



Annual Meeting
Toronto
3-8 January 1981

Preliminary Program

Science and Technology: Bridging the Frontiers

Public Lectures

(Topics to be announced)

- **AAAS Keynote Lecture (3 Jan., 8:30 p.m.).**
W. L. Northrop Frye (University of Toronto).
- **AAAS Public Lecture (4 Jan., 1:30 p.m.).**
Paul Warnke, Esq. (Clifford & Warnke, Washington, D.C.).
- **AAAS Public Lecture (4 Jan., 8:30 p.m.).**
The Honourable John Roberts (Minister of State for Science and Technology and Minister of the Environment, Government of Canada).
- **AAAS Public Lecture (5 Jan., 1:30 p.m.).**
John B. Slaughter (Washington State University).
- **AAAS Public Lecture (5 Jan., 8:30 p.m.).**
Philip Morrison (Massachusetts Institute of Technology).
- **Phi Beta Kappa Public Lecture (6 Jan., 1:30 p.m.).**
Freeman Dyson (Institute for Advanced Study, Princeton, N.J.).
- **AAAS President's Public Lecture (6 Jan., 8:30 p.m.).**
Frederick Mosteller (AAAS President; Harvard University School of Public Health).
- **George Sarton Memorial Public Lecture (7 Jan., 1:30 p.m.).**
Richard S. Westfall (Indiana University).
- **AAAS Public Lecture (7 Jan., 8:30 p.m.).**
Joseph B. MacInnis (Undersea Research Ltd., Toronto).
- **Mount St. Helens (4 Jan., SH).**
Arranged by Robert Tilling (U.S. Geological Survey, Reston, Va.).
- **Successful Innovation in Meeting Urban Transportation Needs (4 Jan., SH).**
Arranged by Margaret Scrivener (Ontario Task Force on Provincial Rail Policy, Toronto, Ont.).
- **The Other Frontiers of Science (5 Jan., SH).**
Arranged by D. Allan Bromley (Yale University).
- **Frontiers in the Social Sciences: New Directions in the Study of Cognition (5 Jan., SH).**
Arranged by Peter B. Read and David L. Sills (Social Science Research Council, New York, N.Y.).
- **Frontiers in Medical Genetics and Immunogenetics (6 Jan., SH).**
Arranged by Richard M. Krause (National Institutes of Health, Bethesda, Md.).
- **Microsurgery and Herbal Medicine (6 Jan., SH).**
Arranged by Huang Jiasi (Chinese Academy of Medical Sciences, Beijing).
- **The Frontiers of the Natural Sciences (7 Jan., SH).**
Arranged by Rolf M. Sinclair (National Science Foundation).

1. General Interest

- **AAAS Annual Youth Symposium (3 Jan., SH).**
Arranged by John F. Fowles and George Vanderkuur (Ontario Science Centre).

2. Directing Science Toward Peace

- **Changes in Strategic Weapons Systems and Doctrines for Their Use: Implications for Arms Control (4 Jan., SH).**
Arranged by Bernard T. Feld (Massachusetts Institute of Technology).
- **Negotiations as an Approach to Arms Control and Disarmament (4 Jan., SH).**
Arranged by George Ignatieff (University of Toronto) and George Rathjens (Massachusetts Institute of Technology).

HOTEL CODES: Sheraton Centre . . . (SH); Royal York . . . (RY)

- **The Problems of Nonproliferation (5 Jan., SH).**
Arranged by Abram Chayes (Harvard University) and George Rathjens.
- **Psychological and Bureaucratic Dynamics of Arms Races and Peace Races (5 Jan., SH).**
Arranged by Charles E. Osgood (University of Illinois, Urbana).
- **Public Opinion, Educational Outreach, and Constituency Building (6 Jan., SH).**
Arranged by Anne H. Cahn (U.S. Arms Control and Disarmament Agency, Washington, D.C.).
- **The Political Economy of Reversal of the Arms Race (6 Jan., SH).**
Arranged by Lloyd J. Dumas (University of Texas, Dallas).
- **International Analysis of International Problems: Science in the Service of Peace (7 Jan., SH).**
Arranged by Roger Levin (International Institute for Applied Systems Analysis, Schloss Laxenburg, Austria) and Harry M. Tollerton (National Academy of Sciences).
- **The Role of Scientists in the Initiation of Nuclear Weapons Development (7 Jan., SH).**
Arranged by Charles Weiner (Massachusetts Institute of Technology).

