alumni have kindly offered to help within their organization in obtaining support. We did not wish to activate these offers prior to the beginning of alumni activities; for the near, and long-term, these connections look very promising for a broadening of our outside support.

One activity which we are exploring actively is a computer conference among alumni, in which they could exchange (over several months, through personal computers) views about a specific discussion topic, as well as news about their personal circumstances. We are trying to persuade a commercial operator to grant a substantial discount in order to introduce a high-quality group of users to this relatively new form of exchange.

E. THE STUDENT COMMUNICATIONS MANAGEMENT ASSOCIATION

The association encompasses those business school students interested in the field. Among the association's goals is to learn about the field and its potential, and to get the word out that the logical and desirable source of management talent is the Columbia Business School. Activities include professional advisement, round-table discussions with invited speakers, field trips, and the composition of a resume book. We have been actively involved in advising students on the telecommunications field, and have cooperated on several projects.

F. LIBRARY

To support our research activities, we have established a unique library collection. In addition to books, it includes a large number of hard-to-obtain consulting studies, government reports, FCC filings, academic papers from a wide range of disciplines, and a large collection of international materials. We receive several dozen trade publications and clip and file them by subject category. The results are many highly informative files, access to which is available to academic researchers and to affiliated organizations.

G. CABLE DATA BASE

We have assembled a large data bank on more than 5000 U.S. cable systems for the years since 1978, and continue to update this information. This unique collection, made possible by the support of the National Science Foundation, is a major source for the study of cable television.

H. OFFICE SPACE

At present, a severe constraint to our administrative and research activities is the limitation of office space which is prevalent throughout the school. Fortunately, an addition to Uris Hall is presently under construction and it is likely that we will have additional offices and secretarial space in the near future.

II. SUPPORTING ORGANIZATIONS

As our activities have become recognized, we have been fortunate to receive the support of a wide variety of organizations. Most of the affiliated organizations have had no previous involvement with us; as they have become acquainted with our activities, they have been satisfied with the quality and importance of our work. To give an example: GTE, in reaffirming support for the next year and increasing it over the previous year's commitment, wrote to us:

"We recognize the Symposia have been timely and academically rigorous in a field where emotions often hold sway, as are the one-day conferences on specific topics. We also feel that the publication of the proceedings from these Conferences is important for not only the research community, but the telecommunications industry in general.

The problems that will confront the telecommunications industry in the 1980s are many and varied. We applaud your focus on these problems that confront regulators, utility managers and consumers. We appreciate that the Symposia have covered generic problems common to the telecommunications industry, as well as problems unique to the telephone industry."

Affiliated organizations include local and interexchange telephone companies, cable operators, equipment producers, microwave operators, financial institutions, programming networks, labor unions, information networks, and foreign firms. We have also obtained the support of US and foreign foundations. This broad support reassured new potential affiliates, and signals to the outside world the independence of our work as an academic institution. At present, we are engaged in very promising discussions with several other potential affiliates.

The affiliated organizations include at present:

New York Telephone Company (Charter sponsor)
American Federation of Television and Radio Artists
CompuServe
Continental Telecom
Dow Jones
France Telecom
Friedrich Naumann Foundation

Gartner Group
German Marshall Fund of the U.S.
Graphic Scanning
GTE Laboratories
GTE Service Corporation
GTE Sprint Communications
Home Box Office
Mead Data Central
Merrill Lynch
National Science Foundation
Northern Telecom Ltd.
Southern New England Telephone

Through both formal and informal channels, our affiliates have an opportunity to draw on our research and participate in its initial discussion. Affiliates attend our monthly seminars, specially convened workshops, and conferences; receive our working papers and book manuscripts as they are drafted; provide input in the planning of further projects; have access to our library facilities; call on our faculty for informal advice; are represented on our Advisory Board in a rotating fashion; and, in general, contribute to the generation and development of economic and business research in the field of telecommunications and information policy.

III. PROGRAM ACTIVITIES

We have found the organization of research-oriented conferences to be a way to generate rapidly much internal research and outside recognition. Our strategy has been to set the tone through two large and highly visible conferences involving, in large part, academic, industry and government experts on the subjects. This goal has been accomplished. The next stage has been to organize a number of smaller (usually one-day) conferences, where the administration lies with chosen conference directors, typically, Columbia faculty members operating under an agreed upon budget, and publishing a conference-generated book under their editorship. This more decentralized method frees the Program staff from getting involved in the details of too many activities; and, at the same time, permits the involvement of other faculty members with their specialized knowledge.

A. CONFERENCES

The two major conferences mentioned above were the following:

1. "Regulation of New Telecommunications Networks"

This conference, strictly speaking, preceded the formation of the Program. However, its success led directly to the Program creation, and the book, Telecommunications Regulation Today and Tomorrow, published by Harcourt Brace Jovanovich, is one of the Program publications. One participant of the conference wrote:

"During the past ten years in my capacity as Managing Editor of the Bell Journal of Economics, I have attended...conferences at Dartmouth, Chicago, UCLA, and Stanford. None has approached the professionalism with which this conference was arranged, directed and run.

The ideological balance was refreshing. The sustained participation of so many top-ranking academic experts in the field of regulation was highly unusual. The support of other members of the Columbia academic community (the Law School and Graduate Faculties) and the skills of your conference planning and public affairs professionals were most impressive."

Speakers included Stanley Besen, Nina Cornell, William Comanor, Henry Geller, Paul Gioia, Werner Hirsch, John Hopley, William K. Jones, Paul Joskow, Alfred Kahn, Burton Katkin, Richard Neustadt, Eli M. Noam, Roger Noll, Philip Nyborg, Janusz Ordover, Alfred Partoll, Michael Pelcovits, Ithiel de Sola Pool, William Shepherd, James Tobin, Harry Trebing, Gordon Tullock, Lawrence White, and Robert Willig.

The conference volume was chosen by Communications Book-notes as a "Book of the Month."

The conference included about one hundred participants, about 25% from communications firms, 15% from government agencies, 40% from academia, and about 20% from law and consulting firms, unions, and advocacy groups.

A conference program and participants list is attached.

2. "Rivalry Among Video Transmission Media"

This conference was held April 13-15, 1984, at the Columbia Conference Center, Arden House. The facts of inter-media competition among VHF/UHF broadcasting, cable television, telephone video transmission, STV, SMATV, DBS, MDS, and video recordings were addressed at the conference in a rigorous empirical fashion. Fourteen commissioned papers were presented by some of the major researchers in the field. The totality of the papers provided a unique empirical research foundation for central telecommunications issues of regulatory policy and business planning relevant to broadcasters and wire-line communications firms alike.

To lay the foundation for research, we collected studies on the economic characteristics of different media by approaching consulting firms, government agencies, media companies, equipment manufacturers, trade associations, and industry analysts. The results of this search were nine anthologies of the highlights from many hard-to-obtain reports. The purpose of this effort was to assist the authors in the literature search and free them for the assessment, interpretation and integration of the data previously collected. Other authors contributed their own, and sometimes massive, data sources.

The conference was reported on at length in the respected trade publications, Broadcasting and Telecommunications Policy. The conference included about one hundred participants; of these, 20% came from communications, 13% from consulting firms, 10% from governmental and regulatory bodies, 5% from communications law firms, 35% from academia, 7% from unions and advocacy groups, and 10% from the press. Attendees came from seven countries.

Speakers included John Abel, Walter Baer, Stanley Besen, Michael Botein, Nolan Bowie, Paul Fagan, William Finneran, Oscar Gandy, Henry Geller, John Hopley, Leland Johnson, Ernest Jouhy, Erwin Krasnow, Harvey Levin, Eli M. Noam, Bruce Owen, Peter Pitsch, John Redpath, Helmut Schaefer, Stephen Sharp, Samuel Simon, Christopher Sterling, Kenneth Thorpe, Douglas Webbink, Lawrence White, Juergen Wickert and John Woodbury.

The proceedings of the conference will be published by Columbia University Press, a relatively rare occurrence for a conference volume.

The program for the meeting and lists of speakers and participants are attached.

B. FORTHCOMING CONFERENCES

1. "Beyond Ratings: New Directions in Audience Measurement Research"
October 19, 1984

This conference deals with the need for accurate yardsticks for advertisers to gauge the impacts of television on today's viewing audience, and attempts to provide advanced research methodologies that go beyond the presently existing rating systems.

Speakers come from a diverse set of organizations, including, University of Massachusetts, University of Texas, and Columbia University; CBS; Information Resources; Cable TV Advertising Bureau, Inc.; TV Audience Assessment, Inc.; and Grey Advertising, Inc.

Conference director is Donna Hoffman, Professor of Marketing at Columbia.

The conference program is attached.

2. "Tracing New Orbits: Satellite Issues Facing North America, Western Europe, and Japan"
November 30, 1984

Bold new satellite projects now underway are altering longstanding relationships between the private sector, administrative agencies and government bodies involved in international communication. Traditional domestic government-supported monopolies, including Comsat and French Ariane, are giving way to new hybrid public sector/private sector institutions. Internationally, the drive toward widening competition is challenging the operations and objectives of such organizations as Intelsat and the International Telecommunication Union. Additionally, the issue of competition versus regulation of satellite activity is central to decisions currently being made by many nations about joint ventures and regional consortia.

The conference addresses the present challenges to establishing a stable environment for international satellite communications. Speakers represent a variety of perspectives and organizations, including the University of Texas, Hofstra University, and Hunter College; Intelsat; Orion; Coronet; French Ariane; The Economist of London; the U.S. Office of Technology Assessment; Ford Aerospace; the Canadian Space Program; and the Center for Strategic and International Studies.

The major themes of the conference will include a) monopoly and competition in satellite applications, b) new institutions needed to facilitate this activity and c) emerging areas for intergovernmental collaboration.

Conference director is Donna Demac, Staff Counsel of the Office of Communications, United Church of Christ, and an Adjunct Professor on satellite issues at New York University.

3. "The Impact of Information Technologies on the Service Sector"
February 7 - 8, 1985

This conference is sponsored jointly with the Fishman-Davidson Center for the Study of the Service Sector, the Wharton School, University of Pennsylvania.

The purpose of the conference is to encourage research of the penetration of telecommunications and information usage in the service sector, and its effect on that sector. Increased demand for communications-intensive services has been generated by a number of overlapping factors, such as the growing dependence of the goods-producing sector on information and telecommunications services to increase productivity and decision making; the expansion of domestic and international trade and financial flows; the steady increase in multiunit, more complex, manufacturing companies; and trends to contract for outside services, e.g., for financial management, consulting, or data processing.

Research papers address the impact of information technologies on services such as banking, finance, insurance, retail trade, health care, education; and the broader impacts on productivity, trade in services, and demographics.

The conference will help researchers to assess and evaluate the mutually reinforcing changes in the service sector, predict future demand for new telecommunications and information services, and analyze the implications for domestic and international telecommunications policy.

Speakers include: Eli Ginzberg, Director, Conservation of Human Resources Project, Columbia Business School; William Baumol, Professor of Economics, New York and Princeton Universities; Almarin Phillips, Professor of Economics and Law, University of Pennsylvania; Charles Jonscher, Professor at the Sloan School, M.I.T.; John Folk, President, Insurance Institute of Research Accords; Geza Feketekuty, Senior Assistant to the

U.S. Trade Representative; and Paul Strassman, Vice President, Information Group, Xerox Corporation.

A program outline is attached.

