

"but let Time's news
Be known when 'tis
brought forth"

Time's News

An
Aperiodic
Newsletter

December, 1987

International Society for the Study of Time

No. 15

From the Editor

A field defines itself chiefly in relation to the questions it asks, the problems it poses, the arguments it encourages, and the perplexities around which it organizes its activities. The field of time study is no different. It is constituted, not as a subject area, but as an arena in which difficulties and puzzlements give rise to conversation. This issue of *Time's News*, as has been the intent of all issues of the newsletter, is meant to serve not only as an index of that conversation, but also as its impetus. Too few of you have been heard from.

A Message from the President

It is my pleasure to announce the dates, location, and theme of the Seventh Conference of the International Society for the Study of Time. The meeting will be held at Glacier Park Lodge, in Glacier National Park (Montana, USA), from 9-15 July 1989. The theme of the conference will be "Time and Process," a theme which can be provocatively addressed from the viewpoints of most disciplines represented in our membership. The Call for Papers will be mailed to members in January 1988.

We are early in our planning for this meeting, thanks to the efforts of our Evaluation Committee (and especially to their able chairman John G. Weihaupt), some intensive screening of possible sites by J. T. Fraser, and a very successful Council meeting on 16-17 May 1987. Thanks to the marvels of modern technology, the Council was treated to a video presentation which offered a tantalizing but convincing glimpse of the superb facilities that will be at our disposal and the scenic wonders of Glacier National Park—which straddles the American/Canadian border.

This will be the Society's first conference in North America, and I would like to assure our many non-American members that thoughtful consideration was given to such matters as international travel, U.S. dollar exchange rates, and the useful responses to our recent Evaluation Questionnaire. It seemed clear that a conference on this continent was overdue, considering the fact that some 45% of our members live in the U.S. or Canada. But, more important, I believe we have selected a site that will be easily accessible from major international airports (Great Falls, Montana, we have been informed, is served by several major European and American airlines), and we are in the process of negotiating rates for lodging and food which seem to be substantially below anything comparable in American conference facilities. I doubt we shall ever again get quite as much of a bargain as we found at Dartington Hall in 1986, but I am convinced that we shall

be able to offer excellent facilities and very comfortable accommodation at reasonable rates. And further, the current economic climate seems likely to work against any substantial rise of the dollar against the major European currencies.

The conference will take place in the midst of some of the most spectacular scenery on the North American continent, hearty Western-style cuisine, and nightly entertainment. You will be surrounded by the atmosphere of the American West, but your "six-guns" must remain holstered and you are expected to use a spittoon if you chew. For family members accompanying, many excursions through the Park are available, both by bus and by horseback, and the lodge is surrounded by hiking trails. Glacier National Park is easily reached by train and by bus (the lodge is operated by the Greyhound Bus Company), and airport transfers will be arranged for participants. Conferees will find it convenient—if they wish—to visit many of the nearby national parks in the American and Canadian Rockies. This should be an ideal place to bring your family, and you may be assured that they will not be bored unless their tastes run more to concrete sidewalks than to mountain trails.

I have mentioned the report of the Evaluation Committee, and I should like to extend the thanks of the Council to Professor Weihaupt for his preparation of this extremely useful report. One clear conclusion from the report was that the 1989 conference must be organized around a theme that will permit and encourage contributions from as many disciplines as possible. Many members have noted, for example, a need to increase participation from the natural sciences, and the theme was chosen with this as one of our major objectives. At the same time, many other members felt that some emphasis on the arts was also appropriate. Many of the other suggestions in the questionnaires will guide the Conference Committee in designing the conference format.

If I may use a musical metaphor, it has always seemed to me that the ISST's three-year cycle consists of two dynamic processes: a *diminuendo* following each conference (which I think of as a "recluer pour mieux sauter"), followed by a *crescendo* leading up to the subsequent conference. I hope that members will join me in feeling this pleasant sense of excitement and dynamic development as we prepare for another milestone in the evolution of the Society.

Lewis Rowell
Indiana University

The Founder's Column

The dedication of this Society to distinguished intellectual work and to an interdisciplinary approach to the study of time may be demonstrated by reading the list of men and women who have served as its officers and Council members since 1966.

