



SPT newsletter

Volume 22, Number 4 (Autumn 1998)

SPT/99 THE 11TH SPT BIENNIAL INTERNATIONAL CONFERENCE

SAN JOSE/SILICON VALLEY,

CALIFORNIA, USA

14-17 July 1999

CALL FOR PAPERS

SAN JOSE/SILICON VALLEY, CA

CONFERENCE THEME: TECHNOLOGICAL SPACES

PAPERS INVITED ON CONFERENCE THEME AND ON OTHER TOPICS CONCERNING
PHILOSOPHY AND TECHNOLOGY

TWO-PAGE ABSTRACTS MUST BE SUBMITTED BY: OCTOBER 30, 1998

NOTIFICATION OF ABSTRACT ACCEPTANCE: DECEMBER 15, 1998

SEND ABSTRACTS TO:

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Check the SPT webpages (<http://www.spt.org>) for updates.

As an international centre of high technology research, development and manufacturing, Silicon Valley is an ideal location for SPT/99. The conference theme, "Technological Spaces," is meant to encourage both traditional and innovative investigations of the intersection of technology and space or place, variously conceived - including: high-tech

regions (like Silicon Valley); the world wide web as social/cyber space; scientific laboratories as technological workplaces; agricultural technics; identity (gender, culture, etc.) and situated technologies; spatial metaphors in computing, etc. The Society for Philosophy and Geography has been invited to join the conference. Special outreach is also being made to other science and technology studies organizations as well as potential colleagues in the Pacific Rim.

LOCAL UPDATE ON SPT/99

Local arrangements for SPT/99 are falling into place.

The conference will take place on the campus of San Jose State University, in downtown San Jose. Founded in 1857, SJSU is California's oldest institution of public higher education. The University now has over 20,000 students in undergraduate and graduate programs and is the largest provider of graduates to the industries of Silicon Valley. The conference meetings will be held in the central building of the College of Engineering, which is a modern, comfortable air-conditioned facility.

Accommodations for the conference will be in the University's residential hall complex, which is a short walk from the College of Engineering. The residential halls are currently undergoing renovation, so accommodations for the conference will be simple but quite comfortable. The rooms we have reserved are air conditioned. " An "all-you-can-eat" breakfast at the will be included. The cost for room and breakfast will be approximately \$35 US per person per night. Arrangements can be made with the University Housing Office for attendees who which either to arrive early or to extend their stays beyond the conference. A list of hotels where attendees are likely to find alternative accommodations will soon be available and will be posted on the SPT website at www.spt.org.

With a population of over 800,000, San Jose is California's third largest city, after Los Angeles and San Diego. San Jose was incorporated in 1777, under Spanish rule and is California's oldest non-native civil settlement. Today it is a city of very broad ethnic and cultural mix. Over 100 different languages or dialects are spoken in the homes of the students in San Jose's public elementary schools. The city's downtown has undergone substantial growth and renovation along with the development of the high-tech industries of Silicon Valley. There are museums, theaters, cinemas, clubs, dozens of restaurants, and other spots of interest and recreation in downtown San Jose, and all are within walking distance of the University. San Jose is also within an hour's drive of the cities of San Francisco, Oakland, and Berkeley as well as the wine country and Monterey Bay. For more information on events and sites in and around San Jose, contact the San Jose Convention and Visitors Bureau website at www.sanjose.org.

San Jose's International Airport is a short distance from downtown and the University (a 10 minute taxi ride). Attendees could also fly into either San Francisco International Airport or Oakland International Airport. (Be sure to ask your travel agent to check rates to all three airports.) There is easy and reasonably priced ground shuttle transportation to San Jose from both San Francisco International and Oakland International (updated details for which will be posted on the SPT website as the conference time approaches).

For any further specific information about the conference site or to request arrangements for special needs at the site, contact Noam Cook at sdncook@aol.com.

AN INVITATION FROM SPT PRESIDENT PAUL DURBIN TO MEMBERS OLD AND NEW

As we approach the end of this century and millennium and the beginning of the next, the Society for Philosophy and Technology faces exciting prospects. Our next two biennial international meetings are set for strategic locations: 1999 in San Jose, the heart of Silicon Valley, and 2001 in Edinburgh, the home of the Roslin Institute of Dolly-cloning fame.

So this seems an ideal time for long-standing members - whether current or lapsed - to recommit ourselves to the pursuit of philosophical interpretations and analyses of technology, technologies, and technological issues. We'd love to see all our past members on board - no need to pay dues for any missed years - and of course it's that time of year for everyone to pay up.

The dues are still only \$10!