Conference coordinators are: Roberta Tasley, Executive Director, the Research Program in Telecommunications and Information Policy; and Gerald Faulhaber, Professor of Public Policy and Management and Director of the Fishman-Davidson Center for Study of the Service Sector, the Wharton School, University of Pennsylvania.

4. "Electronic Banking and Monetary Systems"
March 22, 1985

During the last two decades the world has witnessed rapid technological change in computer hardware, software and telecommunications which permit delivery systems to supply financial services more rapidly and to provide economic agents with more information than ever before. Rapid financial innovation will be expected to continue well into the next century. Yet no group of scholars in the area of monetary and financial economics has attempted to analyze the implications of electronic communications for monetary theory and policy. Such essential concepts as the supply and demand for money which have dominated much monetary thought may become obsolete.

The conference will shed light on several of the processes set in motion by technological change. It will address three essential areas. The first is the actual dynamic measurement of technology on the supply and transaction volume of both wholesale and retail instruments. What are the implications of computer and communications innovation on the cost structure and competitiveness of providing financial intermediation? The second is the regulation of financial intermediation through communications. Papers will analyze the implications of changing technology on regulation and competition--state versus federal regulation of depository and nondepository institutions; electronic financial flows; the strategic importance of holding companies in bank and non-bank competition; privacy and consumer protection and the role of anti-trust. The third part of the conference will address the macroeconomic implications of technological change. Participants will analyze how the evolving technology affects the control of the money supply, the velocity of money and the vulnerability of the monetary system.

Conference directors are Robert Shay and Colin Lawrence, both professors at the Columbia Business School.

5. "Unions, Employment, and New Telecommunications Technologies"
June 12, 1985

Research papers will be presented on employment problems in information processing industries by scholars with different disciplinary backgrounds. Among the research orientations to be presented are human resources management, labor relations, law, economics, and organization design and behavior.

Topics will include the following: Managing human resources in the information age; labor and industrial relations in the information industries; trade secrets and the employment relationship; labor mobility and productivity in high technology industries; and the structure of organizations in the information age.

Conference directors are David Lewin and Donna Sockell, both professors at the Columbia Business School and specialists in industrial relations and human resources management.

Papers and comments will be published in a special issue of the academic journal, Advances in Industrial and Labor Relations.

Other planned conferences, presently in early stages of organization, are:

6. "Information Networks: The Economics of Domestic and International Markets"

The forces of regulation, competition, and technology have been dramatically expressed on an international scale. The U.S. telecommunications industry has been transformed with its recent reorganization. The new AT&T and its competitors are reaching out internationally, offering new voice and data services with new European partners. Canada has restructured its telecommunications infrastructure. The United Kingdom has opened its telecommunications markets to new competition with British Telecom; Europe's economic community is forging new alliances among its member countries. Europe's information network, Euronet, symbolizes a new element of international cooperation, providing new channels of communication which transcend borders. Euronet is linked directly to U.S.-based, value-added networks, Telenet and Tymet, which serve over 400 U.S. cities.

With the emerging of information networks on an international scale, serving both developed and less developed countries, there are also new responsibilities and concerns. Questions to be addressed are:

Are such networks based on sound economic principles? To what extent should government policy allow or discourage un-economic bypass of existing telecommunications facilities? To what extent will trans-border data flow be allowed or controlled? To what extent should proprietary information used in networking be protected, and to what extent will individual's and State's rights to privacy be protected?

Conference director is John Chapman of the Columbia Business School.

7. "Alternative Sources of Financing Universal Service"

The principle of universal service is an important aspect of telecommunications policy, both for telephony and cable television. Before the AT&T divestiture and the emergence of new pay-TV media, such universal service could be maintained by internal subsidization. Under a new competitive regime, the surplus for doing so becomes increasingly contested, and the potential for the internal subsidy declines. However, there are alternative or supplementary forms of supporting universal service, such as general revenue, special general or targeted communications service taxes, two-part tariffs and other pricing schemes, charges on by-pass, direct support to service providers, and low-interest loans and tax incentives. The purpose of the meeting is to bring together public finance economists, tax specialists, communications carriers, and regulators, to analyze the alternatives.

C. PROGRAM SYMPOSIA

A major activity of the Program is to provide a New York meeting-ground for telecommunications experts from a great variety of organizations. We have held, within the context of a newly formed University Seminar--a long-standing Columbia tradition for interdisciplinary subjects--monthly meetings that brought together authoritative speakers and discussants and a wide mix of participants. In the past, no New York area academic institution has provided a regular forum for discussion of telecommunications policy issues. As word of our seminars spread, we received a large number of interested inquiries.

Our initial concept had been one of a small group of about thirty regular participants. Experience has shown that many more would like to attend, though they would not be able to come regularly to all meetings. We have therefore recently broadened our invitation list to include about 250 participants from academia, the media, industry, the consulting community, advocacy groups, government, and U.N. organizations.

The seminars are conducted relatively informally. One of the contributions of the seminar is the informal and lively conversation over drinks and dinner, which brings together people who may be otherwise engaged in a more adversarial dialogue or who have never met. There is often flexibility to schedule subjects and speakers on short notice, to deal with new issues. In the selection of topics, our general aim is to alternate between issues of mass media and telephony.

Last year's program included the events that are listed in the following. Also listed are the first two seminars for 1984/85.

1. Thursday, December 15, 1983

"The Problem of Access in Electronic Publishing and Cable Television"

Speaker:

Professor Ithiel de Sola Pool, Director of the Research Program on Communications Policy, MIT

Discussants:

Corydon B. Dunham, Executive Vice President and General Counsel, NBC
Monroe Price, Dean, Cardozo Law School

2. Wednesday, January 25, 1984

"The New Video Marketplace and the Search for a Coherent Regulatory Philosophy"

Speakers:

Erwin Krasnow, Senior Vice President and General Counsel, National Association of Broadcasters
Jill Abeshouse Stern, Associate, McKenna, Wilkinson and Kittner

Discussants:

Stanley Besen, Senior Economist, Rand Corporation
Samuel Simon, Executive Director, Telecommunications Research and Action Center

3. Wednesday, February 8, 1984

"International Organizations and U.S. Telecommunications Policy"

Doudou Diene, Director of the UNESCO Office for Liaison with the United Nations
Carl Gershman, Counselor to the U.S. Representative to the United Nations

Harvey Levin, Weller Professor of Economics, Hofstra University and Co-director, Economic Working Group, FCC Public committee on Space-WARC '85
John Ruggie, Professor of Political Science, Columbia University

4. Thursday, February 23, 1984

"The Future of Television Networks"

Speaker:

Paul Bortz, Browne, Bortz and Coddington

Discussants:

Michael Botein, Director, Communications Media Center, New York Law School

David Poltrack, Vice President, Research, CBS Broadcasting Group

5. Wednesday, March 14, 1984

"Costs and Benefits of Long Distance Telecommunications Regulations"

Speakers:

Roy Radner, Bell Labs

Peter Linhart, Bell Labs

Discussants:

James Alleman, Manager, Policy Research, GTE Service Corp.

Arthur Harper, Assistant Vice President, New York Telephone Company

6. Thursday, April 5, 1984

"Maintaining America's Technology Pre-eminence"

Speaker:

Admiral Bobby Ray Inman, President and C.E.O., Micro-electronics and Computer Technology Corporation

Discussants:

Seymour Melman, Professor, Industrial Engineering and Operations Research, Columbia University

Michael Tyler, President and C.E.O., Communications Studies and Planning, International

7. Thursday, May 31, 1984

"Risk, Required Return and Regulatory Rules: The Case of AT&T Communications"

Speaker:

Richard Bower, Professor, Amos Tuck School of Business Administration, Dartmouth College

Discussants:

Laurent Baptiste, Manager, Investor Requirements,
NYNEX Corporation

Steven Chrust, Senior Telecommunications Analyst,
Sanford C. Bernstein & Company, Inc.

Theodore Simis, Senior Vice President, E.F. Hutton &
Company

8. Thursday, September 13, 1984

"What's Next in Cable TV Regulation and Legislation?"

Speakers:

Daniel Brenner, Legal Assistant to the Chairman,
Federal Communications Commission

William Finneran, Chairman, New York State Commission
on Cable

John Gault, President, Manhattan Cable TV, Inc.

Gustave Hauser, Chairman and C.E.O., Hauser
Communications, Inc.

Monroe Price, Dean, Cardozo Law School

Thomas Rogers, Counsel to the Subcommittee on
Telecommunications, House of Representatives

Morris Tarshis, Director of Franchises, New York
City Bureau of Franchises

9. Thursday, October 11, 1984

"Restructuring in Telecommunications and Regulatory
Adjustment"

Speaker:

Walter Bolter, Director, Bethesda Research Institute

Others to be announced.

D. ALUMNI MEETINGS

In the context of the newly formed association of Columbia alumni in the communications sector, we plan to hold meetings for these alumni, together with the Business School students of the Communications Management Association. The first event, scheduled for October 10, focuses on "Life and Work in the Communications Sector: An Alumni Perspective."

Additionally, we plan to conduct a computer conference involving alumni and Business School students over several months; selected topics would be discussed, and information exchanged. The computer conference medium will allow physically dispersed participants to communicate without disruption of their business schedules.

E. VISITING FELLOWS PROGRAM FOR NATIONAL AND INTERNATIONAL FELLOWS

One of the functions of a university is to offer an environment for the exchange of ideas across institutions and professions. We want to strengthen this component of the Program by providing a place for a few of the many people who would like to spend a period of time in New York, the communications capital of the world, for purposes of research and writing. We therefore plan to provide facilities and support for two visiting fellows each semester, drawing on candidates from academia, the private sector, government and foreign countries. Candidates will be chosen on the basis of project proposals, with the expectation that work of publishable quality would result at the end of the visit. Research in progress and papers will be discussed during the semester in policy seminars.

The fellows would come with support from other institutions (sabbatical, paid leave, grants, or company released-time); Columbia will supply office space, clerical support, research assistance, access to its facilities, and participation in the research activities.

F. SPEAKING ENGAGEMENTS

Program staff has turned down all consulting. Outside speeches were limited to subjects of academic research, or to providing surveys of policy issues and options. During the year, presentations were given to the following organizations and associations (not including smaller seminars and specialized conferences):

American Business Law Association
American Civil Liberties Union
American Economic Association
Annenberg School of Communications
Annual Telecommunications Policy Research Conference
Association for Public Policy Analysis and Management
Computer and Communications Industry Association
International Communications Association
Law and Society Association
M.I.T. Telecommunications Program
National Association of Regulatory and Utility
Commission
National Rate Setting Conference
Practicing Law Institute
Public Utilities and Transportation Group
Science and Technology Subcommittee of the New York
State Assembly
U.S. Telephone Association

IV. FACULTY RESEARCH AND PUBLICATIONS

One of the important tasks of the Program is to build a broad base of faculty research and to disseminate the results through meetings and publications. Within the year, much faculty interest has been generated through conference participation or organization, research assistance, and the general activity level that creates a critical mass. While our main activity has centered on the Columbia Business School, we have also created active research contacts with other parts of the university.

Our program is part of a major resurgence of telecommunications studies at Columbia University. Within the past year, the School of Engineering has started an electrical engineering-oriented research program; the Gannett Foundation has endowed a major center for electronic journalism affiliated with the School of Journalism. Teachers' College has received an endowed chair for the study of telecommunications in teaching. These efforts nicely complement each other, and jointly establish Columbia University as a major research institution in this field.