Hans Agren, M.D.
History of Medicine
University of Uppsala, Sweden

Jacob A. Arlow, M.D.
Psychoanalysis
New York, NY USA

Mark H. Aultman
Law
Columbus, OH USA

Anindita N. Balslev
Philosophy and Religion
Temple University
Philadelphia, PA USA

Olivier Costa de Beauregard
Physics
Institut Henri Poincare
Paris, France

S. G. F. Brandon
Comparative Religion
University of Manchester
England

Erwin Bünning
Biology
University of Tubingen
West Germany

John Cohen
Psychology
University of Manchester
England

Denis Corish
Philosophy
Bowdoin College
Brunswick, ME USA

K. G. Denbigh, F.R.S.
Physical Chemistry
Queen Elizabeth College
London, England

Robert Efron, M. D.
Neurophysiology
V. A. Hospital
Martinez, CA USA

Mircea Eliade
Comparative Religion
University of Chicago
Chicago, IL USA

David Epstein
Music
M.I.T.
Cambridge, MA USA

Roland Fischer
Biology
Ohio State University
Columbus, OH USA

George H. Ford
English
University of Rochester
Rochester, NY USA
President, 1979-1983

Paul Fraisse
Experimental Psychology
The Sorbonne
Paris, France

J. T. Fraser
The Study of Time
Westport, CT USA

Steven L. Goldman
History and Philosophy of Science
Lehigh University
Bethlehem, PA USA

Brian C. Goodwin
Biology
University of Sussex
Falmer, Brighton, England

Helen B. Green
Psychology
Wesleyan University
Middletown, CT USA

Jonathan D. Kramer
Music
University of Cincinnati
Cincinnati, OH USA

George Kubler
History of Art
Yale University
New Haven, CT USA

Nathaniel Lawrence
Philosophy
Williams College
Williamstown, MA USA

Samuel L. Macey
English
University of Victoria
British Columbia, Canada

Henry Margenau
Physics
Yale University
New Haven, CT USA

Richard Martin
Sociology
University of Massachusetts
Amherst, MA USA

George McVittie
Physical Cosmology
University of Illinois
Urbana, IL USA

John A. Michon
Experimental Psychology
University of Groningen
The Netherlands
President, 1983-1986

Gert H. Müller
Mathematics
University of Heidelberg
Heidelberg, West Germany
President, 1976-1979

Helga Nowotny
Sociology
European Center for Social Welfare
Training and Research
Vienna, Austria

David Park
Physics
Williams College
Williamstown, MA USA
President, 1973-1976

Adolf Portmann
Zoology
University of Basel
Basel, Switzerland

Lewis E. Rowell
Music Theory
Indiana University
Bloomington, IN USA
President, 1986-

Georges Schaltenbrand, M. D.
Neurology
University of Würzburg
Würzburg, West Germany

Masanao Toda
Experimental Psychology
Hokkaido University, Japan

Eric Voegelin
Philosophy
The Hoover Institute
Stanford, CA USA

M. Satosi Watanabe
Physics and Computer Science
University of Hawaii
Honolulu, HI USA
President, 1969-1973

G. J. Whitrow
Applied Mathematics
Imperial College
London, England
President, 1966-1969

Michael Yanase, S. J.
Physics
Sophia University
Tokyo, Japan

J. T. F.

We remember . . .

Members will be saddened to learn of the recent deaths of two of our colleagues: Gilbert M. Cantor and Howard Trivers.

Gil Cantor, an attorney, author, and prominent civil libertarian, died in Philadelphia in early April. His contributions to the ISST were many, including the drafting of, and advice on, many of the important amendments to our constitution and by-laws. He and his wife Nancy attended both the 1979 and 1983 conference, and he was to have delivered a paper entitled "Time and Punishment" at the 1986 conference, which his final illness prevented him from attending. A graduate of the Harvard Law School and an attorney for 35 years (specializing in estate and tax planning), Gil was a member of the firm of Spector, Cohen, Gadon & Rosen in Philadelphia. Among his many services to the public, he was for a number of years general counsel to the Philadelphia chapter of the American Civil Liberties Union. His publications include seven books and numerous articles, essays, reviews, and government handbooks.

The death of Howard Trivers, who taught political science at Ball State University in Muncie, Indiana, after retiring from a distinguished career with the U.S. State Department, has also been reported. Educated at Princeton and Harvard Universities, Professor Trivers held numerous foreign service posts in Europe and the United States, and was instrumental in developing the

U.S. policy proposals for the Potsdam Conference of allied leaders and the terms of German and Japanese surrender in 1945. His final post before retiring from government service in 1969 was as American consul-general in Zurich. Like many other members of the ISST, his interest in time was an absorbing avocation, and in 1985 he published a book titled The Rhythm of Being: A Study of Temporality. Although Professor Trivers was unable to attend any of our conferences, members will join me in recognizing his enthusiastic interest in the study of time and a lifetime devoted to public service.