3. Physical Sciences

- **The Revolution in Experimental Technique in the Sciences (4 Jan., SH).**
Arranged by William M. Fairbank (Stanford University).
- **The Age and the Size of the Universe (5 Jan., SH).**
Arranged by R. B. Partridge (Haverford College).
- **Chemically Solvable Problems (5 and 6 Jan., SH).**
Arranged by Jean'ne M. Shreeve (University of Idaho).
- **Exploration of the Solar System (5 Jan., SH).**
Arranged by Tobias Owen (State University of New York, Stony Brook).
- **Astronomical Crossroads of Science and the Unity of the Universe (6 Jan., SH).**
Arranged by Kenneth Brecher (Boston University).
- **The Laser Revolution in Chemistry (6 Jan., SH).**
Arranged by George W. Flynn (Columbia University).
- **Recent Developments in Lasers and Their Applications (7 Jan., SH).**
Arranged by Boris P. Stoicheff (University of Toronto) and Rolf M. Sinclair (National Science Foundation).
- **Application of Ultrasensitive Mass Spectrometry with Accelerators (7 Jan., SH).**
Arranged by A. E. Litherland (University of Toronto).
- **Science for the Naked Eye: Or, the Physics of Everyday Experience, VIII (8 Jan., SH).**
Arranged by Rolf M. Sinclair.

4. Engineering and Technology

- **New Directions and Applications for Nondestructive Evaluation of Engineering Structures (4 Jan., SH).**
Arranged by Donald O. Thompson (Iowa State University) and Clifford H. Wells (Southwest Research Institute, San Antonio, Tex.).
- **The Emerging Field of Biomechanics: Theory, Method, and Applications (4 Jan., SH).**
Arranged by Harold P. Van Cott (National Bureau of Standards, Washington, D.C.).
- **The Application of Bifurcation Theory to Urban and Regional Analysis (6 Jan., SH).**
Arranged by Robert W. Crosby (U.S. Department of Transportation) and Robert M. Thrall (Rice University).
- **Sulphur—New Uses for an Ancient Material (7 Jan., SH).**
Arranged by Gerald D. Love (Federal Highway Administration, Washington, D.C.).
- **The CANDU Heavy Water Reactor System (7 Jan., SH).**
Arranged by F. Kenneth Hare (Trinity College, Toronto).
- **Innovation in Measurement for Scientists and Consumers (7 Jan., SH).**
Arranged by Frances J. Laner (U.S. Metric Association, Denver, Colo.).
- **The Engineer: Entrepreneur and Deliverer of Science (8 Jan., SH).**
Arranged by Peter Glaser (Arthur D. Little, Inc., Cambridge, Mass.).

5. Energy

- **Health Risk Associated with Energy Technologies (4 Jan., SH).**
Arranged by Curtis C. Travis and Elizabeth L. Etnier (Oak Ridge National Laboratory).
- **Biological Energy Conversion (4 Jan., SH).**
Arranged by James R. Bolton (University of Western Ontario).
- **Beyond Conventional Crude Oil (5 Jan., SH).**
Arranged by George B. Mellon (Government of Alberta) and Robert E. Landry (Imperial Oil Ltd., Toronto).
- **Energy Policy Overview (6 Jan., SH).**
Arranged by S. Fred Singer (University of Virginia) and F. Kenneth Hare (Trinity College, Toronto).
- **North American Energy Systems (6 Jan., SH).**
Arranged by F. Kenneth Hare.
- **Solar Energy and Conservation: How Well Are We Doing? How Well Can We Expect to Do? (7 Jan., SH).**
Arranged by Jon M. Veigel (Solar Energy Research Institute, Golden, Colo.).
- **The Future of Transportation Fuel (8 Jan., SH).**
Arranged by Michael Devine and Martin Cines (University of Oklahoma, Norman) and S. Fred Singer.

- **Engineering and Health Science with Respect to Energy Conservation (8 Jan., SH).**
Arranged by Tamami Kusuda and Samuel Silberstein (National Bureau of Standards, Washington, D.C.).

