



*The unique opportunity is to bring before those who seek to understand, those who understand deeply.*

# PRELIMINARY PROGRAM

## AAAS ANNUAL MEETING

### CHICAGO, ILLINOIS

26-31 December 1970

Co-Chairmen: George W. Beadle (Professor of Biology, University of Chicago) and Thomas H. Coulter (Chief Executive Officer, Chicago Association of Commerce and Industry).

#### AAAS INVITED LECTURES AND PANELS

- Special Lecture (26 Dec.).  
To be selected.
- Distinguished Lecture (27 Dec.).  
Gunnar Myrdal (Institute for International Economic Studies, Stockholm, Sweden).
- Address of the Retiring AAAS President (28 Dec.).  
H. Bentley Glass (State University of New York, Stony Brook).
- RESA Annual Address and Panel Discussion (29 Dec.).  
Lloyd M. Cooke (Union Carbide Corporation).
- Sigma Xi-Phi Beta Kappa Lecture (29 Dec.).  
To be selected.
- Frontiers of Science Lecture (30 Dec.).  
Thomas Eisner (Cornell University).
- Film Lectures (26-30 Dec.).  
Margaret Mead (American Museum of Natural History); Eugenie Clark (University of Maryland); Asen Balikci (University of Montreal); and William Pickering (Jet Propulsion Laboratory).

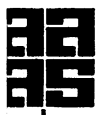
#### AAAS COMMISSION AND COMMITTEE SYMPOSIA

- Commission on Population and Reproduction Control 26, 28-30 Dec.).  
Reducing the Environmental Impact of Population Growth. Arranged by S. Fred Singer (U.S. Department of the Interior).
- Commission on Science Education (29 Dec.).  
Science Education in the Seventies. Arranged by John Mayor and Arthur Livermore (AAAS, Washington, D.C.).
- Committee on Arid Lands (26-27 Dec.).  
Urbanization in the Arid Lands. Arranged by Carle O. Hodge and Carl N. Hodges (University of Arizona).

- Committee on Environmental Alteration (27 Dec.).  
Is Population Growth Responsible for the Environmental Crisis in the United States? Arranged by Barry Commoner (Washington University).

#### AAAS GENERAL SCIENCE SYMPOSIA AND DISCUSSIONS

- Women in Science (27 Dec.).  
Arranged by Jean Simmons (Upsala College, East Orange, New Jersey).
- Women in Science Address (29 Dec.).  
Virus Vaccines, Past and Future, by Hope E. Hopps (National Institutes of Health, Bethesda, Maryland).
- Is There a Generation Gap in Science? (27 Dec.).  
Arranged by Aristide H. Esser (Rockland State Hospital).
- Mood, Behavior, and Drugs (27-28 Dec.).  
Arranged by Chauncey Leake (San Francisco Medical Center, University of California).
- Man's Impact on the Global Environment (28 Dec.).  
Arranged by Richard Carpenter (Legislative Reference Service, Library of Congress).
- Public Policy for the Environment (28 Dec.).  
Arranged by Harold P. Green (George Washington University).
- Techniques and Status of Modern Parapsychology (27 Dec.).  
Arranged by E. Douglas Dean (Newark College of Engineering).
- The Teaching of Science (28-29 Dec.).  
Arranged by Arnold Ravin (University of Chicago).
- Science and the Federal Government—1970 (28-30 Dec.).  
Arranged by Raymond J. Seeger (AAAS, Washington, D.C.).
- Law-Science Interface (29 Dec.).  
Arranged by Harold P. Green (George Washington University).



- Science and Man: Values and Expectations (29 Dec.)**. Arranged by George Wald (Harvard University).
- Large-Scale Use of Defoliants (29 Dec.)**. Arranged by W. G. Berl (AAAS, Washington, D.C.).
- Crime, Violence, and Social Control (29-30 Dec.)**. Arranged by Joseph Coates (National Science Foundation).
- Contributions of U.S. Minority Groups to the Development of Science (30 Dec.)**. Arranged by Raymond J. Seeger (AAAS, Washington, D.C.).