Lewis Rowell

The Secretary's Report

I am pleased to report that the manuscript Time and Mind: Interdisciplinary Issues (The Study of Time VI), was delivered to the editorial staff at the University of Massachusetts Press. They will conduct an independent review; this will include a final decision about the contents of the book.

Since I also served as the editor of this volume, I wish to express my gratefulness to the authors. Their patience and labor, demanded by the process of revisions, has changed the papers of a remarkable conference into chapters of an equally remarkable and unique book.

J. T. F.

Our First Affiliate

Pursuant to the July 1986 decision to admit affiliate societies (under the provisions of amended Article II of our constitution), the ISST Council gave formal approval to a request for affiliation from the Association for the Social Studies of Time (ASSET) at the May 1987 meeting. Lord Michael Young, the President of ASSET, has responded affirmatively to our offer of affiliation, so I am pleased to inform the membership that ASSET has now become the first of our affiliate societies.

Lewis Rowell

Time's Books

With this issue of Time's News we begin a new column presenting books in brief. Dr. Fraser has agreed to serve as our Book Review Editor. Please arrange for review copies of your time-related books to be sent to him at the Society's address: P. O. Box 815, Westport, CT 06881.

In due course we hope to convene a Book Review Committee. If you are a senior scholar and would care to write brief reviews of time-related works in your field of specialty, please communicate with Dr. Fraser.

We plan to publish only signed reviews. In what follows

BA refers to Barbara Adam, JTF to J. T. Fraser, RM to Richard Martin.

Editor, Time's News

Books in Brief:

Descartes' Dream: The World According to Mathematics, by Philip J. Davis and Reuben Hirsh (San Diego: Harcourt, 1986)

An account of the relationship between epistemology and ontology as connected through mathematical law. The authors cast doubt on the popular belief that "the way to arrive at objectivity in the real world is to travel the mathematical road." In a section "Of Time and Mathematics" they maintain that mathematicians have unwisely ignored the role of lived time in mathematical thinking, leading to a "degradation of time in the physical sciences, in the mathematics of physics, and within the operation of the formalism of mathematics itself" (p. 195). They write that only if mathematics is interpreted in the context of human time, do its truths become a "rich source of possible meanings and actions . . . Its ultimate mystery is never dispelled, yet it is exhibited as one of the prime creations of the human intellect" (p. 201).

J. T. F.

Doubt, Time, Violence, by Piotr Hoffman (Chicago: University of Chicago Press, 1987)

From the publisher: "Focuses on two of the central concerns of modern philosophy—doubt and time—and argues that both concerns stem from a suppressed but underlying belief that life is an all-out violent struggle. Examines ideas about doubt and time in the works of Descartes and Hegel, and above all, in Heidegger's Being and Time, and asserts that only when the notion of human violence is given paramount importance do these modern philosophers become fully intelligible and coherent."

J. T. F.

Geht Uns Die Zeit Verloren? Beitrage zum Zeitbewusstsein, H. Petri and I. Zepf, eds. (Bochum: Studienverlage Dr. N. Brockmeyer, 1982).

An interdisciplinary collection of papers, drawn mostly from the humanities. Ministers and priests, physicians, anthropologists and psychologists write on the experience of sacred (as distinct from profane) time, on aging, social change, transcendence, the Zeitgeist, distinctions between lived time and that of rational thought, and on the historical development of time-consciousness in Europe. A physicist outlines the nature of time and space according to the theory of relativity. H. Petri

warns that "machine time," constructed only a few hundred years ago, threatens to control daily life. We have lost sight, he argues, of its artificial nature. He maintains that to ponder time's nature and meaning has become an urgent task that involves all spheres of knowledge.

B. A.

Gesellschaft ohne Zeit. Individuelle Zeitverwendung und Soziale Organisation der Arbeit, by J. P. Rinderspracher (Frankfurt a. M.: Campus Verlag, 1985).

A theoretical treatise on the rationalization processes of time in work organization and economics. The author seeks to develop a theoretical framework for the experience of time pressure, time shortage, the loss of control over time, and the use of time as a commodity of the labor market. He shows the historical development and points to the adverse effects of the separation between the rhythms of nature and abstract, industrial time. The book concludes with suggestions for the introduction of more "humane" time structures in the organization of work.

