

# 4S Society for Social Studies of Science

Spring 1978

Volume 3 Number 2

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# **4S** *Society for Social Studies of Science*

**President:** Warren O. Hagstrom

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## 4S: PROGRESS AND PROSPECTS

### Editors' Note

Ideally the 4S Newsletter should be a forum for exchange of ideas and news among all 4S members. In practice it has been difficult to achieve this ideal. First, like most people, Editors are lazy and rely too much on their own networks of colleagues, friends and chance encounters for material, rather than seek out new sources. Second, it has been the experience of this Editorial group that 4S members are not as communicative with us as we would like. Most of the items you see in the Newsletter are directly solicited from the authors. We would like to receive more unsolicited material--news, book reviews, Thought and Opinion pieces, etc. Perhaps we should all get in the habit of collecting the odd bits of paper on our desks every few months and sending them to the Newsletter. But since new habits are hard to form, we have decided to make it easier for you to remember us. In the near future we will send out a 4S "Information Circular" (formerly sent only to Editorial Advisors) to a nearly random sample of members. Hopefully we will be able to reach all members at least once a year. The Circular will provide a more structured mode of responding, and we hope everyone will take the opportunity to clear off their desks.

You may have noticed that we did not keep our promise to make this a book review issue. Information on the upcoming meeting in Bloomington seemed more pressing. We will, however, make good next issue.

4S OPERATING BUDGET  
(1978-79)

Anticipated Income:

|                                          |            |
|------------------------------------------|------------|
| 1978 Renewals (400*) less 10% (to agent) | \$3600     |
| 1978 New Members (150**)                 | 1500       |
| Proceedings                              | 200        |
| Balance on Hand at Secretariat           | <u>819</u> |
| Total Funds Available                    | \$6119     |

Anticipated Expenses:

|                         |             |
|-------------------------|-------------|
| Secretarial             | \$1002      |
| Telephone               | 150         |
| Newsletter:             |             |
| Printing 4 @ 550        | \$2200      |
| Other Costs 4 @ 250     | <u>1000</u> |
|                         | 3200        |
| Other Costs             | 600         |
| Annual Meeting          | 500         |
| Miscellaneous           | <u>200</u>  |
| Total Expected Expenses | \$5652      |

\*In 1977, there were 348.

\*\*In 1977, there were 188.

ELECTION RESULTS FOR OFFICERS

|                      |                 |
|----------------------|-----------------|
| President:           | Dorothy Nelkin  |
| Secretary-Treasurer: | Lowell Hargens  |
| Council:             | Jerry Gaston    |
|                      | Ian Mitroff     |
|                      | Arnold Thackray |

THIRD ANNUAL MEETING: PROGRAM NOTES

TIME: 2 PM Friday, 3 November to 4 PM Sunday, 5 November 1978

PLACE: Indiana Memorial Union, Indiana University, Bloomington

The program will include invited and contributed papers, panel discussions, and roundtable sessions. Among the invited speakers will be JOHN ZIMAN (University of Bristol) discussing "Epistemological Consequences of a Social Model of Science," HARRISON SHULL (Indiana University) on "Science and Public Policy," DONALD T. CAMPBELL (Northwestern University) on "Comments on the Fragmented History of the Psychology of Science," JOHN LAW (University of Keele), TREVOR PINCH (University of Bath), SPENCER WEART (American Institute of Physics), and STEVE WOOLGAR (Brunel University).

Two panel sessions are planned, and contributions from interested persons are welcomed by the coordinators: THOMAS F. GIERYN (Department of Sociology, Indiana University, Bloomington, IN 47401), Varieties of Theoretical Orientations in the Social Studies of Science, and BELVER C. GRIFFITH (School of Library Science, Drexel University, Philadelphia 19104), Methodological Problems and Potentials in the Social Studies of Science.

Contributed papers are still being received and refereed by the Program Committee: DARYL CHUBIN (Georgia Institute of Technology), THOMAS F. GIERYN, SAL RESTIVO (Rensselaer Polytechnic Institute), and WARREN HAGSTROM (University of Wisconsin). The following sessions and papers have been accepted for presentation:

- (1) The Social Assessment of Scientific Risk, chaired by WILLIAM A. BLANPIED (EVIST Program, NSF)

"Regulation and Risk Management in Federal Science-Related Agencies,"  
MICHAEL S. BARAM (Franklin Pierce Law Center)

"The New Zealand Accident Compensation Act: An Innovative Response to Technology-Related Risk," JANE C. KRONICK (Bryn Mawr College)

"Equity Issues in Radioactive Waste Management," ROGER KASPERSON  
(Clark University)

"Case Studies of Scientific Research on Aggression," RONALD BAYER  
(Institute of Society, Ethics, and Life Sciences)

- (2) Public Participation in Science: Research Approaches, chaired by  
ALEXANDER J. MORIN (Office of Science and Society, NSF)

"Citizen Participation in State Weather Modification Policy,"  
W. HENRY LAMBRIGHT (Syracuse University)

"Public Involvement in the DNA Controversy," RAE GOODELL (MIT)

"Can the Science Court Work? The Minnesota Experience," BARRY M. CASPER  
(Carleton College)

"Institutional Review Boards and Medical Research," BRADFORD GRAY  
(Institute of Medicine)