6. Environment

- **Acid Precipitation and Its Effects on the Ecosystem (4 Jan., RY).**
Arranged by G. H. Tomlinson II (DOMTAR, INC., Montreal, Quebec) and Phyllis Kahn (Minnesota House of Representatives).
- **Acid Rain: Public Policy Problem (4 Jan., RY).**
Arranged by Phyllis Kahn, and Rhett Speer (National Conference of State Legislatures, Denver, Colo.).
- **Lead in the Environment (5 Jan., RY).**
Arranged by Jerome O. Nriagu (National Water Research Institute, Burlington, Ont.).
- **The Natural Environment and Renewable Resources—Current Problems in Ontario (5 Jan., RY).**
Arranged by Henry A. Regier (University of Toronto) and Thomas H. Owen (Thomas Owen & Associates, Toronto).
- **The Great Lakes: Contamination Trends and Consequences (6 Jan., RY).**
Arranged by Helen L. Cannon (U.S. Geological Survey, Denver, Colo.) and W. M. J. Strachan (Canadian Center for Inland Waters, Burlington, Ont.).
- **Hazardous Waste Management: Some Key Issues (7 Jan., RY).**
Arranged by Michalann Harthill (U.S. Water and Power Resources Services, Denver, Colo.).
- **Radicals and the Biosphere (8 Jan., RY).**
Arranged by Anne P. Autor (University of Iowa).
- **The Proper Role of Inexpensive, Short-Term Biological Tests in Environmental Toxicological Testing (8 Jan., RY).**
Arranged by R. Daniel Benz (University of California, Irvine) and Michael Salamone (York University).
- **Planning for Uncertainty: Climate Change and the Study of Societal Impacts (6 Jan., SH).**
Arranged by David M. Burns (American Association for the Advancement of Science).
- **Climate and Food: Case Studies in Vulnerability and Response (6 Jan., RY).**
Arranged by John G. Corbett (Florida International University).
- **CO₂-Induced Climate Change and the Dynamics of Antarctic Ice (7 Jan., RY).**
Arranged by David M. Burns, and Charles Bentley (University of Wisconsin, Madison).
- **Testing Theories of Climatic Change (7 Jan., RY).**
Arranged by Alan D. Hecht (National Science Foundation).
- **The Global Atmospheric Research Program (GARP): A Significant International Scientific Undertaking of the 1970s (8 Jan., RY).**
Arranged by Eugene W. Bierly and Richard S. Greenfield (National Science Foundation).

8. Agriculture

- **Animal Agriculture Research: Social and Economic Priorities (4 Jan., RY).**
Arranged by Larry J. Connor (Michigan State University) and Henry A. Fitzhugh (Winrock International Livestock Research & Training Center, Morrilton, Ark.).
- **National Impacts of Suggested Dietary Changes (4 Jan., RY).**
Arranged by Alex Hershaft (MITRE Corporation).
- **Energy Dimensions of Small-Scale Food Processing Technologies (4 Jan., RY).**
Arranged by Irene Tinker (Equity Policy Center, Washington, D.C.) and Carol Waslien (League for International Food Education, Washington, D.C.).
- **Agriculture as a Producer and Consumer of Energy (5 Jan., RY).**
Arranged by William Lockeretz (Northeast Solar Energy Center, Boston, Mass.).
- **Future Food-Fuel Conflicts (5 Jan., RY).**
Arranged by Bill A. Stout (Michigan State University).
- **U.S. Agriculture in the 1980s: Continued Abundance or Scarcity? (6 Jan., RY).**
Arranged by Joseph D. Coffey (Virginia Polytechnic Institute, Blacksburg, Va.).
- **Agricultural Lands: World Pressures on Food Production (6 Jan., RY).**
Arranged by Gail S. Ludwig (University of Missouri, Columbia) and B. L. Flinchbaugh (Kansas State University).
- **Policies and Strategies for Gene Resource Conservation in Agriculture and Forestry (7 Jan., RY).**
Arranged by Christopher W. Yeatman (Petawawa National
- **Problems of Arctic Wildlife Associated with Increases in Human Population and Technological Development (4 Jan., RY).**
Arranged by Donald J. Zinn (University of Rhode Island).
- **Macrodevelopment in the Tropical Forest and Arid Zones: Social and Environmental Impacts and Problems (4 Jan., RY).**
Arranged by John W. Bennett (Washington University).
- **Forest Utilization: Past, Present, and Future (5 Jan., RY).**
Arranged by John M. Yavorsky (State University of New York, Syracuse).
- **Unmet Requirements of Irrigation Project Development for Native People in the U.S. Four Corners Area (5 Jan., RY).**
Arranged by Cyrus M. McKell (Utah State University) and