B. A.

The Metronomic Society, by Michael Young (Cambridge: Harvard University Press, forthcoming March, 1988).

J. T. F.

The Nature of Time, Raymond Flood and Michael Lockwood, eds. (New York: Basil Blackwell, 1986).

The Editors' introduction remedies the misleadingly broad title: "In this collection, time will be viewed from the standpoint of Einstein's theory of relativity, modern thermodynamics, quantum theory and contemporary cosmology . . ." (p. 1). Consistent with this design, the ten contributors of this collection of papers based on a lectures series given at Oxford deal with two intellectual disciplines: physics and the philosophy of physics. The papers tend to be parochial: "Time is geometry. Our consciousness of the passage of time is the chemical imprint on our brain of this purposeless, irreversible journey. The imprint, the memory, and the experience are chemical." (P. W. Atkins, "Time and Dispersal: The Second Law," p. 80). Perspectives are introduced by the cosmopolitan intellect of Professor Roger Penrose (in "Big Bangs, Black Holes, and 'Time's Arrow'"), by J. R. Lucas' long vistas ("The Open Future") and Michael Sallis' reflections on "Time in Cosmology."

J. T. F.

Night as a Frontier: Colonizing the World After Dark, by Murray Melbin (New York: Free Press, 1987)

Nocturnal Species have been doing it for a while: they sleep during the day. Humans are in the process of

becoming nocturnal only now, not to establish night as an exclusive domain of their waking lives but as an extension of their diurnal existence. And, "the pace of colonizing the night is spectacular." (p. 128). The purpose of research that led up to the book was twofold: to describe the scope and amount of nighttime wakefulness in the industrialized world, and to evaluate the hypothesis that some of the social phenomena of colonizing the night are isomorphic with certain social behavior characteristic of former land frontiers. The implications of the related social changes are extensive, extending from politics and economics to family life and scales of values. The likely long-term effects are fascinating or frightening, depending on one's taste. For related work that contributed to this book, see the author's paper in The Study of Time III.

J. T. F.

Patriarchs of Time: Dualism in Saturn-Cronus, Father Time, the Watchmaker God, and Father Christmas, by S. L. Macey (Athens, GA, 1987)

Personifications of the human experience of time tend to display the duality inherent in those experiences. They bear different names and are drawn in different images, according to the understandings and values of different civilizations. This work recognizes, and examines in detail, four gods and patriarchs of time and their many relatives. The habitations of these personages are the Indo-Iranian pantheons, the historical eschatologies of Judaism, Christianity, and Islam, and the technological mythology of the scientific-industrial world. Out of the latter background arose the Watchmaker God, as did the contemporary form of Father Christmas with his long ancestry, and wearing more cloaks than does a quick-change artist. The relationships among the gods and patriarchs of time are traced through their iconographies and through such time-related conventions as the different celebrations of eternal returns. For related work that contributed to this book, see the author's papers in The Study of Time III, IV, and V.

J. T. F.

Ring of Earth: A Child's Book of Seasons, by Jane Yolen (San Diego: Harcourt, Brace & Jovanovich, 1986).

The four seasons in the world of a weasel, spring peeper, dragon-fly, and goose told through charming verse and image. For ages 6-10 and 21-100.

J. T. F.

The Sociological Quarterly, Volume 28, No. 3, (1987), pp. 303-385.

Much of this issue consists in a special series of articles edited by David Maines and described by him as demonstrating the "sociological neglect of temporality"

and "an increasing univocality in sociological work." It is also argued that "the incorporation of up-to-date conceptions of temporality into sociological work will contribute to improved theory and better understanding of human social life," by which reference is made primarily to an Einsteinian "time-space continua or matrix."

The various articles discuss a number of temporal phenomena. Michael Flaherty describes changes in the experience of duration when moving from one culture or subculture to another; Norman Denzin analyzes "first-time thoroughness," or how social events are experienced in concrete, immediate, interactional terms; Eviatar Zerubavel discusses temporality from a semiotic perspective, as a function of symbolic associations at both semantic and syntactic levels; Mari Molseed considers the possibility of combining formal analysis with a temporal approach to the study of social life as seen in the writings of Georg Simmel; and Michael Katovich assesses and critiques Durkheim's linear conception of time in terms of "more dynamic, interpersonal, and cybernetic conceptions of temporality and transactions."

R. M.

Soziale Zeit. Umfang, "Geschwindigkeit" und Evolution, by G. Schmied (Berlin: Duncker & Humboldt, 1985).