"The European Experience: Comparative Studies," DOROTHY NELKIN  
(Cornell University)

- (3) Public Understanding of Science, chaired by ROBERT WRIGHT (Head  
Scientist Indicators Unit NSF)

"Selective Attentiveness: A Conceptual Framework for Understanding  
Public Attitudes Toward Organized Science," JON D. MILLER (Northern  
Illinois University)

"The Development of Attentiveness to Organized Science Among Young  
Adults," ROBERT SUCHNER AND ALLAN VOELKER (Northern Illinois University)

"The Mobilized Public for Science Politics," KENNETH PREWITT AND  
ROBERT PEARSON (National Opinion Research Center at the University  
of Chicago)

Other sessions will be scheduled on the basis of contributed papers and expressed interests. Likely candidates include sessions on Indicators and Models of Science, Case Studies of Scientific and Technological Innovation, and Big Science in International Context. A session on Social Psychology of Science is being organized by JOHN WILKES on behalf of the Study Group for the Social Psychological and Subjective Aspects of Science (this group formed at last year's meeting). Prospective participants should submit abstracts/papers directly to JOHN WILKES (Social Science Department, Worcester Polytechnic Institute, Worcester, MA 06109). Ample time will be provided for other special interest groups to convene if the Program Committee is notified. Finally, for the first time at our meeting, roundtable sessions are planned in which a single presenter summarizes aspects of his/her research in progress or leads an informal discussion of some problem or topical area with a small group of interested persons. Please contact DARYL CHUBIN (Department of Social Sciences, Georgia Institute of Technology, Atlanta, GA 30332) regarding participation of any kind in the program.\*\*\*

The Local Arrangements Committee, chaired by NICHOLAS C. MULLINS and consisting of nine other Indiana University faculty representing six departments (LYNTOH CALDWELL, FRED CHURCHILL, RON GIERS, LOWELL HARGENS, MORETTA KOERTGE, BARBARA RESKIN, HARRISON SHULL, DAN WILLARD, and JOHN WOODCOCK), reports that a cocktail party (open bar) on Friday and on Saturday, a cocktail party (open bar) and banquet, with an address by President HAGSTROM will be held.

The 4S Business Meeting will be held on Sunday afternoon, 5 November. The Council, old and newly-elected members together, will meet on Friday morning, 3 November.

TRAVEL: Conference participants should make their own travel arrangements to Bloomington or to Indianapolis, 50 miles Northeast of Bloomington. (Air travel directly to Bloomington is available from Chicago or Indianapolis.) We will schedule some buses for the trip between the Indianapolis airport and Indiana University on Friday morning and Sunday afternoon for those who make reservations at \$5.00 each way (to be reserved on Registration Form on next page).

\*\*\*ALL SUBMITTED PAPERS AND SUGGESTIONS FOR SESSIONS OR PARTICIPATION  
MUST BE RECEIVED BY DARYL CHUBIN NO LATER THAN 29 SEPTEMBER 1978

**(SOCIETY FOR SOCIAL STUDIES OF SCIENCE)**

**INDIANA MEMORIAL UNION**  
 Telephone 812—337-2536

**Please Check (✓) Accommodations Desired**  
 (State Tax Additional)

| Type Room                 | 1 Person                         | 2 Persons                        | 3 Persons                              | 4 Persons                        |
|---------------------------|----------------------------------|----------------------------------|----------------------------------------|----------------------------------|
| Double (1 dble bed)       | <input type="checkbox"/> \$17.00 | <input type="checkbox"/> \$21.00 | <input type="checkbox"/> \$27.00       | <input type="checkbox"/> \$31.00 |
| King Size Double**        | <input type="checkbox"/> \$23.00 | <input type="checkbox"/> \$27.00 | <input type="checkbox"/> \$33.00       | <input type="checkbox"/> \$37.00 |
| Twin (2 sgle beds)        | <input type="checkbox"/> \$19.00 | <input type="checkbox"/> \$23.00 | <input type="checkbox"/> \$27.00 (cot) | <input type="checkbox"/> \$31.00 |
| Twin Double (2 dble beds) | <input type="checkbox"/> \$23.00 | <input type="checkbox"/> \$27.00 | <input type="checkbox"/> \$33.00       | <input type="checkbox"/> \$37.00 |
| Suite*                    | <input type="checkbox"/> \$35.00 | <input type="checkbox"/> \$40.00 | <input type="checkbox"/> \$43.00       | <input type="checkbox"/> \$46.00 |
| Suite*                    | <input type="checkbox"/> \$40.00 | <input type="checkbox"/> \$45.00 | <input type="checkbox"/> \$48.00       | <input type="checkbox"/> \$51.00 |

\*Suites - 1 bedroom-1 parlor, 2 single beds in bedroom and hide-a-bed in parlor.  
 \*\*Limited Quantity

Number ..... Date .....

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 No. .... Code .....

I will arrive (date) ..... at ..... A.M.  
 P.M.  
 and depart (date) ..... at ..... A.M.  
 P.M.  
 Name of person other than spouse sharing room. Please  
 send separate card.  
 1. ....  
 2. ....