## SYMPOSIA OF AAAS SECTIONS AND AFFILIATED SOCIETIES

### Mathematics (A)

- Section Program**
  - Vice Presidential Address and Mathematics in the Undergraduate Program in the Sciences (28 Dec.). Arranged by R. P. Boas (Northwestern University, Evanston, Illinois).
- American Mathematical Society and Society for Industrial and Applied Mathematics**
  - Some Mathematical Questions in Biology (27 Dec.). Arranged by J. D. Cowan (University of Chicago).
- Association for Computing Machinery**
  - Computers and Society (26 Dec.). Arranged by Robert Ashenurst (University of Chicago).
- National Council of Teachers of Mathematics**
  - Aspects of Mathematics: Kindergarten to College (29 Dec.). Arranged by Isabelle P. Rucker (State Department of Education, Richmond, Virginia).

### Physics (B)

- Section Program**
  - Elementary Particles and Symmetry (27 Dec.). Arranged by Albert M. Stone (Applied Physics Laboratory, Johns Hopkins University).

### Chemistry (C)

- Section Program**
  - Chemical Memory (30 Dec.). Arranged by William Bryne (University of Tennessee).
  - Teaching of Chemistry (30 Dec.) Arranged by William Cook (Colorado State University).
- American Association of Clinical Chemists**
  - Genetic Diseases and the Quality of Life (29 Dec.).

Arranged by Donald T. Forman (Evanston Hospital, Illinois) and Albert A. Dietz (Veterans Administration Hospital, Hines, Illinois).

- **Contributed Papers in Clinical Chemistry (29 Dec.)**. Arranged by Donald T. Forman and Albert A. Dietz.

### Astronomy (D)

- Section Program**
  - **On Teaching Astronomy (29 Dec.)**. Arranged by Raymond J. Seeger (AAAS, Washington, D. C.).
  - **Interstellar Molecules and Chemistry (30 Dec.)**. Arranged by Bertram D. Donn (Goddard Space Flight Center).
- American Astronautical Society**
  - **Results of the Apollo Program (29 Dec.)**. Arranged by Louis S. Walter (Goddard Space Flight Center, Greenbelt, Maryland).

### Geology and Geography (E)

- Section Program**
  - **Land-Use Problems in Illinois (30 Dec.)**. Arranged by Robert E. Bergstrom (Illinois State Geological Survey).
- Geological Society of America**
  - **Minor Metals of the Geochemical Environment, Health and Disease (30 Dec.)**. Arranged by Helen L. Cannon (U.S. Geological Survey, Denver) and Howard C. Hopps (Armed Forces Institute of Pathology, Washington, D.C.).

### Biological Sciences (FG)

- Section Program**
  - **Plant Population Dynamics (27 Dec.)**. Arranged by Jack McCormick (Devon, Pennsylvania).
  - **The Development of Cell Organelles (28 Dec.)**. Arranged by Joel L. Rosenbaum (Yale University).
  - **The U.S. Contribution to the International Biological Program (28-29 Dec.)**. Arranged by the U.S. National Committee for the International Biological Program, National Academy of Sciences.
- American Fisheries Society**
  - **Water Quality and Fisheries in the Upper Great Lakes (28 Dec.)**. Arranged by Clarence A. Carlson (Cornell University).

- American Society of Naturalists and Society for the Study of Evolution**
  - **Solutions to Environmental Problems (28 Dec.)**.

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Arranged by Bruce Wallace (Cornell University) and David L. Jameson (University of Houston).

