Environment, Technology, and Society

Newsletter of the Section on Environment and Technology
American Sociological Association

Summer 1995 Number 79

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The Winter 1995 issue of E,T&S (No. 78) featured a front page graph titled *U.S. Sources of Air Pollution, 1990.* The graph was compiled from Gale Environmental Library's 1994 *Statistical Record of the Environment.* The text accompanying the graph suggested that U.S. annual lead emissions in the late 1980s and early 1990s, amounted to 7.1 thousand metric tons. If we assume that assessments of lead emissions are used to derive the magnitude of lead exposure affecting the U.S. population, we can happily conclude that a mere 7.1 thousand metric tons won't hurt anybody. The actualities of lead consumption in the United States suggest a more serious exposure problem.

As the accompanying chart suggests (Figure 1), since the late 1950s, the U.S. consumed over one million metric tons of lead annually. During the same period, much of the lead produced in the United States went towards the manufacturing of batteries (primarily automobile batteries) and leaded gasoline. As leaded gasoline was phased out in the early 1990s, nearly one million metric tons of lead were used in the production of batteries. The US. remains the largest consumer of lead in the world, and the third largest mine-lead producer (Bureau of Mines, 1993).

The National Academy of Sciences (NAS) reports that once introduced into the environment, lead persists, as it hardly breaks down into chemically simpler components (NAS, 1993). NAS (1993) also notes that most of the 300 million metric tons of lead produced since the beginning of human history remain in the environment, largely in soil and dust. The sum of industrial lead emissions is about 700 times the sum of natural emissions into the atmosphere. Half of the lead produced in

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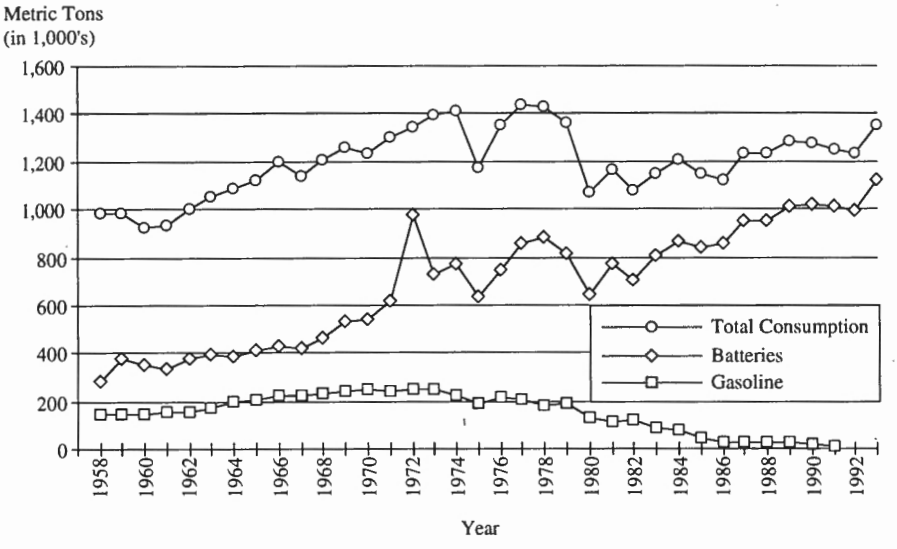
Figure 1. Annual Consumption of Lead for Batteries, Gasoline, and Total: 1958-1993



Source: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook,* Annual editions, Washington, DC: USGPO.