**RESERVATIONS WILL BE ACCEPTED UNTIL TWO WEEKS  
 PRIOR TO THE CONFERENCE. PROVIDED SPACE IS AVAIL-  
 ABLE.**

**IMPORTANT:** Advance payment equal to one day's rate is required on arrivals after 6:00 p.m. Full advance payment may be requested for certain special events. If no room is available at the requested rate, reservations will be made at the next available rate. **NO PETS ALLOWED, PLEASE.** Check out time is 1 p.m. EST. An additional charge will be made for late checkouts.



## Research Concerning Socialist Policy on Technology

Janos Farkas  
Institute of Sociology  
Hungarian Academy of Sciences

The policy on technology of the East European socialist countries (as a part of a unified economic and science policy) is endeavouring to regulate R&D processes and innovation chains and in certain cases, to achieve accelerated development by central development objectives. A research group led by Dr. Pál Tamás within the Department on Science and Technology of the Institute for Sociological Research of the Hungarian Academy of Science is examining this sphere of subjects using the example of the advances and application of computer technology in Hungary. The project, to run from 1977 to 1980, consists of three parts:

1. Using 10 large scale case studies, some of which are concerned with completed systems development projects, while others are R&D operations still underway (this makes participant observation possible) they are endeavouring to examine the effects of changing technologies and organizational incentives on centrally accelerated development. (In Hungary the advance of computer technology is among several high priority R&D projects, coordinated on the government level.)

Some of the case studies follow the development of systems for industrial application (oil refinery, rubber industry, bus manufacture, instrument industry) while others examine research and scientific applications (the history of the development of a universal small scale computer family, the building of a uniform computer technology network for Hungarian geophysical research, the establishment of a central geological data bank, etc.).

2. A separate examination is to be completed of computer technology manpower (those who work in the area full time and those who have become "semi-professional" as users). The group is devoting separate attention to the changes in the profession particularly illustrative in this group, that of highly qualified technological-scientific manpower.

3. In computer technology, two regularities of modern scientific development appear more acutely within Hungarian R&D (and this makes research easier). These are (1) intensive international cooperation and (2) expert participation of researchers in the forming of science and technological policy. The two basic aspects of the examination made by this group of sociologists, engineers, mathematicians and economists are:

1. The growing pains, the unavoidable development disproportions, which occur in accelerated and high priority, centrally supported R&D processes. The measures elaborated to eliminate these growing pains, and the study of regulation mechanisms built organically into the process is an important aspect of study of science policy.
2. Changes in the production system of technology are always followed by inertia, to be more precise, by a selective inertia based on specific regularities in management and manpower. The lack of congruence of these sub-systems which constantly change can also serve the purposes of science policy if examined.

Social Studies of Science in Poland:  
An Organizational Note

Maria Nowakowska  
Institute of Philosophy and Sociology  
and  
Committee of Science of Science  
Polish Academy of Sciences, Warszawa

The social studies of science in Poland are dispersed among several centers. The main coordinating and advisory body is the Committee of Science of Science of the Polish Academy of Sciences (President of the Committee: Prof. I. Malecki). The Committee sponsors its quarterly Zagadnienia Naukoznawstwa (Problems of Science of Science: the editor is Prof. B. Walentynowicz). The journal also has English and Russian editions, appearing once a year.

The Committee organizes local and international conferences, and seminars with guest lecturers. For example, in 1977-78 the following conferences were held:

- "The International School of Methodological Foundations of Systems Research in Science and Technology." Organizer: Prof. W. Gasparski, Scientific Secretary of the Committee of Science of Science.
- "Science and Society." The plenary session of the Committee, jointly with the International Council for Science Policy Studies.
- "On Transfer of Innovations." Organizer: Prof. J. Ruzskiewicz.
- "On Terminology." Organizer: Prof. B. Walentynowicz.

Under the auspices of the Committee, the inter-university courses on science of science are organized for Ph.D. students from all departments.

Among several institutions dealing directly or indirectly with social studies of science, one should mention:

- Institute of Science Policy (Warsaw), sponsored jointly by the Ministry of Higher Education and Polish Academy of Sciences; Director: Prof. J. Kluczynski. This Institute deals mostly with applied problems. One ought to mention here the permanent seminar, conducted by Prof. S. Kwiatkowski, on Organization of Large Research Projects. The theoretical research in the Institute is conducted mostly by Prof. S. Szwedowski, Head of the Department of Economics of Science.
- Technical University of Warsaw;
- Socioeconomical Institute, directed by Prof. S. Szeffler;
- Studium of Organization and Coordination of R + D activities, directed by Prof. E. Olszewski.

---Technical University of Wroclaw:

---Department of Sociology of Science, directed by Prof. J. Goćkowski, organizes annual conferences on various related topics, e.g., "Scientific authority," "The role of master in science," etc.

---Centre for Prognostic Studies, directed by Dr. K. Pelc, deals with theoretical methods and prediction of the development of selected domains of science.

---Institute of Philosophy and Sociology, Polish Academy of Sciences, Warsaw; Director: Prof. T. Jaroszewski. The permanent seminar on sociology of science is conducted by Prof. S. Kowalewska; Prof. L. Zacher, who is Head of the Department of Problems of Scientific and Technical Revolution, is conducting, jointly with the Director of the Institute, the Polish-American research program "Technology and the Future of the Society." He will be editing a series of books, in English, by Polish and US authors, about these topics. The first international conference on the above mentioned research program will be held in Warsaw in September 1978.