A sociological treatise of three areas of concern: the bearing of time, as understood in natural science, upon social life; the experienced speed of social time, and the evolution of the idea of time. The author argues that, irrespective of the philosophical puzzles, we can recognize time as an ordering factor for it informs every culturally based object of social life.

B. A.

Studien zum Zeitproblem in der Philosophie des 20. Jahrhunderts, E. W. Orth, ed. (Freiburg/München: Karl Alber, 1982)

The book comprises four papers, one report and three book reviews. The papers discuss the conceptualization of time by four prominent philosophers: W. Meyer writes on Bergson, E. W. Orth on Cassirer, R. Boehm on Merleau-Ponty, W. Krewani on Levinas.

B. A.

Time, the Familiar Stranger, by J. T. Fraser (Amherst: The University of Massachusetts Press, 1987)

This is Fraser's first book directed to a general trade audience, but it continues to revise, refine, and extend his project, outlined especially in his Of Time, Passion, and Knowledge (1975), of presenting the necessities for a serious interdisciplinary study of time.

The introduction, "A Chart and an Itinerary" describes the work of a "timesmith" as that of a scholar who "hammers out from theoretical and experimental material,

the novel shapes of our understanding of time." The five chapters that follow explore (i) the "discovery of human time" in the realization of the inevitability of death, (ii) the skill of time reckoning made possible by our ability to count, (iii) the temporalities of life and mind, and (iv) the nature of time in the inanimate world. The closing chapter extends the hierarchical theory of time to issues of the time-compact global society.

Throughout the volume he presents informed, imaginative examples of the cross fertilization of ideas about time made possible by drawing upon several disciplines. It is written in an engaging narrative style, enhanced by fifty drawings and photographs, and contains an annotated bibliography.

R. M.

Time, the Refreshing River, by Joseph Needham (Atlantic Highlands, NJ: Humanities Press International, 1986). Reprint of the 1943 edition with a new foreword.

A collection of essays on science, religion, sociology, and history, being contributions to a search for the Christian roots of British socialism delivered between 1935 and 1941. The title is a line from Auden's "Spain," with "time" the guarantor of an open future. In his essay on "Evolution and Thermodynamics" (pp. 207-320), Needham maintains that "thermodynamics order and biological organization are entirely different things." (p. 226) Using Willard Gibbs' phrase, he notes that inorganic evolution progresses from separateness to chaotic "mixed-upness" whereas organic evolution creates local pockets of patterned mixed-upness. He assumes that there is no conflict between the two trends of change, for only as the cosmic mixing proceeds, do higher levels of organization become possible and stable. (p. 230) "The law of evolution is a kind of converse of the second law of thermodynamics, equally irreversible but contrary in tendency." (p. 230) He notes Eddington's belief that the increased mixed-upness in the world gives the direction of time's arrow, adding that "Perhaps when it is possible to measure biological organization, the increasing patternedness will be found to lead to the same result." (p. 232)

J. T. F.

Time's Arrow, Time's Cycle: Myth and Metaphor in the Discovery of Geological Time, by Stephen Jay Gould (Cambridge: Harvard University Press, 1987)

This engaged, and engaging, work formulates a new perspective for the debate: does the history of the earth speak of cyclic or of linear time? Thomas Burnett (17th c.) spoke of "the beginning and progress of a rising world." James Hutton (18th c.) found in geology "no vestige of a beginning, —no prospect of an end," (p. 92) making the earth a place of directionless, endless, cyclic repetitions. Charles Lyell (19th c.) a "historian of time's cycle" (p. 150) accommodated both metaphors.

Stephen Jay Gould perceives the debate sub speciae time's arrow and time's cycle. In his perspective it is easy to recognize the Eleatic categories of change and permanence. We can practically hear Heraclitus and Parmenides in the words of the author: ". . . time's arrow is the intelligibility of distinct and irreversible events, while time's cycle is the intelligibility of timeless order and lawlike structure." (pp. 15-6) Gould sees organisms as following "time's arrow of contingent history, minerals time's cycle of immanent geometrical logic." (p. 196)

The book concludes with the spiritual, "Rock my soul on the bosom of Abraham . . ." There is cycle for you, and the origins of the Western idea of linear, progressive time in salvation history.

J. T. F.

Über die Zeit, by Norbert Elias (Frankfurt a. M.: Suhrkamp, 1984)

Translation of an unpublished English manuscript "An Essay on Time," with the introduction and Sec. 28-46 added by the author. An investigation of the development of time reckoning as a symbolic tool for orientation and social regulation. The author shows how a focus on time breaks down disciplinary boundaries and connects physical, biological and social time in a seamless synthesis.