In This Issue

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Notes from the Editor

Three and a half years, 14 issues, and 160 pages ago I undertook the challenge of editing our *E,T&S* Newsletter. With a lot of support from the Chair and members of the section, and excellent material to work with, I think we have succeeded in engaging our readership, stimulating an energetic exchange of ideas, building stronger networks within the section as well as links to others outside the section, exploring the possibilities of the new electronic media, sometimes entertaining, and hopefully always challenging our members. As I indicated some time ago, I am turning over the editorship as of this issue to a new editor, and I am pleased to announce that **Susan Roschke** of Cornell University has accepted the mantle of Newsletter Editor. Susan has experience in journalism and layout, and brings fresh enthusiasm to this responsibility, and I am confident that with your continued support the newsletter is in good hands. From now on, please forward newsletter material directly to Susan as follows:

Susan H. Roschke
1 Knoll Tree Road
Ithaca, NY 14850
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<sr12@cornell.edu>

This issue of *E,T&S* reflects many of the attributes that I was seeking in our newsletter. The lead article offers a response to the graphic material presented in the prior issue (#78) on U.S. sources of air pollution and illustrates the kind of dialogue that I was hoping might flow from graphic representations of interesting data. **Penelope Canan** has created an effective mechanism for the Chair to communicate with the membership in *From My Corner.* We have another book review authored by undergraduate students, which helps draw new individuals and new ideas into our section. And we have the usual range of membership news, current research activities, meeting announcements, call for papers, publications, and presentations, all of which reflect the vitality and activity of the section. Although we have had to cut back on the number of pages (from about 12 to 8 pages per issue) and the number of issues (4 down to 3 per year), we have added a new medium of communication via the ENVTECSOC listserver which has flourished under **Timmons Robert's** leadership since its inception less than a year ago. Further experimentation and exploration with electronic versions of the newsletter, development of a section Home Page on the Internet, and other strategies to enhance communication within the section lie before us. By the way, since the publication of the last issue (#78), I have heard from very few members regarding successes or failures in attempting to "read" *E,T&S* in its electronic form on the listserver. This issue also will be accessible electronically on ENVTECSOC.

Those of you who have been following the frequent congressional updates that have been posted on our listserver (and in the media) regarding the uncertainties surrounding funding for the behavioral sciences, the future of NSF support for environmental sociology research, and the uncertain status of various key federal agencies and their environmental programs, know that we find ourselves in particularly challenging times. ENVTECSOC has shown itself to be an effective way to get time critical information out to our members and generate effective responses to a rapidly changing political environment. For those of you who have the ability to subscribe to ENVTECSOC but have not yet done so, we urge you to sign up now, as a lot of important and useful information to the section is appearing now on the listserver and not in the newsletter (primarily information that is time dependent).

Finally, thanks to Gretchen Gaffney at Battelle for all her help with the layout of this newsletter, to Penelope for her support throughout my editorship, and to all the section members for continuing to send in plenty of great material that lies at the heart of any successful newsletter.

Environment, Technology and Society Newsletter

Editor

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Publication Schedule:

The deadline for the Fall issue will be October 15, 1995. If it is possible for text items of any length to be submitted electronically, that greatly facilitates the newsletter production process. Use **Susan Roschke's** e-mail address: **<sr12@cornell.edu>** Also, please contribute articles on current research that can be presented graphically on the front page.

Annual Consumption of Lead *(cont.)*

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the last 5,000 years (or about 150 million metric tons) has been released into the environment. Therefore, NAS suggests that half of the lead produced in any region is released into the environment.

The removal of lead from gasoline in the U.S. was completed in the early 1990s. While leaded gasoline was a major source of lead emissions, its impacts did not simply disappear. In other words, the lead deposited in the environment from leaded gasoline in the past 60 years can hardly be removed. Instead, these impacts have been transferred from one environmental medium, air, into other media, soil and water. At issue is whether the elimination of leaded gasoline in the United States contributed to the elimination of lead exposure in the population.

The NAS report on lead suggests that lead exposure is also generated at the microphysical level from such diverse sources as household paint, drinking water, children's toys and art materials, china and dinnerware, water coolers at schools and work, housing renovations, and child-care facilities, to name a few. Several lead processing and battery manufacturing facilities have operated either without a permit or knowingly violating Clean Air and Clean Water standards for nearly two decades. In the past few months, the Omaha World-Herald has reported extensively on water and air pollution control standards violations by ASARCO—a major lead mining and refining company, while EPA found air emission compliance violations at eight battery manufacturing facilities, three of which were involved in severe violations (C. Marks, Environmental Protection Agency, 10/15/94—telephone communication).