---Institute of Philosophy, University of Poznan; Director: Prof. L. Nowak, who is also the editor of the international journal (published in English, by R.B. Grüner Publ. Co., P.O. Box 70020, Amsterdam) "Poznan Studies in the Philosophy of the Sciences and the Humanities" (Editor's address: Prof. Leszek Nowak, Cybulskiego 13, 60-247 Poznan, Poland).

From recent years, the following books, published in Polish, should be mentioned:

- J.L. Baworowski, Prognosis in Science and Technology, Wroclaw 1977.
- W. Gasparski, Design: Conceptual Preparation of Actions. An Introduction to Methodology, Warszawa 1978, PWN.
- L. Nowak, An Idealizational Theory of Science. Warszawa 1977, PWN.
- M. Nowakowska, Quantitative Psychology with Elements of Science of Science, Warszawa 1975, PWN.
- M. Nowakowska, Theories of Research: Modelling Approaches. Warszawa 1977, PWN. English edition in preparation.
- J. Rudnianski, Organization and Creativity, Warszawa 1976, PWN.
- S. Szwedowski, The Effectiveness of Scientific and Technological Progress, Warszawa 1976, PWN.
- L. Zacher, Control of the Process of Scientific-Technological Revolution. Premises and General Assumptions. Wroclaw-Warszawa 1978. Ossolineum.
- L. Zacher, Problems of Scientific-Technological Revolution (ed.). Warszawa 1977, PWN.

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Bibliography on Citation Analysis - A second, updated edition of the Annotated Bibliography on Citation Analysis is available from ISI. The Bibliography covers papers, books and reports which utilize the methods of citation analysis in the fields of information science, sociology of science, history of science and science policy. This second edition contains 678 entries (roughly 200 of which are new) and covers literature to about March 1978. Some of the items are annotated and all are indexed. The Bibliography was compiled by Susan Cozzens, Ming Ivory, Janice LaPorte, Henry Small, and Janet Stanley. A limited number of copies are available free of charge. Contact Henry Small, Institute for Scientific Information, 325 Chestnut Street, Philadelphia, PA 19106.

FORTHCOMING PUBLICATIONS

Scientometrics

An international journal for all quantitative aspects of the science of science and science policy.

Contents of the First Issue - September 1978

Editorial Statements by M.T. Beck, G.M. Dobrov, E. Garfield, and  
D. de Solla Price

G.N. Gilbert (UK) - Measuring The Growth of Science: A Review of  
Indicators of Scientific Growth

F. Narin (USA) - Objectivity versus Relevance in Studies of Scientific  
Advance

H. Inhaber (Canada) - World Science as an Input-Output System

D. de Beaver, R. Rosen (USA) - Studies in Scientific Collaboration I.  
The Professional Origins of Scientific  
Co-Authorship

J. Hustopecky, J. Vlachy (Czechoslovakia) - Identifying Measures of Inequality  
for Scientometric Data

Bibliography Section: Frequency Distributions of Scientific Performance  
A Bibliography of Lotka's Law and Related Phenomena

News Section

Manufacturing and Management

A book based on papers given at a Department of Industry Conference in  
December 1976.

Edited by: Michael Fores and Ian Glover

|               |                  |                     |
|---------------|------------------|---------------------|
| Contributors: | Michael Edwardes | British Leyland     |
|               | B T Jenkins      | ICI                 |
|               | L W Rodger       | Heriot-Watt         |
|               | John Child       | Aston               |
|               | Alistair Mant    |                     |
|               | Liam Hudson      | Brunel              |
|               | Sune Carlson     | Uppsala             |
|               | Arndt Sorge      | Berlin              |
|               | Michael Fores    | DoI                 |
|               | Ian Glover       | The City University |

Mr. Edwardes argues that Britain is an unsympathetic location for manufacturing industry; British industry works well abroad, and British

governments have something to answer for. Staff and line jobs are different, requiring different characteristics from people holding them. Mr. Jenkins argues that the technical functions of manufacturing concerns need to be staffed by people who can communicate well; management science is only useful when it is based on reality. Professor Rodger argues that it is only in markets that manufacturing makes money; markets and marketing need to be closely integrated with the company's other functions. Professor Child sees evidence of the fat in the corporation; a large manufacturing company shows Parkinsonian tendencies amongst its indirect employees. Mr. Mant compares the experience of multi-national companies in various environments; Swedish companies, in particular, have a more direct approach to manufacturing than British companies. Professor Hudson deals with a historical case-study of manufacturing enterprise; the business leader is seen as an outsider-figure who thrives on risk. He notes how the current revival of interest in crafts has not been associated with manufacturing concerns. Professor Carlson argues, from a long personal experience, that modern business leaders do not get information on which to base key decisions; rather, they have to make do with the opinions of others about information (Carlson was the first person to look systematically at executive work). Dr. Sorge argues that the idea of "management" is weak in Germany, where very different educational and training traditions apply from those found in Britain. There is little, in Germany, like the MBA; potential top executives study specialized subjects in higher education. Mr. Fores suggests that the idea of a "relevant science" for parts of manufacturing is misleading; the manufacturer lives a very different life from the scientist and must grasp knowledge from everywhere. Mr. Glover reports evidence that British executives have less impressive career backgrounds than Continental counterparts. He agrees too that the "professional" model is not a suitable one for considering the best staffing and operation of manufacturing units. Typical professionals provide a service to the local community; manufacturers produce goods for the world.