A. PUBLICATIONS

1. Books

So far, the following volumes have been published or are forthcoming:

- * Telecommunications Regulations Today and Tomorrow, Harcourt Brace Jovanovich (Business and Law); Selected a "Book of the Month" by Communications Booknotes.
- * The Competition of Television Media, forthcoming, Columbia University Press.
- * European Telecommunications Policy and the Effects of U.S. Deregulation, forthcoming.

Each of the above-mentioned seven conferences will result in a timely book.

2. Research Papers

A Research Papers Series of the Program has been started in order to disseminate early versions of research prior to publication. At present, it includes the following list.

Research Papers Series

1. Noam, Eli. Economies of Scale, Technological Vintage, and the Learning Curve in Cable Television: A Multi-Product Analysis. 1983.
2. -----, Economies of Scale and Regulation. 1984.
3. -----, Electronic Publishing and Information Flows: Europe and the U.S. in Conflict. 1984.
4. Leff, Nathaniel H. Externalities, Information Costs, and Social Benefit-Cost Analysis for Economic Development: An Example from Telecommunications. 1983.
5. Nadel, Mark. COMCAR: A Marketplace Cable Television Franchise Structure. 1983.
6. Noam, Eli. Federal and State Roles in Telecommunications: The Effects of Deregulation. 1983.
7. Nadel, Mark. A Unified Theory of the First Amendment: Divorcing the Medium from the Message. 1983.
8. Noam, Eli. Private Sector Monopolies and Productivity: The Case of Cable Television Franchises. 1983.
9. Nadel, Mark and Eli Noam, eds. The Economics of Cable Television (CATV): An Anthology. 1983.
10. -----, The Economics of Direct Broadcast Satellites (DBS): An Anthology. 1983.
11. -----, The Economics of Low Power Television (LPTV): An Anthology. 1983.
12. -----, The Economics of Multipoint Distribution Service (MDS): An Anthology. 1983.
13. -----, The Economics of Physical Distribution: Video Cassettes/Discs and Movie Theater: An Anthology. 1983.
14. -----, The Economics of Satellite Master Antenna Television (SMATV): An Anthology. 1983.

15. -----, The Economics of Subscription Television (STV): An Anthology. 1983.
16. -----, The Economics of Traditional Broadcasting (VHF/VHF): An Anthology. 1983.
17. -----, The Supply of and Demand for Video Programming: An Anthology. 1983.
18. Pool, Ithiel de Sola. Problems of Access in Electronic Publishing and Cable Television. 1983.
19. Stern, Jill Abeshouse, Krasnow, Erwin G., and Senkowski, R. Michael. The New Video Marketplace and the Search for a Coherent Regulatory Philosophy. 1983.
20. Brown, Donald J. and Heal, Geoffrey M. The Optimality of Regulated Pricing: A General Equilibrium Analysis. 1984.
21. Lawrence, Colin and Spiller, Pablo T. Market Structure, International Trade and Technological Diffusion: A Theoretical Analysis. 1984.
22. Linhart, Peter and Radner, Roy. Costs and Benefits of Long Distance Telecommunications Regulations. 1984.
23. Bower, Richard. The Risk of AT&T's Communications Operations: The Effect of Regulatory Policy on that Risk. 1984.
24. Anderson, Daniel R. On-Line and Off-Line Assessments of Television Viewing. 1984.
25. Hoffman, Donna L. Program Impact: The Key Measure of Audience Response. 1984.
26. Garrick, George. The Correlation Between TV Viewing and Product Purchase: An Empirical Analysis. 1984.
27. Roberts, Elizabeth J. Qualitative Ratings: Measuring Viewer Involvement. 1984.
28. Delaney, Thomas F. Qualitative Audience Measurement: An Application. 1984.
29. Spaeth, James. The Commercial Audience: The Right Measure of Advertising Value. 1984.
30. Geller, Henry. The Role of Future Regulation: Licensing, Spectrum Allocation, Content, Access, Common Carrier, and Rates. 1984.

31. Botein, Michael. Technological and Regulatory History of the Different Media: An Interpretive Survey. 1984.
32. Owen, Bruce and Wildman, Steven. Program Competition and Diversity in the New Video Industry. 1984.
33. Henry, Jane. The Economics of Pay Television Media. 1984.
34. Levy, Jonathan and Pitsch, Peter. Statistical Evidence of Substitutability Among Video Delivery Systems. 1984.
35. Block, Harry and Wirth, Michael. The Broadcasters: The Future Role of Local Stations and the Three Networks. 1984.
36. Schaefer, Helmut. A European View of Competition and Control in a Multi-Media Society. 1984.
37. Jouhy, Ernest. Why the New Video Media Find an Explosive Market in the Third World. 1984.
38. Baer, Walter. Telephone and Cable Companies: Rivals or Partners in Video Distribution? 1984.
39. Waterman, David. Videocassettes, Videodiscs, and the Role of Theatrical Distribution. 1984.
40. Thorpe, Kenneth. The Impact of Competing Technologies on Cable Television. 1984.
41. White, Lawrence. Antitrust and Video Markets: The Merger of Showtime and the Movie Channel as a Case Study. 1984.
42. Besen, Stanley and Johnson, Leland. Regulation of Broadcast Station Ownership: Evidence and Theory. 1984.
43. Noam, Eli. Telecommunications Policy on the Two Sides of the Atlantic. 1984.
44. ----- . The AT&T Divestiture and Its Impact on Europe. 1984.
45. ----- . Economies of Scale in Cable Television: The Prospects for Competitive Entry. 1984.
46. ----- . American Deregulation of Telecommunications and Its Impact on Western Europe. 1984.
47. Mortimer, Averell H. An Analysis of Cable Television, Multi-Channel Distribution Systems and Direct Broadcast Systems. 1984.

B. PROGRAM-AFFILIATED FACULTY AND RESEARCHERS

The following is a list of program-affiliated full-time and part-time faculty and researchers.

Eli Noam

Eli M. Noam is an Associate Professor at the Columbia Business School and the director of its Research Program in Telecommunications and Information Policy; he has also taught at the Columbia Law School and has been a visiting professor at the Economics department, the Woodrow Wilson School of Princeton University. He has received fellowships for the study of telecommunications from the German Marshall Fund and the National Science Foundation, and has been a member of the organizing committee for the Annual Telecommunications Policy Research Conference. Among his publications are articles in the Journal of Political Economy, the Quarterly Journal of Economics; papers in law reviews and interdisciplinary journals; the edited volumes, Telecommunications Regulation: Today and Tomorrow and the forthcoming Competition of Television Media. He is presently completing the monograph European Telecommunications Policy in Transition. Professor Noam serves on the editorial boards of the Columbia University Press and of the journals, Telecommunications Policy, Telephone Law and Business, and Telematics; he is the general editor of the Columbia University Press book series, "Business, Government, and Society." He received an A.B. in 1970 from Harvard, and a Ph.D. in Economics and a J.D. Law degree from the same university in 1975.

Roberta Tasley

Roberta Tasley is Executive Director of the Research Program in Telecommunications and Information Policy. While completing a Master's Degree in the Interactive Telecommunications Program at New York University, Ms. Tasley served as Program Administrator and Instructor. She designed, developed and taught the Telecommunications Clinic and a seminar series entitled the "Social Impact of Telecommunications." She has done consulting on the social impact of electronic work at home for organizations such as New York University, Queensboro College, and the Economist Intelligence Unit. Prior to becoming involved in the field of interactive telecommunications, she initiated and managed a number of social service programs in San Francisco.

John Chapman

John Chapman, associate of the Program and a Ph.D. candidate at the Columbia Business School, has served as a member of the Justice Department Task Force on computers and communications; participated in the FCC's Computer Inquiry II proceedings, and was involved in Judge Greene's review of AT&T's Plan of Reorganization. His present research is on the impact of divestiture on the structure of the long distance telephone market, the impact of access charges on the AT&T/Communications rate of return and the rates of return for the BOCs, and a study on the emergence of by-pass technologies and services.

John Chapman holds B.A. and B.S. degrees in Electrical Engineering from Brown University, a J.D. from Boston University, and M.B.A. from the University of Southern California.

Donna Demac

Donna Demac is Staff Council, Office of Communications of the United Church of Christ, and Adjunct Professor in the Interactive Telecommunications Graduate Program at New York University, where she teaches courses on the economic, political, and international issues of satellite communications. She conducts research on Congressional and federal court proceedings pertaining to common carrier, broadcast, cable TV and computerized media; and participates in Federal Communications Commission advisory committees for international radio conferences. Ms. Demac has received grants from the H.V. Kaltenborn Foundation, was a Fellow for the Overseas Development Council, and a Journalism Fellow of the Henry Luce Foundation; she spent one year at the Institute for Southeast Asian Studies in Singapore. Her recent papers include "Spectrum Grab vs Equitable Access: The ITU Debate and its Relevance for the U.S." and "Mending or Aggravating Divisions Within Communities: A Study of the Social Effects of Electronic Information Systems." Ms. Demac is coordinator of the conference, "Tracing New Orbits."

Donna Demac holds a B.A. from St. John's College and a J.D. from Boston College Law School.

William J. Drake

William J. Drake is a Ph.D. candidate in the Department of Political Science, Columbia University; and a Research Associate with the Research Program on Telecommunications and Information Policy, where he was Rapporteur for the seminar series. His dissertation research deals with international competition and regulation in telecommunications,

with particular emphasis on policies concerning telematics and trans-border data flow. Mr. Drake has received a number of research grants, including an Albert Gallatin Fellowship at the Graduate Institute for International Studies in Geneva, Switzerland, for research on the International Telecom Union and related institutions.

William Drake holds a B.A. from Northwestern University, an M.Phil. in Political Science from Columbia and is a certified candidate in the Columbia Institute on Western Europe.

Geoffrey Heal

Geoffrey Heal is Professor at the Columbia Business School, where his teaching and research interests include economic theory and regulatory economics and public finance. He has been visiting professor at the Woodrow Wilson School of Public and International Affairs, Princeton University; as well as of the University of Paris, Stanford University, and Yale, and a professor of Economics at the University of Essex, England.

Professor Heal has published several books and has recently completed a general equilibrium analysis of the optimality of regulated pricing, two-part tariffs in telecommunications, and user charges.

Geoffrey Heal holds B.A. and Ph.D. degrees in Economics from Cambridge (England).

Donna L. Hoffman

Donna L. Hoffman is a Professor at the Columbia Business School. Her research interests include audience response measurement, advertising effectiveness, and the graphical representation of multivariate data in marketing research. Currently, she is examining new methodologies for the measurement of the viewing audience and studying the relationship between audience response to programs and advertising effectiveness. Professor Hoffman has worked as a statistical consultant for universities and private firms, and also teaches in Columbia University's Executive Programs for Marketing Management and Marketing Research. She is a reviewer for the Journal of Marketing Research, and a member of the Psychometric Society, the American Marketing Association and the Institute for Management Science. Professor Hoffman holds an A.B. in Psychology from the University of California at Davis and M.A. and Ph.D. degrees in Quantitative Psychology from the University of North Carolina.

Colin Lawrence

Colin Lawrence is a Professor at the Columbia Business School, where his research includes the transmission process of monetary policy, banking, and international trade. His research work also deals with electronic fund transfers and

banking, and the effects of electronic banking on the monetary system. He has been a consultant and visiting scholar to the Federal Reserve Board of Governors and has lectured at the University of Chicago and the Illinois Institute of Technology. He is co-author of "Market Structure, International Trade and Technological Diffusion: A Theoretical Analysis," and is coordinator of the conference on "Electronic Banking and the Monetary System."