7. Climate and Ecology

Forestry Institute, Chalk River, Ont.) and David Kafton (Bodega Bay Institute, San Francisco, Cal.).

- **Chemical Communication in Insects: From Basic Principles to Pest Control (7 Jan., RY).**
Arranged by Robert M. Silverstein (State University of New York, Syracuse).
- **The Ecology of Agriculture and Biological Pest Control (8 Jan., RY).**
Arranged by Douglas H. Boucher (McGill University) and S. W. T. Batra (Beltsville Agricultural Research Center, Beltsville, Md.).

9. Biological Sciences

- **Flow and Form: Adaptations of Living and Extinct Marine Animals to Moving Water (4 Jan., RY).**
Arranged by Michael LaBarbera (University of Chicago) and Roger D. K. Thomas (Franklin and Marshall College, Lancaster, Pa.).
- **Trophic Dynamics of Aquatic Ecosystems (4 Jan., RY).**
Arranged by J. Rudi Strickler (Australian Institute of Marine Science, Townsville, Queensland) and Dewey G. Meyers (Academy of Natural Sciences, Philadelphia, Pa.).
- **Problems and Possibilities: The Development of an Effective Shark Repellent from Naturally Occurring Biologically Active Substances (5 Jan., RY).**
Arranged by Bernard J. Zahuranec (Office of Naval Research Detachment, NSTL Station, Miss.).
- **Research on Fish—A Renewable Resource (6 Jan., RY).**
Arranged by David R. Idler (Memorial University of Newfoundland, St. John's).
- **Circadian Clocks in Man: Timekeeping in Health and Disease (6 Jan., RY).**
Arranged by Martin C. Moore-Ede (Harvard University) and Charles A. Czeisler (Stanford University).
- **Ecogenetics—The Importance of Genetically Determined Variation in the Response of Individuals to Environmental Agents (7 Jan., RY).**
Arranged by Kenneth K. Kidd (Yale University).
- **Ecological Implications of Evolutionary Genetics (7 Jan., RY).**
Arranged by Lev R. Ginzburg and Douglas J. Futuyma (State University of New York, Stony Brook).
- **Some Mathematical Questions in Biology (8 Jan., RY).**
Arranged by Stephen Childress (American Mathematical Society, Providence, R.I.).

10. Cell Biology

- **Theories of Aging, I (4 Jan., RY).**
Arranged by Alain F. Corcos and Laurence R. Krupka (Michigan State University).
- **Theories of Aging, II (4 Jan., RY).**
Arranged by Richard C. Adelman (Temple University).

- **Reproductive Biology and Its Impacts on Populations (5 Jan., RY).**
Arranged by Neena B. Schwartz (Northwestern University).
- **The Genetic Connection Between Molecules and Behavior (5 Jan., RY).**
Arranged by Xandra O. Breakefield (Yale University).
- **Biological Implications of Enzyme Polymorphism (6 Jan., RY).**
Arranged by Shiva M. Singh (University of Western Ontario, London) and George Carmody (Carleton University, Ottawa).
- **The Cancer Cell Surface (6 Jan., RY).**
Arranged by Michael A. Baker (Toronto Western Hospital) and Phil Gold (McGill University).
- **Role of Cell Surface Receptors in Human Diseases (7 Jan., RY).**
Arranged by Jesse Roth (National Institutes of Health, Bethesda, Md.).
- **Cellular Messenger—Role of Calmodulin (7 Jan., RY).**
Arranged by Thomas C. Vanaman (Duke University).
- **Drosophila as a Model Biological System (8 Jan., RY).**
Arranged by William P. Hanratty (University of California, Irvine).