Although accommodations may be made for non-USA memberships, the best policy continues to be to bundle as many memberships from a particular country as possible. For example, for all our Dutch colleagues to join together to send a single payment; the same for Germany; and so on.

A repeat call for papers for the San Jose/1999 meeting appears elsewhere in this newsletter, and there's still time to submit a paper, an abstract, or a proposal for a symposium. So why not join us?

Together we can make the next two meetings - San Jose/1999 and Edinburgh/2001 - the best ever for SPT.

From the Editor

In this issue we are inaugurating two new features: (1) a series of short information articles on the various Ph.D. granting programs around the country whose area of concentration can loosely be called Science and Technology Studies (STS); (2) an occasional series of opinion/editorial pieces designed to either inform or inflame, with the hope of eliciting some feedback from our readers. The reason for the first item: the STS series is to assist those who wish to guide their undergraduate students interested in graduate work in the philosophy of technology. I am beginning with the STS programs simply because I am unaware of any "straight" philosophy of technology graduate programs, which is not to say that none exist; it is merely an expression of my ignorance. If you are involved in a graduate program in the philosophy of technology, please send me information on the program and I will be happy to publish it.

As for the op/ed series, it speaks for itself. Newsletters can serve many functions. Among other things, we hope to provide a vehicle for a dialogue on the many topics that are of interest to the membership of the Society. In this issue, Richard Smith addresses the emerging field of nanotechnology. Editorial comments from the membership are invited. This is a Society that meets infrequently and whose membership is widespread. One function this newsletter can serve is to facilitate a continuing conversation during those periods between our conferences and meetings. If you have comments, please send them.

Science and Technology Studies at Cornell

Cornell's Science and Technology Studies (S&TS) Department and Graduate Field was founded in 1991. This brought together the "Science, Technology and Society" and "History and Philosophy of Science and Technology" programs under one department. This department draws together philosophy, history, sociology and politics in an attempt to understand science and technology as historical and cultural productions. The core faculty of the graduate field are noted for their work in: history and historiography of science and technology; the social construction of technology and scientific knowledge; engineering, environmental, and biomedical ethics; women in science; gender and technology; philosophy of science; and environmental studies. Faculty in the field include Trevor Pinch, Michael A. Dennis, Ronald Kline, Judith Reppy, and Zellman Warhaft. Classes cover a diverse range of topics like: "Biotechnology and Law," "Topics in the Scientific Revolution," and "Science, Technology and Cold War." Dissertation topics are just as varied. Titles include "The Long Span. Intercultural Exchange in Building Technology: Development and Industrialization of the Framed Beam in Western Europe and the United States, 1820-70", "Method in the Early

Royal Society of London" and "Manufacturing Identity: A History of Criminal Identification Techniques from Photography to Fingerprinting." The S&TS program sponsors a number of talks and other events. Speakers at their Fall 1998 Seminar Series include: Mary Jo Nye, Peter Galison, and Antoni Malet. In April of this year, the Department sponsored a workshop entitled "Making People: The Normal and Abnormal in Constructions of Personhood." Next April, Cornell's S&TS department will host a conference entitled "Technology and Identity" (see the announcement in Events of Interest). In addition to regular seminars, lectures and conferences, the S&TS Department also has editorial responsibility for the journals *Isis* and *Public Understanding of Science*.

Molecular Nanotechnology-Some Philosophical Questions

Richard H. Smith, II, MS

Director of Planning and Research Administration, Georgetown University Medical Center

The outgoing Director of the National Science Foundation recently testified that, "If I were asked for an area of science and engineering that will most likely produce the breakthroughs of tomorrow, I would point to nanoscale science and engineering, often called simply "nanotechnology." Since the National Science Foundation expects to spend \$175M this year and other institutions around the world another \$800M on research in the field, it seems appropriate to pose some questions about its philosophical implications.

Nanotechnology research can be broadly defined to encompass dozens of projects within the established disciplines of physics, chemistry, biotechnology, etc. that deal with manipulating matter in the sub-micron domain. If nanotechnology were merely an extension of miniaturization, then the philosophical questions pertaining thereto would be no more challenging than those surrounding other new technologies. There is, however, a growing community of practitioners of nanotechnology research who claim progress towards an ability to manipulate matter to allow the design, manufacture, and programming of molecule-sized, semiautonomous, communicating machines. These "nanomachines," say the theorists, will be designed to perform such tasks as seeking and destroying cancer cells, identifying and correcting genetic damage (including aging factors), converting pollutants into directly-usable energy sources, and even making food out of dirt.

Outlandish? So it would seem. However, with research money pouring in and Nobel Prizes being awarded to researchers in the field like Hoffman, Rohrer, and Richard Smalley, ignoring the potential seems imprudent. If philosophers of technology are to observe the field, what kinds of questions might we ask? Here are some examples intended to spark debate.