Perhaps the most critical impact of these violations and the extensive consumption of lead in the United States can best be summed up in one word—exposure. Hammad and Manocha (1995:37) define exposure as "an event or series of events in which a person (or population) comes in contact with a biologic, chemical, or physical agent." Children continue to be exposed to medically harmful concentrations of lead at home, at school, at play. And adults continue to be exposed to harmful levels of lead at work. Lead-battery recovery facilities routinely expose their workers at alarmingly high concentrations of lead—100 micrograms/dl of blood, a level twice the magnitude of OSHA's occupational safety standard (Weeden, 1993), and over six times the CDC's non-occupational safety level for the general adult population. The Centers for Disease Control (1991) has lowered the safety level of lead in the blood of children to 10 micrograms/dl of blood, and for adults to 14 micrograms/dL (NAS, 1993).

The health impacts of lead in adults include high blood pressure, hypertension, encephalopathy, colic, wrist drop, kidney and reproductive disorders. Children exposed to lead may experience serious health and cognitive problems, including, encephalopathy, kidney damage, hearing loss, diminished attention spans, hyperactivity and long-lasting neurobehavioral problems (Hayes, 1995). Some studies have detected hearing loss in children having as little as 5 micrograms of lead per deciLiter of blood (Schwartz and Otto, 1993), while others suggest that there is no safe level of exposure at all (H. Needleman, 8/15/1994 telephone communication with the author). In its 1993 report on childhood lead poisoning, the National Academy of Sciences states that "chronic low-level lead exposure, insufficient to produce recognizable clinical symptoms of toxicity, has adverse and probably long-lasting effects, particularly on neurodevelopment" (NAS, 1993: 22). Adverse neurodevelopment due to lead exposure has profound negative consequences for school achievement. The removal of lead from gasoline helped substantially in improving the health of millions of American children, yet because of the vast consumption of lead in the United States over the past 60 years, millions more are at risk daily from other sources of lead exposure.

> ***The size of the population at risk from lead exposure is substantial, and warrants immediate national attention; state-level implementation and enforcement of lead control policies remain weak.***

Lead was removed from gasoline, in part, because of the development of an impressive science of lead detection in the environment, its detection and precise measurement in children's blood and, a highly successful demonstration of benefits exceeding costs. The 1993 NAS report on childhood lead poisoning cites at least three studies suggesting that reducing lead in drinking water through corrosion control generates "economic saving in pipe and water-heater replacement [which] exceeds costs," (NAS, 1993: 18). The Agency for Toxic Substances and Disease Registry (ATSDR) reported in the late 1980's that over forty million families lived in homes with high amounts of lead (ATSDR, 1988-cited in NAS, 1993). Specifically, the ATSDR report noted the following: "forty-two million families live in housing that contains an estimated 3 million tons of lead in paints in the immediate environment—equivalent to about 140 LB per household. Ingestion of as little as 150 ug/day [micrograms/day] would result in a steady-state aggregate lead concentration now considered toxic. Similarly, over 90% of U.S. housing units have lead-soldered plumbing" (cited in NAS, 1993:18). The size of the population at risk from lead exposure is substantial, and warrants immediate national attention; state-level implementation and enforcement of lead control policies remain weak.

In short, the 1993 NAS report on childhood lead poisoning and the Bureau of Mines lead-consumption statistics on total lead consumption, and lead consumption for gasoline and batteries suggest, the following: (a) past lead consumption trends have generated long-term environmental lead deposits, which continue to challenge our scientific understanding of exposure risks, as well as the nation's ability to fully incorporate the science of lead exposure in public health policy planning.

If, as the National Academy of Sciences reports, half of the lead produced enters the environment and, if lead cannot be broken down into simpler compounds, then its presence in the physical environment suggests a substantially larger deposition of lead in the environment, and a much larger magnitude of exposure than the lead emission data cited in the Winter 1995 *E,T&S* issue.