- American Society of Zoologists/Division of Comparative Endocrinology**
  - Comparative Studies of Calcitonin and Ultimobranchial Bodies (29 Dec.). Arranged by Nancy B. Clark (University of Connecticut).
  - Techniques of Investigation and Current Concepts in the Physiology and Biochemistry of Sex Steroid Action (29 Dec.). Arranged by Robert D. Lisk (Princeton University).
  - Contributed Papers (27–28, 30–31 Dec.). Arranged by Robert D. Lisk.
- American Society of Zoologists/Division of Comparative Physiology and Biochemistry**
  - Satellite DNA's (27 Dec.). Arranged by Dorothy M. Skinner (Oak Ridge National Laboratory).
  - Contributed Papers (27–30 Dec.). Arranged by Michael Greenberg (Florida State University).
- American Society of Zoologists/Division of Developmental Biology**
  - Biology of Immunity in Amphibians (28 Dec.). Arranged by E. Peter Volpe (Tulane University).
  - Contributed Papers (26–29 Dec.). Arranged by Hans Laufer (University of Connecticut).
- American Society of Zoologists/Division of Ecology**
  - Contributed Papers (29 Dec.). Arranged by David Grant (Davidson College).
- American Society of Zoologists/Division of Invertebrate Zoology**
  - Parthenogenesis (27 Dec.). Arranged by James Oliver (Georgia Southern University).
  - The Libbie H. Hyman Memorial Symposium on Biology of the Turbellaria (28–30 Dec.). Arranged by M. Patricia Morse (Northeastern University), Nathan W. Riser (Northeastern University), and Horace W. Stunkard (American Museum of Natural History).
  - Contributed Papers (26–28 Dec.). Arranged by L. R. Kraemer (University of Arkansas, Fayetteville).
- American Society of Zoologists/Division of Vertebrate Morphology**
  - Contributed Papers (28–29 Dec.). Arranged by Walter J. Bock (Columbia University).
- Animal Behavior Society**
  - Separation and Depression: Clinical and Research Aspects (26–27 Dec.). Arranged by Edward C. Senay (University of Chicago) and John Paul Scott (Bowling Green University).
  - Analytic Problems in Animal Behavior (29 Dec.). Arranged by Stuart A. Altmann (University of Chicago).
  - Contributed Papers (27–31 Dec.). Arranged by John G. Vandenberg (North Carolina Department of Mental Health).
- Beta Beta Beta**
  - Biennial National Meeting (27–28 Dec.). Arranged by E. G. Stanley Baker (Drew University).
- Ecological Society of America and Wildlife Society**
  - Urban Ecology Today (30 Dec.). Arranged by Forest Stearns (University of Wisconsin), William S. Osburn (U.S. Atomic Energy Commission), Robert Brander (U.S. Forest Service), and Charles M. Kirkpatrick (Purdue University).
- Ecological Society of America**
  - Contributed Papers (28–29 Dec.). Arranged by William S. Osburn.
- Herpetologists' League**
  - Contributed Papers (28–29 Dec.). Arranged by T. Paul Maslin (University of Colorado Museum, Boulder).
- Human Ecological Society**
  - Human Ecology (28 Dec.). Arranged by George B. Happ (Institute of Human Ecology) and Eduard C. Brandt, Jr. (Radford College).
- Society for the Study of Evolution**
  - Presidential Address (30 Dec.), by Richard C. Lewontin (University of Chicago).
  - Contributed Papers (27, 29–30 Dec.). Arranged by David L. Jameson (University of Houston).
- Society of Systematic Zoology**
  - Methods and Problems in Cladistic Research (29 Dec.). Arranged by Joseph L. Simon (University of Southern Florida).
  - Contributed Papers (28 Dec.). Arranged by Joseph L. Simon.

## Anthropology (H)

- Section Program**
  - Vice Presidential Address and Film Lecture (26 Dec.), by Margaret Mead (American Museum of Natural History).
  - Aleutian Ecosystem (26–27 Dec.). Arranged by William S. Laughlin, R. F. Black, and J. S. Aigner (University of Connecticut).
  - Contributed Papers (27 Dec.). Arranged by Anthony Leeds (University of Texas).