This book is published by HMSO in August 1978.

#### POSITION VACANCY

Lawrence Berkeley Laboratory announces an opening half-time for an archivist to develop a program of selecting, collecting and organizing LBL records, publications, and equipment with relevance to the history of U.S. 20th century sciences.

The position has a salary range of \$950-\$1,340 per month, pro-rated and the person we are seeking most likely will have a master's degree in one of the sciences or in the history of science with experience in interviewing and archival duties. For application information, contact: Dharma Kaur Khalsa, Personnel Representative, Lawrence Berkeley Laboratory, University of California, Berkeley, California 94720.

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# Zetetic scholar

AN INDEPENDENT SCIENTIFIC REVIEW OF  
CLAIMS OF ANOMALIES AND THE PARANORMAL



ZETETIC SCHOLAR is published by Marcello Truzzi and is an independent journal of opinion. All correspondence including manuscripts, letters, books for review, and subscription and editorial inquiries should be addressed to: The Editor; ZETETIC SCHOLAR; Department of Sociology; Eastern Michigan University; Ypsilanti, MI 48197.

SUBSCRIPTIONS: Subscriptions must begin with the first issue of the annual year; those who subscribe in mid-year will receive that year's back issues. Subscribers are guaranteed three issues per year, but this may increase to four issues if subscriber level increases enough. Subscriptions rates are: Individual, \$10.00 per year; Libraries and institutions, \$15.00 per year. Individual issues, when available, are \$5.00 each.

ANNALS OF THE HISTORY OF COMPUTING

The American Federation of Information Processing Societies, Inc. (AFIPS) has announced that it will begin publication of a new quarterly periodical, the Annals of the History of Computing. The first issue of the quarterly periodical is scheduled for July 1979. The Editor-in-Chief of the Annals is Bernard A. Galler of the University of Michigan. The Assistant Editor-in-Chief is Nancy Stern of Hofstra University in Hempstead, New York. The first issue of the Annals is scheduled for July 1979.

The Annals, according to Galler, will focus on the history of computing by including contributions from individuals who participated in, or witnessed, the events and decisions which have shaped our present computing environment. The purpose of the publication is to encourage and stimulate the creation of historical papers and records concerned with the computing and information processing field and to provide a lively forum for the presentation of the history of computing--one which invites commentary, dialogue, and debate.

Subscriptions to the Annals, which include four issues, are available from AFIPS Press, 210 Summit Avenue, Montvale, N.J. 07645, and are \$15 for members of the AFIPS Constituent Societies, \$20 for individual non-member subscriptions, and \$40 for institutions.

ISTA OBITUARY

In a case of unorthodox organizational behavior, the officers and membership of the International Society for Technology Assessment (ISTA) made a deliberate decision that the Society had accomplished its purpose of establishing the legitimacy and importance of Technology Assessment and dissolved the Society. ISTA was laid to rest as of December, 1977. The Journal of the Society (JISTA) also ceased publication.

11th Annual Meeting of CHEIRON (The International Society for the History of Behavioral and Social Sciences), University of Akron, Akron, Ohio, USA, on 8-10 June 1979. Papers may deal with aspects of the history of any of the behavioral and social sciences. The emphasis of the meeting will be interdisciplinary.

Information concerning program may be obtained from:

Dr. Robert C. Weyant, Department of Psychology, University of  
Calgary, Calgary, Alberta, Canada

Information on local arrangements may be obtained from:

Dr. John A. Popplestone, Archives of the History of American  
Psychology, University of Akron, Akron, Ohio 44325 USA

For information on CHEIRON membership write:

Dr. Elizabeth S. Goodman, Department of Psychology, State University  
College, Fredonia, New York 14063 USA

The Society for the History of Technology will hold its annual meeting in Pittsburgh, Pennsylvania, at the William Penn Hotel from Oct. 19-21. A number of papers on the program will address questions relating to the social study of science and technology. For further information, contact Merritt R. Smith, Department of History, Ohio State University, Columbus Ohio 43210.

Annual Meeting Plans of the Social-Psychology Subgroup

John Wilkes  
Worcester Polytechnic Institute

I am pleased to announce that the subgroup has been able to carry through on some of the plans that were discussed last year in Boston. Those present at the luncheon meeting called by Ian Mitroff may recall that there were several things that we wished to see at the next meeting. We wanted to have a contributed papers session devoted to the cognitive and subjective aspects of science, we wished to have a greater opportunity to discuss promising trends in psychology for the study of science semi-formally, and we wanted to see greater attention given to these subjects on the part of general speakers discussing the nature and direction of science studies as a whole.

This year I have been asked to organize a contributed papers session which I shall dedicate to "Social-Psychological Perspectives on Research Style and Career Development." Those interested in presenting on this topic are encouraged to send abstracts or drafts to me by Sept. 5. Completed papers will not be expected of those selected until early October, but must be in hand for the discussant by Oct. 15.

Don Campbell of the Department of Psychology at Northwestern has accepted our invitation to come to the annual meeting and discuss trends in psychology with us after making some extemporaneous "Comments on the Fragmented History of the Psychology of Science: intended to kick off the discussion.