B. A.

Ursprung und Gegenwart, by J. Gebser (München: Deutsches Taschenbuch Verlag, 1986), 2nd ed., 3 vols.

A philosophical and socio-historical treatise on the cultural development toward an "aperspectivist world." The author develops his analysis through a focus on time, temporality and time-consciousness. Our changing relationship to time is shown to be simultaneously a prize gained and a price paid, as well as the source of destruction and emancipation. Volume one explores the foundations of an "aperspectivist world" and its time-space structure, volume two delineates its manifestations in the sciences, the humanities and the arts, volume three comprises commentary, references, and the index.

B. A.

Winston Churchill's Afternoon Nap: A Wide-Awake Inquiry into the Human Nature of Time, by Jeremy Campbell (New York: Simon and Schuster, 1986)

This is a journalistic report on chronobiology, which is the study of the cyclic order of life. Organic evolution enters only as the path along which biological clocks have become increasingly more complex, but not as a linear contribution to the nature of biotemporality. Aging, this most obvious of all experiences of linear time—and a rather biological process—receives benign neglect. The linear component of biological time is smuggled in as it

were, unidentified, through discussions about history and memory. This is an entertaining, intelligent and informative book in matters of biological cycles, and to a much lesser extent in what the author describes as the steps in assembling the human sense of time. But in its many attempts to leap from biological cycles—the burden of its content—to the idea and nature of time, it falls flat. Thus, the claim of its subtitle is unjustified.

J. T. F.

Die Zeit, A. Peisl and A. Mohler, eds. (München: Oldenburg Verlag, 1983)

Papers from an interdisciplinary symposium on the nature of time sponsored by the Karl von Siemens Stiftung. Specialists from physics, biology, psychiatry, physiology, history, law, music, and theology address the question of time from within their respective disciplines. The assumption underlying the symposium was that the study of time is not a prerogative of discipline-based specialists, and that new understanding of the nature of time will lead to new insights into the human condition.

B. A.

Zeit und Kultur. Geschichte des Zeitbewusstseins in Europa, by Rudolf Wendorff (Wiesbaden: Westdeutscher Verlag, 2nd ed., 1981)

Traces the history of European awareness of, and ideas about time, from the beginnings of Western civilization to the present. The author then shows in great detail the intricate connections involving those ideas, different understandings of reality, scientific and technological achievements, economic developments, and the changing preferences in artistic expression. This work was so successful that its second edition followed its first by only a year.

B. A.

Zeit und Gesellschaft, by M. Schoeps (Stuttgart: Ferdinand Enke Verlag, 1980)

The author investigates the effect of time, understood as an ordering principle, upon social structure. She seeks to establish, first, whether or not this effect is one of mutual constitution; then, the extent to which it could be argued that the differences are reflected in societal levels of development. She focusses primarily on the normative and controlling factors of social time as a structuring element of social life.

B. A.

Zeit und Zeitlichkeit bei Husserl und Heidegger, E. W. Orth, ed. (Freiburg/München: Karl Alber Verlag, 1983)

Six papers discussing Husserl's and Heidegger's approaches to time, with an introduction by the editor.

B. A.

Zeitbegriffe, G. Heinemann, ed., (Freiburg: Karl Alber Verlag, 1986)

Papers from an interdisciplinary symposium on concepts of time in natural science, time experience, and time consciousness. In Part One, dealing with concepts of time, G. Heinemann asks "What is time?", W. Hartkopf writes on philosophical paradoxes of time, U. Sonnenmann on Kant's neglect of the auditory aspects of time. Others focus on the issue of identity (H. Pilot), the transcendence of subjective time (M. Wetzel), on epochs and categories (E. Wolf-Grazo) and on the time structure of experience (K. Binder). Part Two comprises five philosophical contributions from the natural sciences, from Galileo to quantum mechanics. In Part Three past and current issues of time are explored from the perspective of anthropology.

B. A.

Die Zeitstrukturen Sozialer Systeme: Eine Systemtheoretische Analyse, by W. Bergmann (Berlin: Duncker & Humboldt, 1981)

An outline of a sociological conceptualization of time. The author's theory of social time, drawing on the works of Husserl, Mead, and Luhmann is built on phenomenology, symbolic interactionism, and systems theory. He integrates his time-theoretical framework of analysis into social systems theory and applies it to a wide range of issues including the shortage of time in contemporary Western societies, the temporal structures of economic and legal systems, and of different levels of systems formation ranging from the personal to the societal.