What constitutes an appropriate field of inquiry? Should government funding agencies expend scarce resources (including opportunity costs) on something with enormous but conjectural benefits such as molecular nanotechnology or should they reserve them instead for marginal but more easily predictable improvements in Kuhnian "normal science"? How will practitioners of S&T deal with the disruption and melding of existing disciplines?

What is a theoretical technology? Following the work of Ian Hacking, can one "spray" nanomachines? How would one falsify, in a Popperian sense, what doesn't exist yet (and does it make sense to even make the attempt?) How much does computer modeling of molecular machines count as evidence of progress? Is nanotechnology a prospective technology or is it science fiction?

How should the science and technology community deal with the immense potential risks inherent in a successful implementation of self-assembling nanodevices? When will we know

whether it is time to form a RAC-like body? If scarcity becomes uncommon, what risk is there to micro- and macro-economic systems? What role should the military play in production of and defense from nanoweapons?

What are the ethical implications of nanotechnology? Should we view this field and its potential consequences strictly through utilitarian lenses or is there some natural law somewhere that might give us guidance? Should religion play a role in our technical/ethical discussions? Will "progress" in the field further exacerbate the problem of technological haves and have-nots?

Are we really prepared for ever-lengthening life spans?

What impact, if any, will a successful implementation of nanotechnology have on the way we think about the nature of knowledge? If knowledge is bound by technical capabilities, will the field's conceivable capabilities provide new ontological and epistemological lessons to learn and new ways of learning them?

Will nano-assisted brains and bodies still be considered human? To what degree can we enhance ourselves genetically without creating a new species?

Is a world populated by nanomachines that can (theoretically) solve today's problems of disease and aging, pollution and scarcity, overpopulation and starvation to be desired or avoided? Will these "solutions" enhance happiness or merely permit us to temporarily avoid inevitable sorrows.

Many of these questions need to be asked whether or not nanotechnology work succeeds, for some of the changes could come about through other vectors. Nevertheless, the current accelerating work in nanotechnology certainly suggests that we think about the questions at our leisure rather than waiting. For more information on nanotechnology policy and an STS perspective on nanotechnology, see the author's web page at:
<http://www.vt.edu:10021/arch/psk/papa6664/smith/rs.htm>

Announcement

Edmund Byrne has taken over the Office of Treasurer of SPT. The Treasurer is responsible for maintaining the financial accounts of the Society and the registry of its members. All members's dues should be sent to the Treasurer. Edmund Byrne's address is:

SPT Treasurer

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Call for Papers

The editor-in-chief of the book series PRAXIOLOGY: The International Annual of practical philosophy and methodology (published in the US by the Transaction Publishers, Rutgers-State University of New Jersey) is publishing a volume on Praxiology and the Philosophy of Technology. Scholars interested in contributing to this volume should contact:

Prof. Dr. Wojciech W. Gasparski

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Events of interest

Interface: 23rd Annual Humanities and Technology Conference to be held October 28-30, 1998. The Interface Conference provides a forum for discussing the interaction of humanistic concerns with scientific and technological developments. Past participants have represented such diverse fields as engineering, technology, computer science, physics, history, literature, music, and medicine. Without excluding other topics, this year's conference especially invites proposals that focus on teaching and learning technology. For more information, contact Julie R. Newell, INTERFACE, Department of Social and International Studies, Southern Polytechnic State University, 1100 South Marietta Parkway, Marietta, GA 30060-2896. E-mail: jnewell@spsu.edu. <http://www.spsu.edu/interface/>

Science, Technology, and the Rise of Nature. 4S (Society for the Social Studies of Science) and ESAC (Environmental Studies Association of Canada) are jointly sponsoring this conference to be held from 30 October to 1 November 1998 at the Hotel Halifax in Halifax, Nova Scotia, Canada.

Sixth Foresight Conference on Molecular Nanotechnology. November 13-15, 1998 at the Westin Hotel in Silicon Valley, California. The conference is a meeting of scientists and technologists working in fields leading toward molecular nanotechnology: thorough three-dimensional structural control of materials and devices at the molecular level. Invited speakers include Noble Prize winning physicist Prof. Steven Chu (Stanford University), Prof. Steven M. Block (Princeton University), Prof. M. Reza Ghadiri (The Scripps Research Institute), Dr. Sumio Iijima (NEC Corporation, R&D), Prof. Mark Reed (Yale University). An intensive Tutorial on Critical Enabling Technologies for Nanotechnology will be held on November 12, chaired by Jan Hoh of Johns Hopkins University. A National Science Foundation-sponsored forum will be held in conjunction with the 1998 Sixth Foresight Conference on Molecular Nanotechnology on Friday afternoon, November 13, 1998. The forum, entitled "From Scientific Discovery to the Nanotechnology of Tomorrow", will be moderated by Prof. M.C. Roco, NSF Chair of the Interagency Nanotechnology Group. The forum is open to all Foresight Conference attendees at no additional cost. For more information visit <http://www.foresight.org/conference>. Registration form is available at <http://www.foresight.org/Conferences/MNT6/RegInfo.html#RegFees>