Colin Lawrence holds a B.A. from Hebrew University, and M.A. and Ph.D. degrees in Economics from the University of Chicago.

Nathaniel Leff

Nathaniel Leff is Professor at the Columbia Business School, where his teaching includes international business and international economics. His current research interests include the economics of telecommunications in developing countries and cost-benefit studies of telecommunications infrastructure. Professor Leff is widely published on the economics and politics of developing countries, and is included in a recent bibliographical directory of two hundred outstanding American economists.

Nathaniel Leff holds a B.A. from Harvard, an M.A. from Columbia University and a Ph.D. in Economics from M.I.T.

Harvey Levin

Harvey Levin is an August B. Weller Professor of Economics and Director of the Public Policy Workshop at Hofstra University. He is an economic specialist, consultant, and author on broadcast organization and regulatory policy, and economic aspects of the radio spectrum resource. He has held special consultantships relating to telecommunications economics and public policy for the Office of Technology Assessment of the United States Congress, the General Accounting Office, the Bureau of Economics/Federal Trade Commission, the Ford Foundation, and the Brookings Institute, among other organizations. Professor Levin is the author of Fact and Fancy in Television Regulation, The Invisible Resource, and Broadcast Regulation and Joint Ownership of Media. He has written some thirty articles on related issues, and is the recipient of numerous grants and awards.

Harvey Levin holds an A.B. from Hamilton College and A.M. and Ph.D. degrees from Columbia University.

David Lewin

David Lewin is Professor and Coordinator of the Doctoral Program at the Graduate School of Business, Columbia University, where his teaching and research interests include industrial relations, human resource management, and conceptual foundations of business. Prof. Lewin has been visiting scholar of the University of California (Berkeley and Los Angeles); and has received grants from the Ford Foundation, the National Science Foundation, and the U.S. Department of Labor.

Professor Lewin is author and co-author of four books and numerous journal articles including, "The Regulation of Public Sector Labor Relations: Theory and Evidence," Journal of Labor Research, Spring, 1985. He is coordinator of the conference on "Employment Problems in an Information Age."

David Lewin holds a B.S. from California State (Los Angeles), and M.B.A and Ph.D. degrees (Industrial Relations) from the University of California (Los Angeles).

Mark Nadel

Mark Nadel is an Adjunct Assistant Professor at the Cardozo and New York Law Schools and a research associate at the Columbia University Research Program on Telecommunications and Information Policy. He teaches and writes on issues of economics and the First Amendment in the media. His publications include, "A Unified Theory of the First Amendment: Divorcing the Medium from the Message," "COMCAR: A Marketing Cable Television Franchise Structure," and "Anti-trust issues in the New Media."

Mark Nadel holds a B.A. from Amherst College and a J.D. from Harvard Law School.

Dennis Quinn

Dennis Quinn is a Research Associate for the Research Program on Telecommunications and Information Policy, and has been a Ph.D. candidate at Columbia. In 1985 he will assume a position as assistant professor in the Business, Government and Society Program at the University of Washington. His primary interests are industrial policies, government/business relations, and political science change. He has written on European and American industrial policies.

Dennis Quinn holds B.A., M.A. and Ph.D. degrees from Columbia University and an M.S. from the London School of Economics.

Robert Shay

Robert Shay is a Professor at the Columbia Business School, where he teaches courses on banking and finance. He is active and involved in the research of electronic fund transfers and electronic banking. He is a member of the governing board of the Credit Research Center of the Krannert School of Purdue University and has served as consultant to the National Commission on Consumer Finance and the New York Law Revision Commission. His publications include The Consumer Finance Industry: Its Costs and Regulation; Consumer Sensitivity to Finance Rates; Licensed Lending in New York; and Retail Credit Card Use in New York.

Professor Shay is director of the conference on "Electronic Banking and the Monetary System."

Robert Shay received B.A., M.A. and Ph.D. degrees from the University of Virginia.

Donna Sockell

Donna Sockell is an Assistant Professor in the Columbia Business School, where her teaching and research interests are industrial and labor relations. Her current area of research is on the impact of advanced technologies on human resource functions in the computer, telephone, and electronics components industries and their labor and industrial relations. Professor Sockell was project director on a study of economic performance of employee owned firms for the New York State School of Industrial and Labor Relations and has been a research analyst with the National Labor Relations Board in Washington. She is coordinator of the conference on "Employment Problems in an Information Age."

Donna Sockell holds a B.A. from Union College (New York), and M.I.L.R. and Ph.D. degrees from Cornell.

Kenneth Thorpe

Kenneth Thorpe is an Assistant Professor of Public Health and Public Policy at Columbia University. He is currently a Ph.D. candidate in policy analysis, and a staff member in the Economics Department of the Rand Corporation. He has taught Business and Management at Pepperdine University. Professor Thorpe's research has centered on the economics of the cable television industry, as well as on developments in the newspaper industry. He served with the Human Resources and Community Development Division of the Congressional Budget Office and with the Department of Commerce.

Kenneth Thorpe received a B.A. from the University of Michigan in Political Science and an M.A. in Public Policy Sciences from Duke University.

Frederick T.C. Yu

Frederick Yu is CBS Professor of International Journalism at the Columbia School of Journalism. He is former staff member of the News-Sun (Springfield, Ohio), The Washington Post, and Times Herald. He is the author of Mass Persuasion in Communist China and Get it Right, Write It Tight. Professor Yu is editor of Behavioral Science and the Mass Media.

Frederick Yu holds a B.A. from Nanking and M.A. and Ph.D. degrees from the University of Iowa.

C. SEMINAR AND CONFERENCE SPEAKERS

The following Columbia faculty have or will have participated as speakers in our seminars and conferences.

Ann Bartel

Ann Bartel is an Associate Professor at the Columbia Business School where her current research includes labor mobility and productivity in high technology industries. She holds a B.A. from Pennsylvania and M.A. and Ph.D. degrees from Columbia University.

Rajeev Batra

Rajeev Batra is an Assistant Professor at the Columbia Business School where his teaching and research interests include marketing and advertising management, and television audience measurement. He holds a B.A. from Delhi, an M.S. from University of Illinois, and an M.B.A. from the Indiana Institute of Management.

Robert Drazin

Robert Drazin is an Assistant Professor at the Columbia Business School where his research interests include management of organizations, and organizing theory, behavior and innovation. He holds a B.B.A. from Baruch and M.A. and Ph.D. degrees from the Wharton School.

Frank Lichtenberg

Frank Lichtenberg is an Assistant Professor at the Columbia Business School where his research focuses on the determinants and consequences of R & D performance by U.S. industrial firms. He has taught at Harvard and the University of Pennsylvania. He holds a B.A. from Chicago, and M.A. and Ph.D. degrees from Pennsylvania.

D. RESEARCH IN PROGRESS

The following topics represent research being conducted by program-affiliated faculty and researchers:

- * The impact of divestiture on the structure of the long distance telephone market
- * The impact of access charges on the AT&T/Communications rates of return and the rates of return for the BOCs
- * A general equilibrium analysis of the optimality of regulated pricing
- * By-pass technologies and services
- * Two-part tariffs in telecommunications and user charges
- * New methodologies for the measurement of television viewing audiences and the relationship between audience and advertising effectiveness
- * The effects of electronic banking and the monetary system
- * The economics of telecommunications in developing countries and their cost-benefit structure
- * Employment problems in an information age
- * European telecommunications policy in transition
- * Optimal deregulation and the financial analysis of AT&T divestiture
- * Electronic funds transfer and the monetary system
- * Social impacts of telecommunications
- * Information technology and the service sector
- * ITU and international satellite issues
- * Comparative industrial policy
- * The impact of new information systems on the health care industry
- * The economics of cable television and STV

Seymour Melman

Professor of Industrial Engineering and Operations Research, Seymour Melman holds a B.S. in economics from the College of the City of New York and a Ph.D. from Columbia University. He is a well-known national and international speaker on the topics of military spending and work organization. He has published many articles and books, including, Profits Without Production.

John Ruggie

Professor of Political Science, John Ruggie holds a B.A. from McMaster University (Canada), and M.A. and Ph.D. degrees from University of California, Berkeley. His teaching fields include international relations theory and international political economy. He is author and co-author of a number of books, including, International Responses to Technology: Regimes, Institutions and Technocrats. He has also edited a volume on transborder data flow issues.

Larry Selden

Larry Selden is Professor of the Graduate School of Business, Columbia University, where his teaching and research interests include capital markets, financial controls, and corporate finance; his current telecommunications research is on optimal deregulation, and the financial analysis of AT&T's divestiture. Professor Selden has been director and/or management consultant for numerous corporations and investment banks, and has received National Science Foundation research grants. Larry Selden holds a B.A. from Washington University (St. Louis), and M.B.A. and Ph.D. degrees from the University of Pennsylvania.

Lacy Glenn Thomas

Tom Thomas is an Assistant Professor at the Columbia Business School, where he teaches courses in regulatory economics, microeconomic theory, and applied econometrics. He has also taught at the University of Illinois. His research and publications focus on the nature, effects, and reform of Federal regulations. He received a B.A. from Vanderbilt and M.A. and Ph.D. degrees from Duke University.

- * International competition and regulation in telecommunications: policies concerning telematics and trans-border data flow
- * The economic functions of editors and program packagers
- * First Amendment issues in media access
- * Labor mobility and productivity in high technology industries
- * Determinants and consequences of R&D performance by U.S. firms
- * International institutional responses to technology
- * Competition of video media
- * Cost and production functions of cable television
- * The valuation of video channels
- * Antitrust issues and the new video media
- * Electronic publishing, data base suppliers, and transborder issues

V. CONTACTS WITH OTHER INSTITUTIONS

The Program has established active contacts with other researchers and institutions. In addition to becoming a meeting ground for New York area private sector experts, we are interacting with telecommunications-oriented academics from Brooklyn Polytechnic Institute, Cardozo, CUNY, Hofstra, Hunter, New York Law School, New York University, and Rutgers, and provide a forum for researchers interested in similar questions. Outside the New York area, we are jointly sponsoring a conference with the Wharton School of Finance of the University of Pennsylvania, and are regularly interacting with other academic programs across the country.

The international links of our Program were actively established over the last year. Spurred by our research project on European telecommunications, personal contact and exchange of information with hundreds of European researchers and institutions were established. As a consequence, a growing number of European visitors passing through New York visit Columbia or plan to do so -- for example, the recently appointed first Director General of the new British regulatory agency, OFTEL. We also receive an increasing number of invitations to participate in telecommunications activities in Europe, and have, for example, become an American participant of a project of the German Max Planck Institute for International Private Law. We have also collected materials on the broadcasting and telephone systems of a large number of developing countries, thus creating a library base for future work.

What sets us apart from other academic communications research programs is a) our location in New York, the center of world communications, b) our business school base, and c) our reliance on economics as the primary--though not exclusive--research methodology. To the best of our knowledge, there is no other business school-based telecommunications research center in the country; other programs have roots in law schools, communications science, journalism departments, engineering and arts schools. Our Program, which draws strength from its location within the Columbia Business School, is in a position to provide a unique setting and the human resources for the academic study of the economics, business, regulation, and applications of telecommunications.