I would also like to direct your attention to the plenary presentations to be given by J.M. Ziman and Derek Price. These presentations have grown indirectly out of the interchange we have had this year through the mail about our plans and concern about balance in the study of science. They are very likely to make some of the connections which we would like to see made.

Some question has arisen about the attention that was devoted to annual meeting plans this year and I must admit that none of the sharing of bibliography, personal contacts and cross invitations that we discussed last year have occurred. Perhaps we should devote more attention to the informal side of the subgroup next year, now that we have come to the attention of the 4S society.

### Call for Papers

#### THE JOURNAL OF AMERICAN CULTURE (Special Issue: Technology in American Culture)

The Journal of American Culture edited by Ray Browne and Russell B. Nye will feature an in-depth section on technology in a future issue. The purpose of the section is to provide a survey of the current state of technology and culture studies that will be useful to the generalist and the specialist in this field alike. Essays from a broad range of perspectives and academic disciplines and which address topics appropriate to the proposed format are invited.

#### Format

##### Part I: Theory

Essays providing overviews on technology's past, present and/or future roles in the American experience, as well as more specific treatments of the relation between technology and values.

##### Part II: Technology in Context

- A. Social History: Essays focusing on technology and social institutions, patterns of living, and cultural styles.
- B. Aesthetics, Philosophy and Religion: Essays concerning technology and the symbolic dimensions of culture.
- C. Public Policy: Essays on environmental issues, technology transfer, and technology and political ideology.

Twelve to fifteen essays will be selected for this special section which will appear early in 1979. Essays should be 10-15 pages, should include endnotes, and should be sent no later than November 15, 1978 to the editors of this section:

David E. Wright  
Robert E. Snow

Lyman Briggs College  
Michigan State University  
East Lansing, MI 48824

Volume 5 of The Sociology of the Sciences Yearbook (Reidel) on "The Social Process of Scientific Investigation" will be devoted to ethnographic, historical, or otherwise detailed studies of the actual processes of scientific investigation. The attempt will be to treat the social and cognitive processes of science within one interpretive frame, to trace the roots of creativity in the presymbolic sense of problem or unarticulated "interests" through articulated research problems, to trace conceptual development from vernacular metaphor to precise models, and to trace the sense of direction to investigation through key decisions, improvisation and research strategies. The perspective calls for close description and new vocabulary to answer current questions about the nature of science. A theme paper attempting to set out some suggestive notions will be available from the three editors by 1 June 1978.

Potential contributors should communicate immediately with one of the following three editors:

Professor R. Krohn  
Department of Sociology  
McGill University  
855 Sherbrooke Street W.  
Montreal, Quebec H3A 2T7

Mr. Richard D. Whitley  
Managing Editor  
Manchester Business School  
University of Manchester  
Booth Street West  
Manchester, England M15 6PB

Dr. Karin Knorr  
Institute for Advanced Studies  
A 1060 Wien, Stumpergasse 56  
Austria

## OBJECTIVES

1977 has been an important year for science policy in Australia. The Prime Minister announced that the Australian Science and Technology Council (ASTEC) would be set up on a permanent statutory basis. A major report on the future of CSIRO was completed by a committee headed by Professor A.J. Birch. The Premier of New South Wales announced that a permanent advisory body on science and technology would be set up at the State level. The role of the universities in research is being scrutinised by a committee of enquiry headed by Professor B.R. Williams.

These events provide a background for broad general discussion of the issues surrounding the role of science and technology in public policy. In addition, pressing questions such as those related to the supply and use of energy have given these issues a renewed urgency, reflected in the national debate on uranium mining and nuclear power. In this field, too, national committees of enquiry are active.

The importance of these questions is not confined to Australia. The present role of science and technology in public policy is largely the result of the Second World War and the subsequent economic boom which led to an enormous expansion of research and development and a general optimism about the contribution of science and technology to economic and social progress. Since 1970, this optimism has been shaken by a series of events including the world economic recession, the energy crisis, and the growth of widespread scepticism about the social benefits of science and technology. In addition, the growing literature of science policy has increasingly cast doubt on the value and efficacy of attempts to formulate national science policies and to set up appropriate machinery to conduct it.

This Conference, the first of its kind to be held in Australia, will provide an important opportunity to ventilate matters of this kind and to relate them to the considerations affecting Government policies over a wide range of areas. The Conference has been arranged by the University of New South Wales in conjunction with the New South Wales Division of ANZAAS. It will bring together a number of people concerned with the study of science policy, with the administration of research organisations, with research and development in private industry, and with particular aspects of public policy on which science and technology have an important bearing.

Thanks to the generosity of the various sponsors, it has been possible to invite several distinguished overseas speakers to participate in the Conference and to give it the international perspective which the title suggests.

The Proceedings of the Conference, which will be published after the Conference, will constitute a permanent addition to the development of science policy in Australia.