- Biologic Relativity (28 Dec.). Arranged by E. R. N. Grigg (Chicago Medical School).
- User participation in the Housing Process (29 Dec.). Arranged by John Turner (Cambridge, Massachusetts).
- Technology: Nuts and Bolts of Social Process (29–30 Dec.). Arranged by Thomas R. DeGregori (University of Houston).

### Psychology (I)

#### Section Program

- The Developmental Sciences: State and Fate of Research Funding (27 Dec.). Arranged by Victor Denenberg (University of Connecticut).
- University Open Admissions (27 Dec.). Arranged by Lloyd G. Humphreys (University of Illinois).
- The Impact of Colleges on Students (28 Dec.). Arranged by Alexander W. Astin (American Council on Education).
- Critical Issues in Research Related to Disadvantaged Children (28 Dec.). Arranged by Donald L. Peters (Pennsylvania State University).
- Human Behavior and Its Control (30 Dec.). Arranged by William A. Hunt (Loyola University of Chicago).

#### American Psychoanalytic Association

- The Interface between Psychoanalysis and Education (27 Dec.). Arranged by G. E. Blom (University of Colorado Medical Center).

### Social and Economic Sciences (K)

#### Section Program

- Vice Presidential Address (27 Dec.), by Robert M. Solow (Massachusetts Institute of Technology).
- Policy Sciences: A New Supradiscipline and Its Implications (26–27 Dec.). Arranged by Yehezkel Dror (The Rand Corporation, Santa Monica).
- Science and Democracy (27 Dec.). Arranged by Harvey Sapolsky (Massachusetts Institute of Technology).
- Comparative Policies in Science and Technology (27 Dec.). Arranged by Dixon Long (Case Western Reserve University).
- How People React to Technology (28 Dec.). Arranged by Emmanuel G. Mesthene (Harvard University).
- Science Policies of Non-Defense Federal Agencies

(28 Dec.). Arranged by James Carroll (Ohio State University).

- Goals Analysis—Looking Ahead to 1980 (29 Dec.). Arranged by Leonard A. Lecht (National Planning Association).

- The Economics and Politics of Large-Scale Technological Programs (30 Dec.). Arranged by Daniel Rich (University of Delaware).

#### American Sociological Association

- Recent Studies in the Sociology of Science (28 Dec.). Arranged by Bernard Barber (Barnard College, Columbia University).

#### Association for the Study of Grants Economy

- A Symposium on the Grants Economy (26–27 Dec.). Arranged by Janos Horvath (Butler University).

#### Metric Association

- Metric System—Status of Adoption by the United States (28 Dec.). Arranged by Richard W. Mattoon (Abbott Laboratories, Chicago).

#### National Institute of Social and Behavioral Sciences

- Simulation and the Science of Public Policy (27 Dec.). Arranged by Donald P. Ray (Washington D.C.).

- Contributed Papers (26, 28 Dec.). Arranged by Donald P. Ray.

#### Population Association of America

- Social Consequences of Demographic Phenomena (27 Dec.). Arranged by David D. McFarland (University of Chicago).

#### Society for the Scientific Study of Religion

- Directions in Religious Organization (28 Dec.). Arranged by Ross P. Scherer (Loyola University, Chicago).

### History and Philosophy of Science (L)

#### Section Program

- Science and Human Values (27 Dec.). Arranged by R. W. Burhoe (Zygon Journal of Religion and Science).

- Hiroshima: 25 Years Later (28 Dec.). Arranged by George Wald (Harvard University).

- Approaches to the Philosophy of Biology (30 Dec.). Arranged by Dudley Shapere (University of Chicago).

#### History of Science Society

- George Sarton Memorial Lecture (28 Dec.). Attitudes toward Nature in Medieval England: The Alphonso and Bird Psalters, by G. Evelyn Hutchinson (Yale University).