RESEARCH PROGRAM IN TELECOMMUNICATIONS
AND INFORMATION POLICY

Graduate School of Business
Columbia University

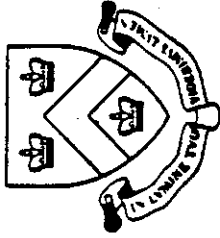
STATEMENT OF POLICY RELATING TO ACADEMIC
INTEGRITY AND CONFLICT OF INTEREST

The Research Program in Telecommunications and Information Policy at Columbia's Graduate School of Business conducts a program of research, conferences and symposia on telecommunications and information industry issues.

To assure the academic integrity of the Program, in accordance with University principles relating to the conduct of research under its sponsorship, the Program's policies are determined by the Faculty of Columbia Business School with the advice of an Advisory Board drawn from persons in government, industry, universities, and other constituencies. The Program is funded largely from corporate contributors, government grants, independent foundations, and income-generating publications. Contributors to the Program do not exercise control over its policies, and gifts and grants to the Program are made without qualification.

Researchers participating in the Program's studies are required to disclose relationships with companies, groups, and institutions which may have positions on the issues under research.

ATTACHMENTS 1.



RECORD

Research Program in Telecommunications Founded at B-School

The establishment of a major new research program in telecommunications and information policy at the Business School has been announced by dean John C. Burton. The program will be directed by associate professor Eli Noam, a specialist in communications policy and the electronic media.

In making the announcement Burton said: "For a long time telecommunications in the United States consisted largely of one telephone company, three television networks and one telegraph company, all tightly regulated. All this is rapidly changing as new technology, deregulatory philosophy and business initiative join to usher in a new information era.

"As these changes occur at an accelerating pace, it is increasingly important to understand them, to research their economic and social implications and to analyze public policy alternatives. It is fitting that Columbia Business School should be at the leading edge of this research, since a business school, with its interdisciplinary orientation, is an ideal

focus for such work."

Burton said that the research program is funded in part by an unrestricted charter grant from the New York Telephone Company. The funding has enabled the school to launch the new project. Other unrestricted contributions have come from CompuServe, Continental Telecom, Cox Cable Communications, Graphic Scanning, GTE Service Corporation, GTE Sprint Communications, Northern Telecom Ltd. (Business Systems) and Southern New England Telephone Company. Additional support for specific projects has come from the National Science Foundation, the German Marshall Fund of the United States and the Friedrich Naumann Foundation.

Noam noted that the program's goal is to encourage independent research by faculty and Ph.D. students at the Business School and the University at large. A second goal is to provide a meeting ground for participating experts from business, academia and government. Symposia, conferences, research papers

and publications will all emanate from Columbia Business School's program, he said.

Research projects will include international telecommunications, the economics of cable television, the AT&T divestiture, state regulation and the First Amendment concerns of the new technology. Several other projects are underway. A research-working paper series, including a nine-volume anthology of working papers on the economics of the different video media, is planned.

Immediate activities include:

- A symposium series on telecommunications. The series was launched on December 15 with a symposium conducted by professor Ithiel de Sola Pool, director of MIT's Research Program on Communications Policy, on "The problems of access in electronic publishing and cable television." On January 25, a symposium focused on "The new video marketplace," with a presentation by Erwin C. Krasnow, senior vice-president and general counsel of the National

(Continued on page 2)

(Continued from page 1)

Association of Broadcasters, and

- A two-day conference (April 13-15) on "Competition among video transmission media." This event, which will bring together academics, industry experts and government representatives (among them Federal Communications Commission officials), will examine economic realities of inter-media competition and ownership among broadcasting, cable television, direct broadcast satellite (DBS) and several other methods of video distribution. The conference will be held at Arden House, Columbia's Harriman, New York, conference center.

The program is convening an advisory board under the chairmanship of George Shinn, executive-in-residence at the Business School and retired chairman of the First Boston Corporation. Sen. Frank Lautenberg (D, N.J.), an alumnus of the school and a pioneer in the information industry, is honorary chairman of the board.

A member of the Business School faculty since 1976, Noam is a 1970 graduate of Harvard College who has both M.A. and Ph.D. degrees in economics from Harvard and a J.D. degree from Harvard Law. He is the author of numerous articles on telecommunications, regulatory policies, federalism and related subjects.

HERMIES

COLUMBIA BUSINESS SCHOOL MAGAZINE

Research on Telecommunications On-Line at the Business School

A major new research program in telecommunications and information policy has been established at Columbia Business School. The program will encourage faculty research in telecommunications and will sponsor symposia and conferences on major issues.

The program is directed by Professor Eli M. Noam, a specialist in communications policy and the electronic media.

In making the announcement Dean John C. Burton said: "For a long time telecommunications in the United States consisted largely of one telephone company, three television networks, and one telegraph company, all tightly regulated. All this is rapidly changing as new technology, deregulatory philosophy, and business initiative join to usher in a new information era.

"As these changes occur at an accelerating pace, it is increasingly important to understand them, to research their economic and social implications, and to analyze public policy alternatives. It is fitting that Columbia Business School should be at the leading edge of this research, since a business school, with its interdisciplinary orientation, is an ideal focus for such work.

"I am especially delighted that Eli Noam, a respected economist and attorney, as well as an interna-

tionally recognized authority on telecommunications, will be directing this important new project."

Burton said that the research program is funded in part by an unrestricted charter grant from the New York Telephone Company, which enabled the School to launch the new project. Other unrestricted contributions have come from CompuServe, Continental Telecom, Cox Cable Communications, Graphic Scanning, GTE Service Corporation, GTE Sprint Communications, Northern Telecom Ltd. (Business Systems), and Southern New England Telephone Company. Additional support for specific projects has come from the National Science Foundation, the German Marshall Fund of the United States, and the Friedrich Naumann Foundation.

The first research projects in the program include studies of international telecommunications and First Amendment concerns of the new technology. A research working-paper series is planned for the new program, part of a nine-volume anthology of working papers on the economics of the video media.

The symposia and conferences conducted under the auspices of the program will provide a forum for telecommunications experts from business, government, and the academic world.

An advisory board for the program has been named under the chairmanship of George Shinn, executive-in-residence at Columbia Business School and retired chairman of the First Boston Corporation. Senator Frank Lautenberg, an alumnus of the School and a pioneer in the information industry, is honorary chairman of the advisory board.

Drive to Forge Ahead in Electronic Mass Media

By Koos Bekker

Most academic studies of the electronic media treat them as a mass pathology — focusing on topics like the effect of violence on television. Yet many areas of the vibrant and fast-paced telecommunications industry are not accorded any serious attention at academic institutions, notes Eli Noam, director of the new Research Program in telecommunications and Information Policy.

Noam, a recently tenured associate professor, heads up a drive aiming to address this deficiency and to position Columbia as the leading business school for the study of telecommunications.

Columbia appears ideally situated for this purpose. In an interview with *The Bottom Line*, Noam pointed out that Greater New York is emerging as the telecommunications capital of the world. It boasts the big three television networks, AT&T, IBM, GTE, ITT, several major cable companies and some of the greatest users of telecommunications, such as banks and corporate headquarters.

Lack of Space

His own unit is somewhat less illustrious at this stage. Funded by grants from New York Telephone and several other corporations, the group still huddles in a small office on the seventh floor of Uris Hall. Computer terminals, filing cabinets, printed matter strewn on every horizontal surface and the sheer number of bodies per cubic meter suggest the control room of a well-shaken submarine.

Seedbed

Apart from Noam, the group is comprised of Roberta Tasley as Executive Director and four

part-time research assistants, mostly students. They see their function as providing a seedbed for faculty and student research of telecommunications and information policy issues. They are also creating a meeting ground for participants in this field.

One of the problems with the study of telecommunications, said Noam, is that so many disciplines are involved. At Columbia alone, the Schools of Engineering, Law, International Affairs, Business and Journalism all have an interest in the field. In the business world, common carriers such as telephone companies and mass media concerns such as TV networks view themselves as operating in vastly different industries, and hardly communicate at all.

Seminars

A series of monthly seminars have been held to create a forum. The first, during December last year, looked at "The problems of access in electronic publishing and cable TV." This was followed by a symposium on "The new video marketplace."

Quick to react to the US threat of divorcing UNESCO, the February seminar investigated international organizations and US telecommunications policy. Among the participants was Under Secretary General Michel Doo-Kingue, the number two man at the UN.

Video Media

One of the next meetings will be an ambitious three-day conference at Arden House to assess the implications of "Rivalry among video transmission media." This includes the fast-paced worlds of cable television,

direct broadcasting systems, subscription and low-powered television, the booming video cassette field and even movie theater distribution.

"There has been a lot of talk about the new media, but the reality of competition — for what services, which geographic regions, which types of viewers — these things haven't yet been seriously analyzed," said Noam. Research papers delivered will be published as an edited conference volume.

Alumni Network

An effort is currently under way to set up a network of Columbia alumni involved in telecommunications. The Research Program is working with the Communications Management Association to link alumni to the School, to each other, and to give business students greater exposure to the industry.

Although space hardly seems to allow for it, a cable television data bank was started and is already being touted as one of the most extensive collections of this nature.

Respect

Noam pointed out that the electronic media still lack intellectual respectability. While few doubt the power of television and recent developments have indicated a vast potential for media such as cable, DBS and the like, academic institutions have been slow to accord electronic media the same standing as the traditional print media.

Deregulation

Deregulation of telecommunications will not eliminate its enormous regulatory complexity, Noam feels. "In our field the sum total of deregulation is less than the sum of the parts. The fact that we cut half our current regulations over the next few years doesn't mean we'll make the game simpler by half."

"To the contrary. Partial regulation is a much more complicated game than if you were playing strictly by the rules — just look at Manhattan traffic."

Stays A Maze

Convergence of media and a greater number of technologies and players will see to it that telecommunications remains a maze of complexity, said Noam. He also doubts the political viability of a "completely free" system, and assumes a "partially deregulated world of the future" in his current research.

Two further topics seem to attract particular attention at the Research Program. The first is the question of how the information industry of the future will affect other parts of society such as financial services, labor unions, professional services and even the very nature of work.

Elsewhere

Another area — in which Noam himself is currently engaged — is the future of the telecommunications industry in other industrialized countries. Telecommunications have always been government-dominated in the vast majority of states outside the US. Scarcity arguments (for instance the limited nature of the radio frequency band) have mostly been used to justify state ownership of electronic media in countries where newspapers, books and magazines are published by the private sector.

Open Up?

What interests Noam in particular is whether the abundance of channels possible with the new electronic media will lead governments to open up the industry to private access, or whether the potential loss of influence over the political content will cause them to hang on. He is currently working on a book titled *European Telecommunications Policy in Transition*.

The Research Program recently announced the formulation of an advisory board under George Shinn, executive-in-residence here and former chairman of First Boston. Frank Lautenberg, the Democratic senator from New Jersey and a pioneer in the information industry, serves as honorary chairman of the board.

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The Research Program in Telecommunications and Information Policy

The Research Program in Telecommunications and Information Policy was created in 1983 to encourage and concentrate telecommunications research at the Business School. It was established following a major conference, held at Arden House in 1982, to explore the regulatory implications of the divestiture of AT&T and the structural changes in the telecommunications industry. *Telecommunications Regulation Today and Tomorrow*, a recently published volume edited by Professor Eli Noam, director of the program, is a collection of the papers presented at that conference.

Noam says that one of the program's aims is to provide a meeting ground for representatives of business, academia and government to discuss telecommunications issues. A monthly symposium at the School features talks by professors, consultants, and executives in industry and in the nonprofit sector.