## SPEAKERS

Dr. GEORGE L. FERNE, Science Policy Section, Directorate for Science, Technology and Industry, O.E.C.D., Paris, co-author of *The Research System* and O.E.C.D. National Science Policy Reports on U.S.A., Canada, Switzerland, Netherlands and Iceland, on:

**Review and Evaluation of Government Procedures for the Promotion of Research and Development.**

PROFESSOR CHRISTOPHER FREEMAN, Director, Science Policy Research Unit, University of Sussex, England, and author of *The Economics of Industrial Innovation*, on:

**Technical Change, Unemployment and Policies for Innovation.**

PROFESSOR MICHAEL GIBBONS, Head, Department of Liberal Studies of Science, University of Manchester, and Science Advisor to the U.K. Parliamentary Committee on Science and Technology, on:

**Recent Changes in the Organization of British Government Research and Development — An Appraisal.**

Dr. ANDREW WILSON, Science Advisor, Science Council of Canada, on:

**Science Policy Procedures in Canada: An Evaluation.**

Dr. J.A. ALLEN, Former Executive Officer, CSIRO and now Chairman, Board of Advanced Education, Queensland, on:

**Perceptions of Science and Technology in Industry and Government — Some Comparisons.**

PROFESSOR G.M. BADGER, F.A.A., Chairman, Australian Science and Technology Council, on:

**Planning for Science and Technology in Australia.**

PROFESSOR A.J. BIRCH, F.A.A., F.R.S., Research School of Chemistry, Australian National University, and Chairman of the Committee of Inquiry into CSIRO, on:

**The Role of Government Research in Public Policy.**

Dr. E.G. HALLSWORTH, Chairman, Land Resources Laboratories, CSIRO, on:

**The Role and Optimum Structure of a National Scientific Organization.**

SENATOR D.S. JESSOP, Chairman, Senate Standing Committee on Science and the Environment, on:

**Science and the Senate.**

## SESSIONAL CHAIRMEN

Dr. J.L. FARRANDS, Sec. Dept. of Science, C.B.R.

Dr. F.R. JEVONS, Vice-Chancellor, Deakin University

Dr. K. SUTHERLAND, F.A.A., Chairman, N.S.W. Science and Technology Council, President of ANZAAS.

PROFESSOR B.R. WILLIAMS, Vice-Chancellor, University of Sydney.

## ARRANGEMENTS

The Conference will be held in Theatre B, Mathews Building, University of New South Wales, from 9.30 a.m. 12.30 p.m. and 2.30-5.30 p.m. on Thursday and Friday, December 1st and 2nd.

A registration fee of \$20 for non-members of ANZAAS is chargeable (or \$7 per session). Members of ANZAAS and students are exempt from this charge.

A Conference Dinner will be held on the evening of December 1st.

## SPONSORS

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## CONFERENCE ORGANIZERS

Professor S. Encel, School of Sociology, University of New South Wales.

Professor J. Ronayne, School of History and Philosophy of Science, University of New South Wales.

Mrs. N. Allen, School of History and Philosophy of Science, University of New South Wales (Conference Secretary).

The Proceedings of the Conference will be published in the Autumn (Northern) under the following title:

SCIENCE, TECHNOLOGY AND PUBLIC POLICY  
An International Perspective,  
Eds. Solomon Encel and Jarlath  
Ronayne, Pergamon Press, 1978.

# ANNUAL REVIEWS GRADUATE FELLOWSHIPS IN SCIENTIFIC COMMUNICATIONS

Annual Reviews, Inc. is a not-for-profit corporation based at Palo Alto, Calif., dedicated to critical communication in scientific progress. Its main activity at the present time is the publication of 22 series of Annual Review publications.

The Board of Directors of Annual Reviews is ready to entertain proposals for graduate fellowships that would encourage and assist dissertation research in scientific communication. Its resources do not permit the establishment of comprehensive research grants that might well be better addressed to established agencies, but we would be glad to receive suggestions about modest seed efforts that could reasonably lead to more substantial support.

We have not yet established formal procedures pending a sounding of the community's interest in this direction. Informal suggestions or proposals are invited, to be addressed to Mr. William Kaufmann, Editor-in-Chief of Annual Reviews, 4139 El Camino Way, Palo Alto, California 94306.

Regional Economic History Center Established. A Regional Economic History Research Center has been established at the Eleutherian Mills Library for the study of economic development and social change in the Philadelphia-Wilmington-Baltimore region. Grants are available to individual scholars. For further information, contact Glenn Porter, REHC, Eleutherian Mills Library, Greenville, Delaware 19807.

Announcements From EVIST

- Guidelines: (1) The NSF Ethics and Values in Science and Technology (EVIST) Program issued a revised set of guidelines in mid-June. Copies may be obtained by writing directly to the program.
- (2) The AAAS Science Education Office has recently published a new Directory of Programs and Courses in Ethics and Values in Science and Technology. Copies are available free of charge from:

Science Education Office  
AAAS  
1776 Massachusetts Avenue, N.W.  
Washington, D.C. 20036

EVIST Awards During Fiscal Year 1978:

Murray L. Wax  
Social Science Institute  
Washington University  
St. Louis, Missouri 63130

"Ethical Problems of Fieldwork"

Raymond G. Hunt  
Institute for the Study of  
Contemporary Social Problems  
PO Box 5745 University Station  
Seattle, Washington 98105

"Case Studies of Value Dilemmas  
in Law Enforcement"

William Friedland  
Sociology Department  
University of California, Santa  
Cruz  
Santa Cruz, California 95060

"Ethics and Values in Agricultural  
Research: A Case Study"