11. Medical Sciences

- **The Role of Dissociation in Hypnosis and Psychopathology (4 Jan., RY).**
Arranged by Marion Kenn (The Society for Clinical and Experimental Hypnosis, Liverpool, N.Y.) and Kenneth S. Bowers (University of Waterloo).
- **Recent Developments in Medical Imaging (5 Jan., RY).**
Arranged by Harold E. Johns (Ontario Cancer Institute, Toronto).
- **Why Don't Patients Take Their Medicines and What Can Be Done About It? (6 Jan., RY).**
Arranged by David L. Sackett and R. Brian Haynes (McMaster University, Hamilton, Ont.).
- **Geographic Medicine: A New World (6 Jan., RY).**
Arranged by Kenneth S. Warren (The Rockefeller Foundation).
- **Cancer Therapy: Clinical Trials, Regulations, and Bioethics (7 Jan., RY).**
Arranged by Vijaya L. Melnick (University of the District of Columbia) and Franklin D. Hamilton (Atlanta University).
- **Cell-Cycle Kinetics and Chemotherapy (7 Jan., RY).**
Arranged by Daniel E. Bergsagel (Princess Margaret Hospital, Toronto).
- **New Insulin Delivery Devices: Will They Alter the Treatment of Diabetes Mellitus? (8 Jan., RY).**

Arranged by A. M. Albisser (The Hospital for Sick Children, Toronto).

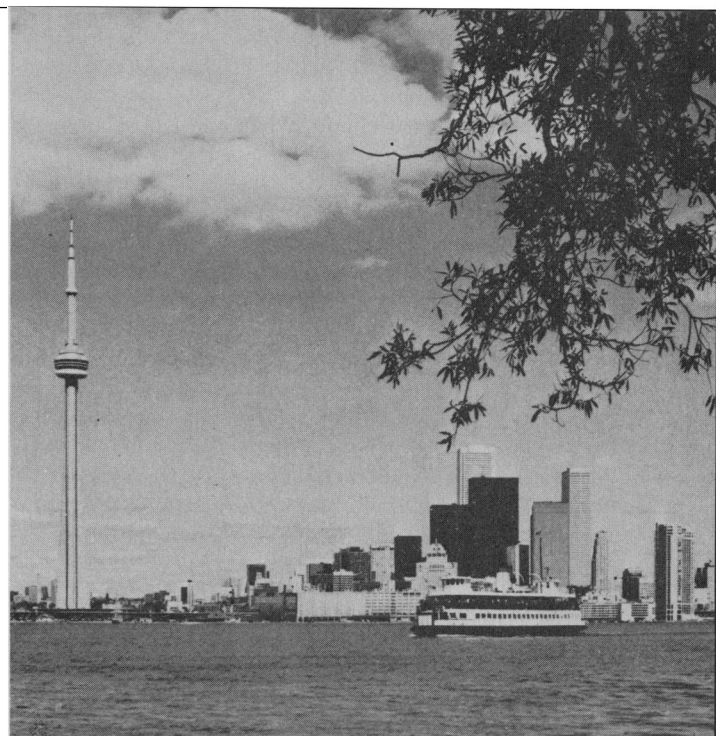
- **Intrauterine Diagnosis (8 Jan., RY).**
Arranged by Mildred T. Stahlman (Vanderbilt University).

12. Health Care

- **Network Models in Health and Human Services (4 Jan., RY).**
Arranged by Alvin W. Wolfe (University of South Florida).
- **Adoption and Social Impact of New Medical Practices (4 Jan., RY).**
Arranged by Stan N. Finkelstein (Massachusetts Institute of Technology) and Edward J. Sondik (National Institutes of Health, Bethesda, Md.).
- **Choices in Health Care: Decision-making and Evaluation of Effectiveness (5 Jan., RY).**
Arranged by Raisa B. Deber and Antonio Ciampi (University of Toronto) and Claire Bombardier (Wellesley Hospital, Toronto).
- **The Meaning of Child Health (6 Jan., RY).**
Arranged by Jack Elinson (Columbia University) and Dorothy Jones Jessop (Albert Einstein College of Medicine).
- **Immunopharmacology: A Rapidly Expanding New Interdisciplinary Field (6 Jan., RY).**
Arranged by Leslie Z. Benet (University of California, San Francisco).
- **Surveillance of Drugs and Prescribing (7 Jan., RY).**
Arranged by David A. Knapp and Dee A. Knapp (University of Maryland, Baltimore) and Joseph A. Oddis (American Society of Hospital Pharmacists, Bethesda, Md.).
- **Rationale and Methods of Controlled Release of Pharmaceuticals (8 Jan., RY).**
Arranged by Jorge Heller (SRI International, Menlo Park, Cal.).