State and federal regulation, issues regarding patents, copyrights and the extent of "free speech" of the new technology, the divestiture of AT&T, and the economics of cable television are some of the subjects currently under study. A research conference on competition among video media will take place at Arden House in the spring of 1984. Another project, sponsored by the German Marshall Fund, examines the differences in development of the telecommunications industry in Europe and in the United States. A study designed to build up a data bank on cable television has been underwritten by the National Science Foundation.

An advisory board for the program is now being convened under the chairmanship of George L. Shinn, executive-in-residence and former chairman and chief executive officer of The First Boston Corporation. United States Senator Frank R. Lautenberg, an alumnus of the School and pioneer in the data processing industry, is honorary chairman of the advisory board.

The program's charter sponsor, the New York Telephone Company, has recently been joined by other corporate sponsors, including GTE Service Corp.; GTE Sprint Communications Corp.; Northern Telecom, Inc.; Continental Telecom Inc.; Cox Cable Communications, Inc.; The Southern New England Telephone Co.; Graphic Scanning; CompuServe; and the Friedrich Naumann Foundation.

Eli M. Noam:
Understanding the Regulation of Deregulation
"The 'information age' is upon us," says Professor Eli M. Noam, "and the changes that are ushering it in—deregulatory philosophy, new technology, and business initiative—are occurring at a dizzying pace." As director of the Research Program in Telecommunications and Information Policy, one of Noam's goals is to understand these changes, to research their economic and social implications, and to analyze public policy alternatives.

"The term 'deregulation' is not particularly accurate to describe what has been happening," says Noam. "We are not really eliminating governmental rules; we are primarily changing their nature from rules of behavior in pricing to rules that regulate industry structure. Communications market segments are currently being defined by the FCC, the courts, and Congress. Companies that operate in some segments are often restricted from operating

in others and are thus kept from competing head-on.

Noam believes this type of regulation will not work in the long run. "As market lines blur, structural regulation becomes unsustainable. The advent of new communications technologies—satellite and microwave broadcasting, fiberoptics, and cable television, for example—sharpen the issue: Where is new regulation proper and where has it become unnecessary? The new environment is affecting all players. Companies like AT&T," says Noam, "are becoming entrepreneurial since they realize that they could, like Western Union, become a once-dominant communications company that failed to keep pace with technology."

Noam describes the telecommunications program as unique in the New York area, "which, after all, houses most of the headquarters of the communications industry. The Business School's interdisciplinary orientation," he adds, "provides a particularly good foundation for such work."

ATTACHMENTS 2.

TELECOMMUNICATIONS REGULATION TODAY AND TOMORROW

**edited by
Eli M. Noam**

**LAW & BUSINESS, INC.
HARCOURT BRACE JOVANOVIĆ, PUBLISHERS**

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Columbia University Graduate School of Business
Conference on
"REGULATION AND NEW TELECOMMUNICATIONS NETWORKS"
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RESEARCH PROGRAM IN TELECOMMUNICATIONS AND INFORMATION POLICY

Graduate School of Business
Columbia University

in collaboration with

THE FRIEDRICH NAUMANN FOUNDATION

"RIVALRY AMONG VIDEO TRANSMISSION MEDIA:
ASSESSMENT AND IMPLICATIONS"

April 13 - 15
1984

Arden House
Harriman, New York

The objective of the conference on the rivalry among video transmission media is to clarify the nature of the interrelation among conventional broadcasting, cable TV and mini-cable, satellite and microwave broadcasting, video recordings, telephone transmission, and several other video media. Though such interaction has major consequences for United States and international media policies, it has been more asserted than investigated in detail. Our aim has been to generate a series of research papers by experts on the subject, and to discuss the findings and their policy implications among U.S. and international academics, policy makers, and industry participants.

PROGRAM

Friday, April 13

5:30 p.m. Reception

6:15 p.m. Dinner

7:30 p.m. Evening Session

Chairman: William Finneran, Chairman, New York State
Commission on Cable Television

Opening Remarks: Eli Noam, Graduate School of Business,
Columbia University

Speakers: Henry Geller, The Washington Center for Public
Policy Research

"The Role of Future Regulation: Licensing,
Spectrum Allocation, Content, Access, Common
Carrier, and Rates."

Michael Botwin, Communications Media Center,
New York Law School.

"Technological and Regulatory History of the
Different Media: An Interpretive Survey."

Discussant: Stephen Sharp, Skadden, Arps, Slate, Meager &
Flom; former Commissioner, Federal Communi-
cations Commission.

Saturday, April 14

8:00 a.m. Buffet Breakfast

9:00 a.m. First Morning Session

Chairman: Christopher Sterling, Center for Telecommuni-
cations Studies, George Washington University.

Speakers: Bruce Owen and Steven Wildman, Economists, Inc.

"Program Competition and Diversity in the New
Video Industry."

Jane Henry, Communications Studies and Planning,
International.

"The Economics of Pay Television Media."

Discussants: John Woodbury, National Cable TV Association

John Abel, National Association of Broadcasters

Stuart Brotman, Communication Strategies, Incorporated

10:45 a.m. Coffee Break

11:00 a.m. Second Morning Session

Chairman: Oscar Gandy, Department of Communications Arts and Sciences, Howard University

Speakers: Jonathan Levy and Peter Pitsch
Office of Planning and Policy,
Federal Communications Commission

"Statistical Evidence of Substitutability Among Video Delivery Systems."

Eli Noam, Graduate School of Business, Columbia University

"Economies of Scale in Cable Television: The Prospects for Competitive Entry."

Michael Wirth and Harry Bloch
Departments of Mass Communications and Economics,
University of Denver

"The Broadcasters: The Future Role of Local Stations and the Three Networks."

Discussants: Douglas Webbink, Federal Trade Commission

Mark Nadel, Columbia Business School and Cardozo Law School

12:30 p.m. Lunch

2:00 p.m. First Afternoon Session

Chairman: Juergen Wickert, Representative to the United Nations of the Friedrich Naumann Foundation.

Speakers: Helmut Schaefer, Member of the German Bundestag,
Spokesman of the Media Commission, European Liberal and Democratic Parties.

"A European View of Competition and Control in a Multi-Media Society."

Speakers: Ernest Jouhy, Frankfurt University

"Why the New Video Media Find an Explosive Market in the Third World."

Discussants: Juergen Wickert, Representative to the United Nations of the Friedrich Naumann Foundation

Michel Doudou Diene, UNESCO, Representative to the United Nations.

3:30 p.m. Coffee Break

3:45 p.m. Second Afternoon Session

Chairman: Paul Fagan, American Society of Composers, Authors, and Publishers

Speaker: Walter Baer, Times Mirror Company.

"Telephone and Cable Companies: Rivals or Partners in Video Distribution?"

Discussant: John Hopley, New York Telephone Company

Speaker: David Waterman, Annenberg School of Communications, University of Southern California

"Videocassettes, Videodiscs, and the Role of Theatrical Distribution."

Discussant: Marc Porat, Private Satellite Network, Inc.

6:30 p.m. Dinner

Sunday, April 15

8:00 a.m. Buffet Breakfast

9:00 a.m. First Morning Session

Chairman: John Redpath, Home Box Office

Speakers: Kenneth Thorpe, School of Public Health, Columbia University

"The Impact of Competing Technologies on Cable Television."

Speakers: Lawrence White, Graduate School of
Business Administration, New York
University

"Antitrust and Video Markets: The Merger of
Showtime and the Movie Channel as a Case
Study."

Stanley Besen and Leland Johnson, Rand
Corporation

"Regulation of Broadcast Station Ownership:
Evidence and Theory."

Discussants: Harvey Levin, Department of Economics,
Hofstra University

Nolan Bowie, Aspen Institute, Program in
Communication and Society

10:45 a.m. Coffee Break

11:00 a.m. Second Morning Session

SUMMARY ROUND TABLE

Chairman: Erwin Krasnow, Verner, Lipfert, Bernhard, and
McPherson

Panelists: Bruce Owen, Stanley Besen, Henry Geller, Helmut
Schaefer, Peter Pitsch, Samuel Simon

12:30 p.m. Lunch

2:00 p.m. Departure

PARTICIPANTS LIST
COLUMBIA UNIVERSITY CONFERENCE
"RIVALRY AMONG VIDEO TRANSMISSION MEDIA: ASSESSMENT AND IMPLICATIONS"

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Elisabetta di Cagno
Editor and Chief
Hermes

Steve Knoll
New York Times

Pat Wechsler
Dun's Business Month

ATTACHMENTS 3.

Beyond Ratings:

NEW DIRECTIONS IN AUDIENCE MEASUREMENT RESEARCH PROGRAM

8:00 AM	REGISTRATION CONTINENTAL BREAKFAST	12:15 PM	LUNCHEON President's Room Faculty House
9:00	INTRODUCTION AND WELCOME JOHN C. BURTON Dean Graduate School of Business Columbia University	2:15	FIRST AFTERNOON SESSION <i>Chairman:</i> RICHARD B. ZACKON Vice President, Research Cable Television Advertising Bureau, Inc. Qualitative Ratings: Measuring Viewer Involvement ELIZABETH J. ROBERTS President Television Audience Assessment, Inc. Qualitative Audience Measurement: An Application THOMAS F. DELANEY Director Cable/New Technology Research CBS Broadcast Group CBS, Inc.
9:15	FIRST MORNING SESSION <i>Chairman:</i> ELI NOAM Associate Professor Graduate School of Business Columbia University On-Line and Off-Line Assessments of Television Viewing DANIEL R. ANDERSON Professor Department of Psychology and Diane E. Field Doctoral Candidate University of Massachusetts Program Impact: The Key Measure of Audience Response DONNA L. HOFFMAN Assistant Professor Graduate School of Business Columbia University	3:15	DISCUSSION
10:15	DISCUSSION	3:45	COFFEE/TEA BREAK
10:45	COFFEE/TEA BREAK	4:00	SECOND AFTERNOON SESSION <i>Chairman:</i> ROBERT CHESTNUT Vice President and Technical Director Grey Advertising, Inc. The Commercial Audience: The Right Measure of Advertising Value JAMES SPAETH Manager Media Research and Analysis General Foods Corporation
11:00	SECOND MORNING SESSION <i>Chairman:</i> DONALD R. LEHMANN Professor Graduate School of Business Columbia University The Correlation Between TV Viewing and Product Purchase: An Empirical Analysis GEORGE GARRICK Executive Vice President Information Resources, Inc.	4:30	DISCUSSION
11:30	DISCUSSION	5:15	CONFERENCE CONCLUDES

Morning Sessions Discussants:

RAJEEV BATRA
Assistant Professor
Graduate School of Business
Columbia University
ROLAND T. RUST
Assistant Professor
Graduate School of Business
University of Texas at Austin

Afternoon Sessions Discussants:

PEARL E. JOSEPH
Vice President
and Associate Director
Communication Information Services
Young & Rubicam
WILLIAM S. RUBENS
Vice President, Research
National Broadcasting Company