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- Science in the 19th Century (27 Dec.). Arranged by John L. Heilbron (University of California, Berkeley).
- Renaissance Optics (27 Dec.). Arranged by David Lindberg (University of Wisconsin).
- The Confrontation of Scientific Traditions in the Orient (27 Dec.). Arranged by John L. Heilbron.
- Early Modern Biology (28 Dec.). Arranged by Theodore M. Brown (Princeton University).
- Works-in-Progress (28–29 Dec.). Arranged by John L. Heilbron.

- History of Science Society and Society for the History of Technology
  - The Improvement of Instruments and the Growth of Scientific Ideas (28 Dec.). Arranged by John L. Heilbron.

- History of Science Society and Section L
  - Recent Physical Science (29 Dec.). Arranged by John L. Heilbron.

- Society for General Systems Research
  - Presidential Address (27 Dec.). The Coming Era of Systematic Societal Change, by Bertram M. Gross (Hunter College).
  - World Cities of the Future (26–30 Dec.). Arranged by Bertram M. Gross.

- Society for the History of Technology
  - Presidential Address by Robert P. Multhauf (27 Dec.).
  - Scientific Engineering in the 19th Century (27 Dec.). Arranged by Otto Mayr (Smithsonian Institution, Washington, D.C.).
  - Perspectives on Apollo History (29 Dec.). Arranged by Lloyd S. Swenson, Jr. (University of Houston).
  - Topics in the History of Technology, Works-in-Progress (27 Dec.). Arranged by Melvin Kranzberg (Case Western Reserve University).

### Engineering (M)

- Section Program
  - Automobile Pollution (26 Dec.). Arranged by Paul Rosenberg (Paul Rosenberg Associates, New York).
- American Institute of Aeronautics and Astronautics
  - Education Toward Social Responsibilities for Engineers (28 Dec.). Arranged by T. Paul Torda (Illinois Institute of Technology).
  - Biocybernetics of the Dynamic Communication of Emotions and Qualities (29 Dec.). Arranged by Manfred Clynes (Rockland State Hospital).

### Medical Sciences (N)

- Section Program
  - Problems in the Meaning of Death (29 Dec.). Arranged for the Institute of Society, Ethics, and the Life Sciences by Leon R. Kass (National Academy of Sciences).
- Alpha Epsilon Delta
  - Advisory Programs for Careers in the Health Professions (28 Dec.). Arranged by Maurice L. Moore (Bronxville, New York).
- American Association of Bioanalysts
  - The Importance of the Bioanalytical Laboratory in Health Care (27 Dec.). Arranged by Edmond L. Morgan (Illinois Association of Clinical Laboratories, Des Plaines).
- American Genetic Association
  - Advances in Human Genetics and their Impact on Society (28 Dec.). Arranged by Digamber S. Borgaonkar (Johns Hopkins University School of Medicine) and Saleem A. Shah (National Institutes of Mental Health).
- American Orthopsychiatric Association
  - Unresolved Social Issues—Impact on Child and Family Mental Health (30 Dec.). Arranged by Herman P. Schuchman (University of Illinois).

### Dentistry (Nd)

- Section Program
  - The Neuropsychology of Feeding (28–29 Dec.). Arranged by Robert C. Likins (University of Chicago).

### Pharmaceutical Sciences (Np)

- Section Program
  - Vice Presidential Address (28 Dec.). Don E. Francke (University of Cincinnati).
  - Distinguished Lecture (28 Dec.). Delivery of Health Care in the United States, by Ray E. Brown (Northwestern University McGaw Medical Center).
  - Contributed Papers on Hospital Pharmacy (28 Dec.). Arranged by Joseph A. Oddis (American Society of Hospital Pharmacists, Washington, D.C.).
  - Marine Pharmacology and Toxicology (29 Dec.). Arranged by Gary P. Carlson (University of Rhode Island).
  - Soaps, Detergents, and Antibacterials (30 Dec.). Arranged by Joseph Jerome (United States Adopted Names Council).
  - Contributed Papers on Pharmaceutical Sciences (30 Dec.). Arranged by John Autian (University of Tennessee Medical Units).