13. Sociology and Economics

- **The Factory as Workplace—Past, Present, and Future (4 Jan., RY).**
Arranged by Gary Kulik (Smithsonian Institution).
- **Organizational and Human Implications of New Manufacturing Technology (4 Jan., RY).**
Arranged by Joel D. Goldhar (National Research Council), Barbara Burns (Solar Energy Research Institute, Golden, Colo.), and Rolf Piekartz (National Science Foundation).
- **Aging from Birth to Death: Sociotemporal Perspectives (5 Jan., RY).**
Arranged by Matilda White Riley (National Institutes of Health, Bethesda, Md.) and Michael S. Teitelbaum (Ford Foundation).
- **The Measurement of Socioeconomic Status: Current Issues (6 Jan., RY).**
Arranged by Mary G. Powers (Fordham University) and Bernard Blishen (York University).



Toronto Skyline. [Convention and Tourist Bureau of Metropolitan Toronto]

- **Society and Handicapped: Ethical, Social-Psychological, Sociological, and Administrative Perspectives (6 Jan., RY).**
Arranged by Hanan C. Selvin (State University of New York, Stony Brook) and Yole G. Sills (Ramapo College, Mahwah, N.J.).
- **Sino-American Exchange of Information: Status of Study in the Social Sciences (7 Jan., RY).**
Arranged by Burton Pasternak (City University of New York, Hunter College) and Anne F. Thurston (Social Science Research Council, New York, N.Y.).

14. Anthropology

- **Women and Science: Two Cultures or One? (4 Jan., RY).**
Arranged by Evelyn Fox Keller (Massachusetts Institute of Technology).
- **Humanity's Place in the Universe: Exploring the Convergence of Scientific, Philosophical, and Religious Perspectives (4 Jan., RY).**
Arranged by Karl E. Peters (Rollins College, Winter Park, Fla.) and Philip Hefner (Lutheran School of Theology, Chicago, Ill.).
- **Undocumented Immigration: Sociocultural and Ethical Considerations (5 Jan., RY).**
Arranged by Nancie L. Gonzalez and Peter G. Brown (University of Maryland, College Park).
- **Religion and Food (5 Jan., RY).**
Arranged by Solomon H. Katz (University of Pennsylvania).
- **Pluralistic Approaches in a Pluralistic Society: The Scientific Study of Religion in Canada (6 Jan., RY).**
Arranged by Roger O'Toole (University of Toronto).

- **Growing Inequality in Rural Society: The Displacement Costs of Modernization (6 Jan., RY).**
Arranged by Priscilla Reining (American Association for the Advancement of Science).
- **The Origins of Man: Biochemical, Anatomical, and Paleontological Perspectives (7 Jan., RY).**
Arranged by C. Owen Lovejoy (Kent State University) and Glynn Isaac (University of California, Berkeley).
- **Palaeopathology of Prehistoric Populations of Canada (8 Jan., RY).**
Arranged by F. Jerome Melbye (University of Toronto).
- **Social Systems and Evolutionary Theory (8 Jan., RY).**
Arranged by Eugene E. Robkin (University of Wisconsin Center System) and Paul Diener (Southern Illinois University).