Beyond Ratings: NEW DIRECTIONS IN AUDIENCE MEASUREMENT RESEARCH

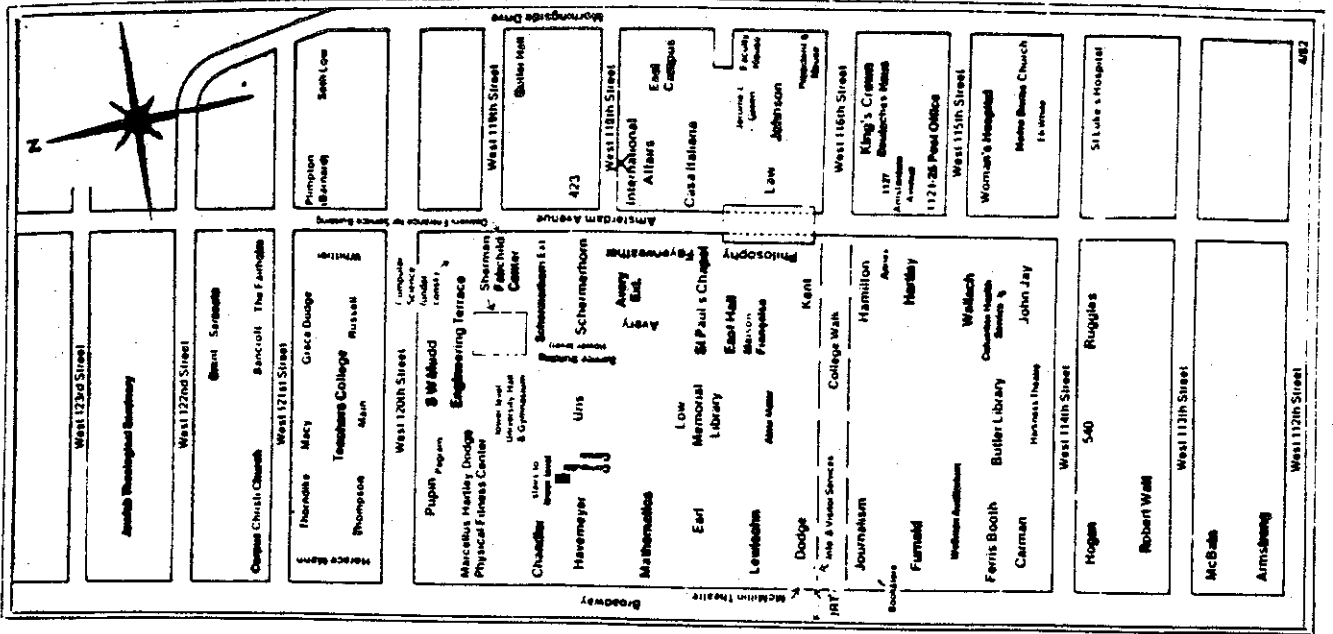
All-Day Conference Sponsored by
The Research Program in Telecommunications and Information Policy
Graduate School of Business
Columbia University in the City of New York

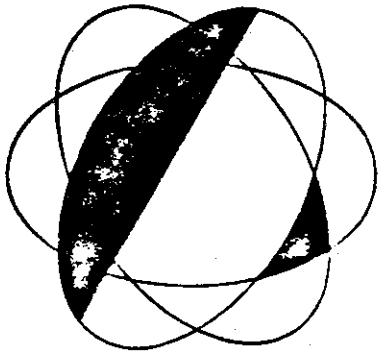
Friday, October 19, 1984
Kellogg Conference Center
Columbia University
New York City



GENERAL INFORMATION

DATE AND TIME: Friday, October 19, 1984, 8:00 a.m. to 5:15 p.m.
LOCATION: Kellogg Conference Center, 15th Floor, School of International Affairs, Columbia University, 420 West 118th Street, New York City (see map).
MEALS AND REFRESHMENTS: Continental breakfast, buffet lunch, and coffee breaks are included in the conference fee.
TO REGISTER: Promptly complete the registration form below and enclose it with your check or money order in the business reply envelope provided.
REGISTRATION: Registration is determined on a first come, first served basis. Date of postmark determines date of registration. Register early, as space is limited.
FEES:
 Corporate Participants \$150.00
 University Faculty and Non-Profit Participants \$175.00
 After August 31 \$50.00
 Postmarked Before August 31 \$35.00
PAYMENT: Your reservation must be accompanied by payment in full, either by check or money order. Please make checks payable to *Columbia University*.
CANCELLATIONS: Notice of cancellation must be received in writing to qualify for a refund. Refund policy: 100% if request is postmarked by August 22, after August 22, a 20% cancellation fee will apply. No refund if postmarked after October 8.
ADDRESS INQUIRIES TO: Professor Donna L. Hoffman, Conference Director
 Graduate School of Business
 Columbia University
 New York, NY 10027 (212) 280-3480





TRACING NEW ORBITS:

Competition & Cooperation

in

Satellite Development



A one-day research conference

focusing on major satellite projects

in North America

and Western Europe

to be held on

Friday, November 30, 1984

COLUMBIA UNIVERSITY

Purpose

To bring together academic researchers, government policy-makers, economists and industry representatives to discuss the current drive toward satellite competition and long-term cooperative projects underway in Western Europe and North America.

Major themes will include:

- Private & public satellite networks
- Hybrid government and industry relationships
- Regulatory agencies for global coordination
- Domestic objectives for satellite communication
- Emerging areas for multilateral collaboration.

Speakers will present original research that has not heretofore been published.

Location

Dag Hammerskjold Lounge
School of International Affairs

Columbia University
420 West 118th Street

New York, New York 10027

Registration Form

Please mail with money order or check addressed to "Satellite Conference/ Columbia University."

ADDRESS: Donna A. Demac
Research Program in
Telecommunications
and Information Policy
Columbia University
726 Uris Hall
New York, New York 10027

NAME _____

AFFILIATION _____

ADDRESS _____

PHONE _____

AMOUNT ENCLOSED _____

FEES	
CORPORATE	\$150
INDIVIDUAL	\$50
STUDENT	\$25

Speakers

Dr. Carl Christol, author of The Modern International Law of Outer Space

Mr. Mario Hirsch, European Director Coronet Satellite Corp., Luxembourg

Dr. Heather Hudson
University of Texas, Austin

Ms. Brenda Maddox
Communications Editor
The Economist (London)

Dr. William Montgomery
Director General
International Relations
Dep't. of Communications, Canada

Dr. Joseph Pelton, Director
Strategic Planning/INTELSAT

Dr. Marcellus Snow
University of Hawaii, Manoa

Dr. Christopher Vizas, II
Executive Vice President
Orion Satellite Corporation

Other speakers include experts from:

European Space Agency

NASA

Academy for Educational Development

Department of Communications
Canada

Office of Technological Assessment
United States Congress

Program Preview

KEYNOTE -- Establishing a stable environment for international satellite ventures

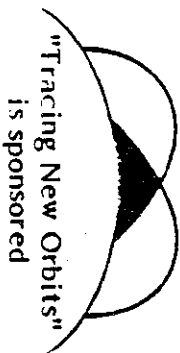
PANEL -- The pros and cons of global satellite networks

PANEL -- European satellite projects

LUNCHEON -- Address by Ms. Maddox

PANEL -- The U.S. and Canadian satellite projects

PANEL -- The 1985 Space WARC of the International Telecommunications Union



by

The Research Program
in Telecommunications and Information
Policy

Graduate School of Business
Columbia University
City of New York
Eli M. Noam, Director



Please address inquiries to:

Donna Demac, Conference Organizer
Anne McKay, Assistant Organizer
Columbia University
(212) 714-1450

To receive abstracts
of the speakers' papers,
please register with payment

by

November 1, 1984.

TRACING NEW ORBITS:

COMPETITION AND COOPERATION IN SATELLITE DEVELOPMENT

Friday, November 30, 1984

9:00 A.M. - 6:00 P.M.

Dag Hammarskjold Lounge, School of International Affairs

Sponsored By

THE RESEARCH PROGRAM IN TELECOMMUNICATIONS
AND INFORMATION POLICY
GRADUATE SCHOOL OF BUSINESS
COLUMBIA UNIVERSITY

Conference Organizer: Donna A. Demac, Esq.
Assistant Conference Organizer: Anne McKay

PROGRAM

8:00 A.M. REGISTRATION

9:30 A.M. PANEL 1: THE PROS AND CONS
OF UNIFIED GLOBAL SATELLITE NETWORKS

9:00 A.M. INTRODUCTION AND WELCOME

DONNA A. DEMAC
Communications Lawyer
Adjunct Associate Professor
Interactive Telecommunications
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MARCELLUS SNOW, Moderator
Associate Professor of
Economics, University of
Hawaii at Manoa

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Dean
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DOUGLAS GOLDSCHMIDT
Consultant
(Formerly, Director of
Economic Studies, Academy for
Educational Development)

KEYNOTE ADDRESS

"International Satellite Activity: The
Search for a Stable Regulatory Framework"

11:00 A.M. COFFEE BREAK

CARL Q. CHRISTOL
Professor of International
Law and Political Science
University of Southern
California

11:15 A.M. PANEL 2: EUROPEAN
SATELLITE PROJECTS: GOVERNMENT POLICIES
AND INVESTMENTS

HEATHER HUDSON, Moderator
Associate Professor
Department of Radio-TV-Film
University of Texas, Austin

MARIO HIRSCH
European Director, Coronet
Satellite Corporation.

DOUGLAS A. HEYDON
Executive Vice President and
General Manager, Arianespace
Inc.

JOHN DOWNING
Chairman, Communications
Department, Hunter College,
City University of New York

12:45 -
2:00 P.M. LUNCH

LUNCHEON ADDRESS
"The Theology of Satellite Television"

BRENDA MADDOX
Editor, CONNECTIONS NEWSLETTER
Communications Editor, THE
ECONOMIST

2:15 P.M. PANEL 3: THE UNITED STATES
AND CANADA: GOVERNMENT POLICIES AND
INVESTMENTS

DONNA A. DEMAC, Moderator
Conference Organizer

W.M. EVANS
Director, Space Policy and
Plans, Ministry of State for
Science and Technology
Government of Canada

ROBERT LOVELL
Director, Communications
Division, NASA Headquarters

FRED WEINGARTEN
Program Manager,
Communications and Information
Technologies Program, Office of
Technology Assessment, United
States Congress

3:45 P.M. PANEL 4: THE INTERNATIONAL
TELECOMMUNICATIONS UNION AND THE 1985
SPACE WARC

DOUGLAS GOLDSCHMIDT, Moderator
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WILLIAM MONTGOMERY
Director General, International
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Communications, Government of
Canada

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of Texas, Austin

HARVEY LEVIN
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Department of Economics
Hofstra University

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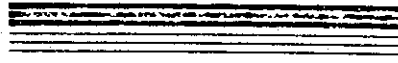
5:15 -
5:45 P.M. WRAP-UP

"Tracing New Orbits"

DONNA A. DEMAC
Conference Organizer

6:00 P.M. RECEPTION





The Impact of Information Technology on the Service Sector

February 7 and 8, 1985

**International House
3701 Chestnut Street
Philadelphia, PA**



**A Conference Organized by
The Fishman-Davidson Center
for the Study of the Service Sector
The Wharton School, University of
Pennsylvania**

and

**Research Program In Telecommuni-
cations and Information Policy
Graduate School of Business,
Columbia University**

Conference on
"The Impact of Information Technologies on the Service Sector"

Sponsored by

The Research Program in Telecommunications and Information Policy
Graduate School of Business, Columbia University
and
The Fishman-Davidson Center for the Study of the Service Sector
University of Pennsylvania, The Wharton School

PRELIMINARY PROGRAM

February 7

- 8:30 - 9:00 A.M. Registration and coffee
- 9:00 - 9:30 A.M. Keynote Address: "Services: Certainties and
Uncertainties"
- Speaker: Eli Ginzberg
Director
Conservation of Human Resources Project
Columbia University
- 9:30 - 10:15 A.M. "The Regulation of Deregulated Financial
Institutions"
- Speaker: Almarin Phillips and Mitchell Berlin
The Wharton School
University of Pennsylvania
- 10:15 - 11:00 A.M. Discussants: Robert Shay
Columbia University
- TBA
- 11:00 - 11:45 A.M. "Technology Impacts on the Structure of the
Insurance Industry"
- Speaker: David N. Young
Aetna Life and Casualty Company
- 11:45 - 12:30 P.M. Discussants: Howard Kunreuther
The Wharton School
University of Pennsylvania
- TBA
- 12:30 - 1:30 P.M. Lunch

1:30 - 2:15 P.M.