### Agriculture (O)

- Section Program**
  - Agriculture and the Quality of the Environment in the Seventies (28–29 Dec.). Arranged by Mathias Stelly (American Society of Agronomy).

### Industrial Science (P)

- Section Program**
  - Past Vice Presidential Address by Gordon Teal, and Presentation of Industrial Science Award (28 Dec.).
  - Industrial Approaches to Urban Problems (28 Dec.). Arranged by Jordan D. Lewis (Battelle Development Corporation).
  - New Roles for Old Research and Development Laboratories (30 Dec.). Arranged by James Carroll (Ohio State University).

### Education (Q)

- Section Program**
  - Search for Purpose in Nature and in Living Systems (27 Dec.). Arranged by V. L. Parsegian (Rensselaer Polytechnic Institute).
  - Surplus Ph.D.'s (27 Dec.). Arranged by Lee Grodzins (Massachusetts Institute of Technology).
- American Junior Academy**
  - Contributed Papers (28 Dec.). Arranged by Frank Starr (Waterloo Community Schools, Iowa).
- American Nature Study Society**
  - Nature Study and Conservation Education; the Ecological Attitude, Its Presence, Its Characteristics, and How to Effect It (27–29 Dec.). Arranged by John I. Green (St. Lawrence University).
  - Presidential Address (29 Dec.) by Mrs. J. Lewis Scott.
  - Lenses on Nature (28 Dec.). Arranged by John I. Green.
- Association of Academies of Science**
  - President-Elect Address (27 Dec.). Environmental Geology, by Glenn W. Stewart (University of New Hampshire).
  - Science Teacher Education (27 Dec.). Arranged by Harry Bennett (Louisiana State University).
- Joint Science Teaching Societies**
  - The Learner and His Future Environment: Perspectives (29 Dec.). Arranged by Mary Keegan (School

District of Winnetka, Illinois) and Irwin Siegelman (Scott, Foresman, and Company).

- National Science Teachers Association**
  - Individualizing Instructions in College Science Courses (27 Dec.). Arranged by Albert F. Eiss (National Science Teachers Association).

### Information and Communication (T)

- Section Program**
  - International Sharing of Scientific Information (28 Dec.). Arranged by Scott Adams (National Academy of Sciences).
- American Medical Writers Association**
  - Dynamic Changes in Biomedical Communication in the Seventies (29 Dec.). Arranged by Abe Rubin (Ohio College of Podiatric Medicine).
- National Association of Science Writers**
  - Science Literature for Children (27 Dec.). Arranged by Eugene Kone (American Institute for Physics).
- Society of Technical Writers and Publishers**
  - Excellence in Scientific Writing (29 Dec.). Arranged by W. Earl Britton (University of Chicago).

### Statistics (U)

- Section Program**
  - Statistical Problems of Resources Management (30 Dec.). Arranged by Douglas Chapman (University of Washington).
- Operations Research Society of America**
  - Use of Statistics in Operations Research (26 Dec.). Arranged by John E. Walsh (Southern Methodist University).

### Atmospheric and Hydrospheric Sciences (W)

- Section Program**
  - Water Supply and Water Management Problems of the Great Lakes (30 Dec.). Arranged by Max A. Kohler (ESSA–Weather Bureau, Washington, D.C.), William C. Ackermann (Illinois Water Survey, Urbana), and L. A. Heindle (National Academy of Sciences).
- Committee on Environmental Quality of the American Geophysical Union**
  - Lake Restoration (29 Dec.). Arranged by Robert A. Ragotzkie (University of Wisconsin).
- Operations Research Society of America**
  - Systems Approach to Environmental Pollution (27–28 Dec.). Arranged by George K. Chacko (Washington, D.C.).

Further information, including housing, registration, and tours will appear in the 25 September issue of Science.

# Science

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