B. A.

Die Zerstörung der Zeit: Wie aus einem Göttlichen Gut eine Handelsware wurde (Frankfurt a. M.: Fischer Alternativ, 1984)

The author sets out to illuminate the relation between time consciousness, social time, work, and cosmology. His socio-historical treatise employs the concepts of alienation, secularization, and commodification to characterize the development of Western social time. He traces the changes of European time-consciousness and attitudes to time from the early Middle Ages to the present, and shows their fundamental linkage to patterns of work, modes of production, and dominant cosmologies.

B. A.

Additional listings:

Women and Time, Frieda Forman, ed., (New York: Pergamon Press, forthcoming 1988)

Work, Time and Equality, by Carmen J. Sirianni (Oxford: Polity Press, an imprint of Basil Blackwell, 1987)

The Physics of Time Reversal, by Robert G. Sachs (University of Chicago Press, November, 1987)

Space, Time, Infinity, by James F. Trefil (Washington: Smithsonian Books, 1985)

The Twin Dimensions: Inventing Time and Space, by Gesa Szamosi (New York: McGraw Hill, 1986)

The Measure of Times Past: Pre-Newtonian Chronologies and the Rhetoric of Relative Time, by Donald J. Wilcox (University of Chicago Press, November, 1987)

The Deconstruction of Time, by David Wood (Atlantic Highlands, NJ: Humanities Press, forthcoming Spring, 1988)

R. M.

Book Discounts

With the present newsletter as an enclosure, we plan to approach several publishers and arrange, if possible, for discounts on their books for ISST members. It would be much appreciated if you were to talk with your publisher on this matter and ask them to contact Richard Martin, Editor of Time's News.

The following discounts are now available to ISST members only. When writing to publishers, in all cases, identify yourself as a member of ISST.

The Study of Time II, III, and IV are all available from Springer-Verlag at 20% off list price. Write to:

Springer-Verlag New York, Inc.
attn: G. Kiely S496
175 Fifth Avenue
New York, NY 10010

Volume II (ISST price: \$34.80), III (ISST price: \$32.50), IV (ISST Price: \$40.50).

Patriarchs of Time: Dualism in Saturn-Cronus, Father Time, the Watchmaker God, and Father Christmas, by Samuel L. Macey is available at 20% off list price from:

The University of Georgia Press
Athens, GA 30602

(ISST price: \$20.00, add \$2.00 for postage and handling)

The following are all available to ISST members at 20% discount from the University of Massachusetts Press:

J. T. Fraser, Time, the Familiar Stranger (ISST price: \$18.35); J. T. Fraser, et al., eds., Time, Science and Society in China and the West: The Study of Time V (ISST price: \$28); J. T. Fraser, The Genesis and Evolution of Time: A Critique of Interpretation in Physics (ISST price: \$16); J. T. Fraser, ed., The Voices of Time, 2nd ed. (ISST price: \$12.75); Bertrand Helm, Time and Reality in American Philosophy (ISST price: \$22.00); David Park, The Image of Eternity: Roots of Time in the Physical World (ISST price: \$11.60); Lewis Rowell, Thinking about Music (ISST price: Hardback: \$20.00, Paperback: \$8.00). Add \$1.50 per order for shipping and handling.

Write to: The University of Massachusetts Press
P. O. Box 429
Amherst, MA 01004

Notes, Insights, and Letters to the Editor

To the Editor:

1) I submit the following question to the members of ISST:

After having attended three ISST conferences I cannot help feeling that there is a discrepancy between the stimulating contents of the papers presented on these occasions and the very conventional temporal format of the conferences. Although such formats are the standard practice at academic meetings I believe that the unique and still innovative character of our Society would be enhanced if we gave some thoughts to the possibility of developing a more imaginative temporal organization for our conferences. This should be considered not so much a technical/administrative issue but rather an opportunity for addressing a complex issue which, so far, has not been prominent among our concerns: that of the appropriate temporal articulation for the sharing of knowledge and experience in a "live" situation.

Before entering in any detail I would like to find out whether I am expressing solely a private idiosyncrasy or whether I am striking a sympathetic chord in some other members, who might be attracted by the idea of a "compositional" approach to the temporal organization of our conferences.