15. History and Philosophy of Science

- **Do the Engineering and Scientific Societies Have a Role in Promoting Ethical Conduct Among Their Members? (4 Jan., RY).**
Arranged by Mark S. Frankel (Illinois Institute of Technology, Chicago) and Sheri Smith (Rhode Island College, Providence).
- **Alfred L. Wegener (1880–1930) and the Revolution in the Earth Sciences (4 Jan., RY).**
Arranged by Henry Frankel (University of Missouri, Kansas City) and Harold Burstyn (U.S. Geological Survey, Reston, Va.).
- **The Place of Science in the History of Science (5 Jan., RY).**
Arranged by George Basalla (University of Delaware).
- **The Human Knowledge Process: The Role of Its Special System Forming Activity in Human Ecology (5 Jan., RY).**
Arranged by William Gray (Massachusetts Department of Mental Health, Malden) and Aristide H. Esser (Association for the Study of Man-Environment Relations, Orangeburg, N.J.).
- **Patterns in Scientific Thinking (6 Jan., RY).**
Arranged by Magoroh Maruyama (Southern Illinois University) and Roger Krohn (McGill University).
- **Science and Tradition: Contrasting Views of Man and the Universe (6 Jan., SH).**
Arranged by Rolf M. Sinclair (National Science Foundation).
- **Psychological Bases of Morality (7 Jan., RY).**
Arranged by Robert Hogan (Johns Hopkins University) and Michael Chapman (National Institutes of Mental Health, Bethesda, Md.).
- **The Scientific Literature as a Mirror of Science: Quantitative Studies (7 Jan., RY).**
Arranged by Belver C. Griffith (Drexel University).
- **Documenting the History of Science and Technology: What Should Be Saved and How? (8 Jan., RY).**
Arranged by Edward C. Carter II (Maryland Historical Society, Baltimore).
- **Frontiers of General Systems and Cybernetics Research (8 Jan., RY).**
Arranged by William J. Reckmeyer (San Jose State University) and Roger Conant (University of Illinois, Chicago).

16. Information and Computing

- **Machine Intelligence and Perception: Premises and Progress (4 Jan., RY).**
Arranged by Judith M. S. Prewitt (National Institutes of Health, Bethesda, Md.).
- **Graph Theory in Contemporary Science and Technology (5 Jan., RY).**
Arranged by Judith M. S. Prewitt.
- **Human Factors Considerations in Computer Systems for Nonprofessional Users (5 Jan., RY).**
Arranged by Michael J. Seven (Harvey Mudd College, Claremont, Cal.).
- **International Exchange of Scientific and Technical Information (6 Jan., RY).**
Arranged by Robert L. Chartrand (Library of Congress).
- **Technologies for the Information Society: A Canadian Perspective (7 Jan., RY).**
Arranged by Lewis Auerbach (Canadian Radio-Television and Telecommunications Commission, Ottawa), Arthur Cordell and R. E. Barrington (Science Council of Canada, Ottawa).
- **Functional Limitations in Primary Memory (8 Jan., RY).**
Arranged by Fergus I. M. Craik (Erindale College, Mississauga, Ont.).
- **Quantification of Mental Workload in Man-Machine Systems (8 Jan., RY).**
Arranged by John W. Senders (University of Toronto).

17. Education

- **Self-Instruction for Medical Students: Old and New Methods (4 Jan., RY).**
Arranged by Philip K. Bondy (West Haven Veterans Administration Medical Center).
- **Can We Educate for Leadership? (4 Jan., RY).**
Arranged by Anna J. Harrison (Mount Holyoke College) and Frederick Mosteller (Harvard University).
- **Science Education Programs Bringing the Research Scientific Community Together with Teachers and Students (5 Jan., RY).**
Arranged by Sidney Borowitz (New York Academy of Sciences) and Morris Shamos (New York University).
- **An Exploration of Early Intervention to Improve the Academic Skills of Black Students (5 Jan., RY).**
Arranged by Lloyd G. Humphreys (University of Illinois, Champaign).

- **A Program to Introduce Science to Physically Handicapped Students (6 Jan., RY).**
Arranged by S. Phyllis Stearner (Argonne National Laboratory) and Nansie S. Sharpless (Albert Einstein College of Medicine).
- **New Directions in Education: Implications of Recent Developments in Cognitive Science and Computation (6 Jan., RY).**
Arranged by Frederick Reif (University of California, Berkeley).
- **Early Adolescence: A Critical Stage for Science (7 Jan., RY).**
Arranged by James T. Robinson (Biological Sciences Curriculum Study, Boulder, Colo.).
- **Social and Political Implications of Achievement Testing (7 Jan., RY).**
Arranged by Joseph D. Novak (Cornell University) and Ezra Glaser (Falls Church, Va.).
- **Science, Mathematics, and Gifted Youth (8 Jan., RY).**
Arranged by Arthur H. Livermore and Joseph D. Dasbach (American Association for the Advancement of Science) and Letitia Lestina (Illinois Science Lecture Association, Chicago).