Midwest Junto Annual Meeting 9-11 April 1999, Bartlesville, Oklahoma. The Midwest Junto is an informal organization open to all persons interested in the history of science, technology, mathematics, and medicine. Although annual meetings are held in the midwestern states, participants come from all over the country, as well as from areas outside the USA. The Junto is especially known for providing a stimulating and supportive venue for graduate student presentations and other works in progress. For more information about the Junto, contact Dick Overfield, phone 402-554-2593, e-mail: Rover@unomaha.edu. For information

about the 1999 meeting, contact Marjorie Malley, phone 918-336-4537, e-mail: mcmjmh@galstar.com.

The American Society for Environmental History announces the call for papers for its biennial meeting to be held in Tucson, Arizona, 14-18 April 1999. The theme will be "Environmental History across Boundaries." For details, contact Edmund Russell (program chair), Technology, Culture, and Communication, SEAS, Thornton Hall A-237, University of Virginia, Charlottesville, VA 22903 (epr5@virginia.edu, 804-982-2623).

Technology & Identity: A Conference at Cornell University, April 16-18, 1999. As a theoretical term, identity is being increasingly invoked by analysts in science and technology studies (S&TS) and other fields to order and explain actors' values, interests, practices, and more generally, world-views. As social constructs, heterogeneous assemblages can form, maintain, fragment, and completely transform the identities of collectivities and actors. The graduate students of the Science & Technology Studies Department at Cornell University announce a conference to explore the boundaries of identity, to be held April 16-18, 1999. How are identities constructed and defined? What work do actors achieve by drawing on identity as a resource? In our analyses, what work do we accomplish by using the term "identity" as compared to other theoretical resources? By focusing on the constructed boundaries of identity, including those between other identities, we hope to investigate core questions in S&TS such as how some identities are maintained or how a particular sociotechnical system can support multiple identities. Ken Gergen, Professor of Psychology at Swarthmore College, will deliver the keynote address. Although conference participants may study these questions at multiple levels, such as the nation-state or the laboratory, and with diverse empirical concerns, we expect papers to engage with theoretical questions raised by the intersection of technology and identity. Abstracts of no more than 250 words and a one-page curriculum vitae should be sent to the postal or e-mail address listed below by December 15, 1998. Abstracts from graduate students in all fields are encouraged. Conference information is posted as available at <http://www.sts.cornell.edu>, or contact: Dan Plafcan, Abstract Coordinator, Science & Technology Studies, 726 University Ave., 2nd floor, Cornell University, Ithaca, NY, 14850. E-mail: djp2@cornell.edu

Gendered Landscapes: An Interdisciplinary Exploration of Past Place and Space, 31 May - 1 June 1999. The Nittany Lion Inn, State College, PA. The goals of this conference are to learn, explore, and share particular perspectives within a multidisciplinary community and to initiate an ongoing dialog regarding issues of gender and past construction of place and space. A call for papers/panels will be mailed in August 1998 and abstracts will be due 11 December 1998. Please bookmark the program Web site: <http://www.outreach.psu.edu/C&I/GenderedLandscapes>. For more information, contact: Roberta Moore, Conference Planner, The Pennsylvania State University, 225 The Penn State Conference Center Hotel, University Park, PA 16802-7002; Phone: 814-863-5120; Fax: 814-863-5190; e-mail: conferencelnsfor1@cde.psu.edu

New Titles

Compiled by Mechthild Nagel

Foundations of complex-system theories, Sunny Auyang (Cambridge).

Maps and Politics, Jeremy Black (Chicago).

Reasoning with the infinite. From the closed world to the mathematical universe, Michel Blay (Chicago).

Radon's Deadly Daughters. Science, environmental policy, and the politics of risk, Edelstein

& Makofske (Rowman & Littlefield).

Spaces of modernity. London's geographies 1680-1780, Miles Ogborn (Guilford).

Peace and War. Reminiscences of a life on the frontiers of science, Robert Serber with Robert Crease (Columbia).

Representing. hip hop culture and the production of black cinema, S. Craig Watkins (Chicago).

Techne Affairs

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