2) The "Consiglio Nazionale delle Ricerche" has agreed to subsidize an "Interdisciplinary Study of Subjective, Analog Codes for the Representation of Temporal Experience and Temporal Planning by Individuals and Groups" to be carried out by myself, a mathematician, a psychologist, and two composers. The study intends to investigate the "notations" in different media (graphics, sounds, movements) adopted by subjects to express their actually experienced, recollected, or anticipated functioning in

time. In the analysis of the resulting materials the study will focus on the formal aspects of these expressions.

I would be very pleased to hear from members who have dealt with similar questions in theory and/or practice.

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Conferences reported to the editor include the following:

Time and Rhythm in Music, Indiana University, April 18, 1987

Time, Medicine, Health and Healing, Dartington Hall, July 3-5, 1987

Okonomie und Zeit, Evangelischen Akademie Arnoldshain, April 10-12, 1987

"On Time," University of Rochester's spring academic term inauguration, January 10-17, 1988

Information on any of the above conferences is available from the editor of Time's News upon request.

"Bricolage" from the Editor

The resistance to interdisciplinary work which we in the ISST encounter daily, particularly within the confines of a fragmented university life, is prompted by very real concern on the part of specialists. One of the great difficulties for a specialist within any discipline is coming to terms with other disciplines, with those whose research protocols, whose fundamental perspectives, differ markedly from one's own. This difficulty occurs at a time when there is growing recognition, within particular disciplines, that every form of knowledge, every cultural form, is played out within a social and political context. It is today almost a commonplace to admit the social and political nature of all cultural forms, including the cultural forms we call scientific knowledge. The specialist's resistance to other disciplines is very often a form of defense against possible efforts by those in other disciplines to essentialize their own interests through the privileging of particular ideas and idioms.

That cultural forms raise political issues has been seen by many in recent years to entail epistemological and ontological issues. The raging debates within literary theory or within the broad range of the social sciences, for example, as to what the process of knowing means within a social and political context have produced an

enormous number of volumes reflecting upon the question of whether knowledge is even possible, if it is always perspectival. Many wholesale solutions to this issue have been proposed, always seemingly based upon at least partial insights: common proposals are the Marxian axiom that all cultural expression is equally a form of praxis hence cultural activity (including the production of knowledge) must be subservient to a choice whether or not to serve the owners of the forces of production, or the poststructuralist insistence, following Nietzsche, that we must deconstruct all our symbolic creations because they belong to a metaphysical tradition whose purpose is always to gain power over others.

These issues are exponentially significant to those of us in the ISST, which sees itself not only as "interdisciplinary," but "international"—that is, cross-cultural. The issues we face involve not only coming to terms with the "imperialism of consciousness," as it has been called, but with the question of how processes of knowing within particular cultural arenas can inform similar processes in quite different, even fundamentally different, settings. I would like to pose both such kinds of questions as a single issue—namely, how is it possible for us to know an "other." The issue is crucial. It raises the immediate consideration, for example, of whether or not our knowledge depends upon our capacity to empathize with others, to imagine our way into the subjective lives of others, including the subjective lives of those who work in other disciplines. Prematurely, I note my own opinion with regard to this issue: namely, it does not. Yet I also refuse the logocentric position with regard to knowledge—that knowledge is an objective structure whose purpose is to explain what things are in relation to that which is mere appearance. Still further, I do not believe the purpose of knowledge is the legitimation of particular activities or power structures.

But if the possibility of understanding minds other than our own is not primarily a matter of interpreting the "innerness" of other minds, nor positing an objective structure transcending individual perspectives, in what does it consist? I will not offer an opinion here for I'm being, or at least I'm hoping to be, in the best sense of the term, provocative. The dire consequences of the symbolic solipsism resulting from the specialized languages of fragmented disciplines (what the literary critic Kenneth Burke once revealingly termed "terministic screens") demand that we continue to formulate answers to the problem of understanding an "other;" the traditional answers no longer suffice. In order for us to meet what can only be called this cross-cultural challenge adequately I believe the field of time studies needs to develop an even more sophisticated understanding of what "others" (other cultures, other subcultures, other disciplinary perspectives, the ultimate other) consist of and the processes of interpretation which allow us to define and assess what others are up to and what it means for all of us. I further believe it will prove necessary to develop a more complex model of the relationship between culture and human activity. I feel this will entail reformulating the central subject of inquiry in

time studies in terms more valuational and more political. In my judgment, the crisis of the "other" in contemporary thought will not be dispelled by business-as-usual, but, rather, will respond only to, in Giles Gunn's wonderful phrase, "the moral imagination."

R. M.

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