18. Public Access to Science

- **The Science Museum, Science Centre, and Television: Seeing versus Doing in the Public's Understanding of Science (4 and 5 Jan., SH).**
Arranged by James Bell (Ontario Science Center).
- **Promoting Science at the Grass Roots Level—The Local Academy (5 Jan., RY).**
Arranged by Everett L. Wisman (Virginia Polytechnic Institute, Blacksburg).
- **Science and Secrecy (6 Jan., RY).**
Arranged by Stephen H. Unger (Columbia University).
- **Distance Education (6 Jan., RY).**
Arranged by Trilochan S. Bakshi (Athabasca University, Edmonton, Alberta).
- **Public Input Into Science Issues in the Canadian Inquiry Process (7 Jan., RY).**
Arranged by Judith Miller and Jack Basuk (Science Council of Canada).
- **The Attitudinal and Behavioral Foundations of Public Participation in Science Policy (7 Jan., RY).**
Arranged by Jon D. Miller (Northern Illinois University, DeKalb) and Kenneth Prewitt (Social Science Research Council, New York, N.Y.).
- **Science in the News: Risks and Benefits (8 Jan., RY).**
Arranged by William E. Burrows (New York University).

19. Social Implications of Technology

- **Radioactive Waste: Technically and Politically Viable Solutions (4 Jan., SH).**
Arranged by Rustum Roy (Pennsylvania State University,

University Park) and Eva L. Rosinger (Atomic Energy of Canada, Ltd., Pinawa, Manitoba).

- **Innovation and the Law (5 Jan., SH).**
Arranged by Joel D. Goldhar (National Research Council).
- **State/Province and Federal Roles in the Management of the Nuclear Fuel Cycle (6 Jan., SH).**
Arranged by Phyllis Kahn (Minnesota House of Representatives) and William J. Scanlon (Michigan House of Representatives).
- **The Impact of Technology Policy on Industrial Policy: Comparative International Experiences (7 Jan., SH).**
Arranged by John Diebold (The Diebold Group, New York, N.Y.).
- **The SST Controversy Ten Years Later: A Case Study in the Use of Science for Decision-making (8 Jan., SH).**
Arranged by S. Fred Singer (University of Virginia) and Harold I. Schiff (York University).

20. Science and Technology Policy

- **Successful Models of University-Industry Collaboration on Research (4 Jan., RY).**
Arranged by Walter S. Baer (Rand Corporation, Santa Monica, Cal.) and John D. Caplan (General Motors Research Laboratories, Warren, Mich.).
- **The Scientist as Expert Witness (4 Jan., SH).**
Arranged by Albert H. Teich (American Association for the Advancement of Science) and Emilio Q. Daddario (Washington, D.C.).
- **Bad Research—Good Decisions: The Role of Expert Analysis in Policy-making (5 Jan., RY).**
Arranged by Jessica T. Mathews (*The Washington Post*) and Frank von Hippel (Princeton University).
- **The Mediation of Environmental Disputes: The U.S., Canadian, and Joint Experience (6 Jan., RY).**
Arranged by Robert E. Stein (Environmental Mediation International, Washington, D.C.).
- **The Uses of History in Policy Analysis and Strategic Planning (6 Jan., RY).**
Arranged by Vary T. Coates (Dames & Moore, Washington, D.C.) and Joel Tarr (Carnegie Mellon University).
- **Policy Outlook on Science and Technology (7 Jan., RY).**
Arranged by Jurgen Schmandt (University of Texas, Austin).
- **Interdisciplinary Research: Policy and Performance Issues (7 Jan., RY).**
Arranged by Alan L. Porter and Frederick A. Rossini (Georgia Institute of Technology).
- **Impact and Risk Assessment: Professionalism and Participation (8 Jan., RY)**
Arranged by Frederick A. Rossini, Joshua Menkes (National Science Foundation), and William R. Freudenburg (Washington State University).