Nancy N. Dubler  
Department of Social Medicine  
Montefiore Hospital and Medical  
Center  
110 East 210th Street  
Bronx, New York 10467

"Ethical Issues in the Delivery  
of Health Care Within Detention  
and Correctional Institutions"

Everett Mendelsohn  
History of Science Department  
Harvard University  
Cambridge, MA 02138

"International Conference on  
Ethical and Value Issues in  
the Social Assessment of Science"

The National Humanities Institute at the University of Chicago announces Year III Fellows. On January 23 the Institute formally announced the complete roster of Fellows for Year III. During the year 1978-79, the Institute will take up consideration of the impact of science and technology upon questions of human conduct and social policy. Year III Fellows will consider not only technology's effects upon the lives of individuals, but also its reflection in such areas as biological and social sciences, law, medicine, and the humanities. Seminar and workshop topics during Year III may include changes in life patterns and life expectancy, marriage and the family, work and leisure, and ethical-religious responses to technology. The Program Directors for Year III will be Stephen Toulmin, Professor in the Committee on Social Thought and Department of Philosophy, and James Gustafson, University Professor in the Divinity School and the College, and Member of the Committee on Public Policy Studies.

In addition to the resident Fellows listed below, the Institute has also announced the appointment, as Visiting Senior Fellow, of Philip Rieff, Benjamin Franklin Professor of Sociology at the University of Pennsylvania. Rieff will make several brief visits to the Institute during the first two quarters of the year and will spend the spring in residence at the University of Chicago.

David F. Channell, Assistant Professor of History, The University of Texas at Dallas

Edward E. Daub, Professor of Engineering, University of Wisconsin

J. Patrick Dobel, Assistant Professor of Political Science, University of Michigan-Dearborn

Patricia Fauser, Professor of Philosophy, Illinois Benedictine College

Frederick P. Ferre, Charles A. Dana Professor of Philosophy, Dickinson College

Daniel L. Guillory, Associate Professor of English, Millikin University

David Laird, Professor of English, California State University-Los Angeles

Edward A. Langerak, Assistant Professor of Philosophy, St. Olaf College

Daniel E. Lee, Assistant Professor of Religion, Augustana College

John Y. LeBourgeois, Assistant Professor of History, Clemson University

W. David Lewis, Hudson Professor of History and Engineering, Auburn University

Karen Lynn, Assistant Professor of English, Brigham Young University

Carol R. Ochs, Associate Professor of Philosophy, Simmons College

Arthur S. Parsons, Instructor of Sociology and Anthropology,  
Smith College

Anthony A. Preus, Associate Professor of Philosophy, State University  
of New York at Binghamton

Henry J. Rutz, Assistant Professor of Anthropology, Hamilton College

Howard Smokler, Professor of Philosophy, University of Colorado  
at Boulder

Seth L. Wolitz, Associate Professor of Foreign Languages, The  
University of Texas at San Antonio

Lee H. Yearly, Associate Professor of Religious Studies, Stanford  
University

Social Science Research Council, Center for Coordination of Research on Social Indicators. Papers presented at Review Symposium: Science Indicators 1976 - May 12-13, 1978.

1. Social Indicators and Science Indicators  
Harriet Zuckerman and  
Roberta Balstad Miller (Social Science Research Council)
2. U.S. Science in an International Perspective  
Joseph Ben-David (Hebrew University and University of Chicago)
3. Discussion of Paper by Joseph Ben-David  
Derek de Solla Price (Yale University)
4. The Impact of Science (R & D) on the Economy  
Richard Freeman (Harvard University)
5. International Indicators of Science and Technology: How Does  
the U.S. Compare  
Rachel McCulloch (Harvard University)
6. Indicators of Scientific Manpower and Science Indicators  
Charlotte V. Kuh (Harvard University)
7. Science Indicators and Science Policy  
Harvey Brooks (Harvard University)
8. Basic Research and Its Measurement: Remarks Concerning the  
Physical Sciences  
Ray Bowers (Cornell University)
9. Vital Signs for Basic Research in the Social and Behavioral Sciences  
Henry W. Riecken (University of Pennsylvania)
10. Science Indicators 1976 and the State of Biomedical Science  
Robert Bock (University of Wisconsin)
11. Indicators of the Public's Attitudes Toward Science and  
Technology: Science Indicators 1972, 1974, 1976: A Review and  
Prospective Reflections  
Todd LaPorte (University of California, Berkeley)
12. Concepts and Data for Assessing the Performance of Science:  
Science Indicators 1976  
Edward Tufte (Yale University)
13. Remarks on Statistical Issues  
Kenneth Wachter (Harvard University)



# *4S Society for Social Studies of Science*

The 4S Newsletter is published four times each year, beginning with V.2:4 at the Department of Sociology, Southern Illinois University, Carbondale, Illinois 62901, and sent to all members of the Society for Social Studies of Science. Membership is on a calendar year basis. Membership dues (\$10 for professionals, \$5 for students) and institutional subscriptions (\$20) should be sent to: The Secretary/Treasurer, 4S, SASS, 323 Uris Hall, Cornell University, Ithaca, NY 14853. Renewals are handled by Neale Watson Academic Publications, Inc., 156 Fifth Avenue, New York, NY 10010.

Editorial Assistant: Beverly Morber

4S

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