"Information Technology and the U.S. Health
Care Industry: A New Direction"

Speaker: Richard Scheffler
University of California - Berkeley

2:15 - 3:00 P.M.

Discussants: Mark Pauly
The Wharton School
University of Pennsylvania

Kenneth Thorpe
Columbia University

3:00 - 4:00 P.M.

"Measuring the Spillovers from Technical
Advance: Mainframe Computers in
Financial Services"

Speaker: Timothy Bresnahan
Stanford University

4:00 - 4:45 P.M.

Discussants: Irving B. Kravis
University of Pennsylvania

Arie Schinnar
The Wharton School
University of Pennsylvania

5:00 P.M.

Social for Conferees and Speakers

February 8

8:30 - 9:00 A.M.

Coffee

9:00 - 9:45 A.M.

"Technology and the Export of Services"

Speaker: Geza Feketekuty
Senior Assistant to the United
States Trade Representative

9:45 - 10:30 A.M.

Discussants: Ronald Shelp
American International Group

TBA

10:30 - 11:15 A.M.

"Productivity and Growth of the Information
Economy: Government Policy Implications"

Speaker: Charles Jonscher
Massachusetts Institute of
Technology

- 12:00 noon

Discussants: Paul Strassman
Information Products Group
Xerox

Dennis Yao
The Wharton School
University of Pennsylvania

- 1:30 P.M.

- 1:30 P.M.

Lunch (No Host Lunch)

"Demographics and Social Impacts (Locational,
Employment Implications)"

Speaker: George Sternlieb
Urban Research Center
Rutgers University

00 - 2:30 P.M.

Discussants: Mitchell L. Moss
New York University

Peter Linneman
The Wharton School
University of Pennsylvania

:30 - 3:00 P.M.

Wrap-up: "Technology and Service Industry
Structure: An Overview"

Speaker: William Baumol
New York University and Princeton
University



Conference on
"Unions, Employment, and New Telecommunications Technologies"

Sponsored by

The Research Program in Telecommunications and Information Policy
Graduate School of Business, Columbia University

Conference Directors

Donna Sockell
Assistant Professor, Columbia Business School

David Levin
Professor and Coordinator of the Doctoral Program,
Columbia Business School

June 12, 1985

Overview: We propose soliciting eight papers on employment problems in information processing industries from scholars with different disciplinary backgrounds. Among the research orientations to be presented at this one-day conference are: human resources management, labor relations, law, economics, and organization design or behavior.

I. Managing Human Resources in the Information Age

This session will focus on the impact of advanced technology on the human resource function in information processing industries. In particular, the focus will be on compensation and manpower forecasting problems and techniques for addressing these problems. Two papers will be solicited for this session.

II. Labor and Industrial Relations in the Information Age

This session will focus specifically on the impact of advanced technology on unionization in the Information Age. Specifically, two paper topics will be considered: (1) the effects of deregulation on bargaining structure and process in AT&T; and (2) organizing strategies and unionization patterns in micro-processing industries.

III. Trade Secrets and the Employment Relationship

This session will focus on limiting employees' rights to change jobs in microprocessing industries on the basis of access to trade secrets. The focus will be on either the scope and type or restrictions imposed by enterprises (descriptive) or the enforceability of such covenants. One paper will be solicited on either topic.

IV. Labor Mobility and Productivity in High Technology Industries

This session will focus on employment problems in high technology industries from a labor economics perspective. Potential topics for this segment include (1) employment development and career mobility (supply factors) (2) employers' willingness to invest in training (demand factors) and (3) assessing labor productivity. One or two papers will be solicited on these subjects.

V. The Structure of Organization in the Information Age

This session will focus on organizational design strategies that promote individual initiative, entrepreneurship, and innovation. More specifically, strategies that deal with simultaneously meeting information processing industries' needs for flexibility and innovation and employee problems such as motivation and retention will be considered. One paper will be solicited on this subject.

Columbia University in the City of New York | New York, N. Y. 10027

GRADUATE SCHOOL OF BUSINESS

URIS HALL

CONFERENCE TO BE HELD AT COLUMBIA UNIVERSITY
ON FRIDAY, MARCH 15TH, 1985

TECHNOLOGICAL INNOVATION, REGULATION AND THE MONETARY ECONOMY

Organizers: Colin Lawrence, Associate Professor, Columbia
Robert P. Shay, Professor, Columbia

The objective of the conference is to assess the long run impact that changes in technology and financial innovation in supplying and demanding financial services have had and can be expected to have on the monetary system, the structure of the financial intermediation industry and the appropriate need for regulation of banking and non-banking institutions.

Technological change is meant to include improvement in computer hardware, software and telecommunicators that permit delivery systems to supply financial intermediation services more speedily, efficiently and with more information available to agents in the past. Such development accompanied to some degree by deregulation has led to a proliferation of new financial instruments including money market funds, closer integration between offshore and onshore markets, credit and debit cards, and a host of financial services generated by ATM's and POS'.

The conference will address three interrelated issues:

- (a) The impact of technological change on the economic costs of supplying wholesale and retail financial services.
- (b) The desirability of dismantling current regulations on the supply and demand for money and/or introducing new financial/monetary regulation.
- (c) An examination of the macroeconomic consequences of rapid financial innovation - to include a reexamination of the definition of 'money', the indeterminacy of the demand for money, and the new role of monetary policy.

The major contribution of the conference is to synthesize two strands of literature - the microfoundations of technological change in banks and nonbanks and the consequent implications for monetary theory and policy. Although the conference cannot possibly address all the issues created by financial innovation, we would like to throw some light onto the long run outcome of financial innovation on the monetary system.

The conference would perhaps be termed as "futuristic": twenty years from now, given the technological revolution in computers, what will the monetary system be like for private economic agents and policymakers? Will it be different

and if so, in what direction? To what extent will our current monetary theories (and controversies) become obsolete? These are difficult and complex questions. The conference will attempt, in part, to answer some of these future outcomes.

THE SESSIONS [Please note that not all the authors below have committed themselves to the tasks assigned to them. This is tentative and subject to revision.]

SESSION 1: The Dynamics of Technological Innovation Affecting the Supply of Financial Services

Paper #1: David Humphrey (Federal Reserve Board), "The Changing Nature of the Payments System."

Paper #2: Colin Lawrence and Robert Shay (Columbia University), "New Empirical Approaches to Analyzing the Impact of Technological Change on the Costs of Financial Intermediation in a Multi Product Banking Firm 1979-1983."

Discussants: George Benston (Rochester)
Mark Flannery (North Carolina)

SESSION 2: The Need for Regulation of Evolving Financial Technological Change

Paper #3: Paul Horvitz (Houston), "Financial Innovation, Deregulation and Federal Insurance."

Paper #4: Eugene Fama (Chicago), "Money and the Role of Reserve Requirements in Banks and Nonbanks under Rapid Technological Change."

Discussants: Frank Edwards (Columbia)
Thomas Sargent (Minnesota and Federal Reserve of Minneapolis)

SESSION 3: Monetary Theory and Policy

Paper #5: John Karekan (Minnesota), "A General Equilibrium Analysis of Technological Change in Financial Intermediation and the Role of Monetary Policy."

Discussants: Robert Townsend (Carnegie Mellon)
Olivier Blanchard (Harvard)

Paper #6: SYMPOSIUM: The Impact of Computer Technology and Telecommunications on Monetary Thought - The Views of a Prominent Keynesian, Monetarist and New Classicist.

Participants: James Tobin (Yale)
Philip Cagan (Columbia)
Neil Wallace (Minnesota and Federal Reserve, Minneapolis)

Moderator: Frederic Mishkin (Columbia)

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On Friday, March 15th, 1985
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THE TOPICS OF THE PAPERS

Paper #1: Dave Humphrey (Federal Reserve Board), "The Changing Nature of the Payments System."

The paper will assess the impact of current technological innovations on the costs of wholesale financial intermediation. This includes an economic analysis of the relative costs of check clearing in relation to the alternatives of electronic transfers. The paper will analyze the economic consequences created by automated payment systems.

Paper #2: Colin Lawrence and Robert Shay (Columbia), "New Empirical Approaches to Analyzing the Impact of Technological Change on the Costs of Financial Intermediation in a Multi Product Banking Firm 1979-1983."

Recent research has revised traditional approaches to measurement of costs of providing retail financial services. This paper is an econometric analysis of computer technology on economies of scale and cost complementarities of the multi product banking industry. The paper explores how the use of ATM's and POS' intensity of the banking firm has affected the retail cost structure. The methodology utilizes transcendental logarithmic dual functions in a pooled cross section-time series analysis of the banking industry. The paper concludes with policy implications of the empirical findings.

Paper #3: Paul Horvitz (University of Houston), "Financial Innovation, Deregulation and Federal Regulation."

This paper will discuss the role of FDIC insurance in a world of banks and nonbanks. The emphasis of the paper will be focused on the need for government regulation in an environment with rapidly changing financial instruments. If FDIC insurance is sold to banks, why shouldn't nonbank liabilities such as money market funds also be a recipient? The paper will conclude with policy implications for facilitating a stable banking system undergoing financial innovation.

Paper #4: Eugene Fama (Chicago), "Money and the Role of Reserve Requirements in Banks and Nonbanks under Rapid Technological Change."

Technological change in the form of automated electronic payment systems has widened the scope of virtually instantaneous transfer of funds between onshore and offshore markets, and between banks and nonbanks. Moreover, automated information systems have made possible portfolio selections that could not have been made without longer searches and costly means.

The question posed in this paper is whether or not differential reserve requirement regulation across banks and nonbanks, onshore and offshore markets, and between different financial instruments has any desirable qualities for the conduct of an optimal monetary policy. This question is asked with reference to the technological regime in operation as described in the first paragraph.

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Paper #5: John Karekan (Minnesota), "A General Equilibrium Analysis of Technological Change in Financial Intermediation and the Role of Monetary Policy."

This paper will provide an analytical model capable of investigating how rapid financial innovation brought about by technological change affects the definition and relevance of the concept 'money'. The author will analyze the relevance of the distinction between credit and money and the role of central banking. Finally, the author will explore how technological change and financial innovation affects the distribution of income between banks, nonbanks, consumers, borrowers and lenders under differential regulatory regimes.

Paper #6: Symposium: James Tobin (Yale), Phil Cagan (Columbia), and Neil Wallace (Minnesota and Federal Reserve, Minneapolis), "The Impact of Computer Technology and Telecommunications on Monetary Thought."

There is little doubt that developments in computer technology and financial innovation are changing the time, place and form of money as both a medium of exchange and a state of value. The three panelists will debate the nature and extent to which technological change has affected (or will affect): (a) the definition of money; (b) the way through which economic agents utilize money (liquidity preference); and (c) the conduct, impact and desirability of monetary policy in a market economy today and in the next century.