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Annual... *(cont.)*

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References:

ATSDR (Agency for Toxic Substances and Disease Registry). 1988. *The Nature and Extent of Lead Poisoning in Children in the United States: A Report to Congress.* Atlanta, GA: U.S. Department of Health and Human Services.

Bureau of Mines. 1958-1993. *Minerals Yearbook.* Washington, DC: USGPO.

Centers for Disease Control and Prevention. 1991. *Preventing Lead Poisoning in Young Children.* Atlanta, GA: U.S. Department of Health and Human Services/Centers for Disease Control and Prevention.

Hammad, Yehia Y. and Yogesh Manocha. 1995. *Principles of Exposure Assessment.* Pp. 37-45 in Environmental Medicine, edited by Stuart Brooks, et al. St. Louis: Mosby.

Hayes, Edward B. 1995. *The Hazards of Lead to Children.* Pp. 383-389 in Environmental Medicine, edited by Stuart Brooks, et al. St. Louis: Mosby.

National Academy of Sciences. 1993. *Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations.* Washington, DC: National Academy Press.

Omaha World-Herald. 1995. *Court Records Show ASARCO Was Probed.* March 12. P. 11.

Omaha World-Herald. 1995. *Judge Rules ASARCO Violated Water Act.* March 24. P. 1.

Schwartz, Joel and David Otto. 1993. *Lead and Minor Hearing Impairment.* Archives of Environmental Health. 46(5): 300-305

Weeden, Richard P. 1993. *The Politics of Lead.* Pp. 168-200 in Toxic Circles, edited by Helen E. Sheehan and Richard P. Weeden. New Brunswick, NJ: Rutgers University Press.

Environment & Technology Sessions for the ASA Meetings

In the last issue of E.T&S (#78) we reported on the six sessions of particular interest to members of the Section that will take place in conjunction with the forthcoming meetings in Washington, D.C. on August 22-23, 1994. Be sure to refer to your preliminary program for the time and make-up of each of these sessions. In addition, **Gene Rosa** has organized eleven roundtable sessions that will take place on the afternoon of August 23rd, followed immediately by the Section's Business Meeting. We encourage you all to participate in the meetings, and in particular to attend the business meeting.

Proposed Change to Environment and Technology Section Bylaws

Gene Rosa is suggesting a change to the Section's Bylaws, and he writes as follows: According to the wording of the Bylaws: "Proposed changes in these Bylaws must first be discussed at an annual business meeting of the Section, then approved by a majority of the Council through a mailed ballot, and finally approved by a majority of the Section members who vote through a mailed ballot that may be distributed with the Section newsletter. Thus, I would like to alert Section members via the Newsletter of a change that I will propose at this year's business meeting. In particular, I wish to change slightly the composition of the Committee for the Section's Distinguished Contributions Award. Currently, again according to the Bylaws, "The Selection Committee for this award shall consist of all members of the Section Council, with the Chair-elect of the Section serving as Chair of this committee." I will suggest that the chair of this committee be the Secretary-Treasurer, not the Chair-elect, for two reasons. First, the chair-elect already has a considerable burden planning and coordinating sessions for the ASA meetings. The added obligation of chairing the distinguished award committee overburdens that position. Second, this is not a discretionary role, but an administrative one. Hence, it could be just as effectively discharged by the Secretary-Treasurer.

Call for Papers

Persons interested in presenting a paper, poster, or organizing a roundtable discussion at the *Sixth International Symposium on Society and Natural Resource Management* are encouraged to submit an abstract (no longer than two, double-spaced, typewritten pages) by November 1, 1995 to A.E. Luloff, Program Co-Chair, Dept. of Agricultural Economics and Rural Sociology, 111 Armsby Building, The Pennsylvania State University, University Park, PA 16802 (814-863-8643). The symposium will be held at the Penn State campus May 18-23, 1996, and it will focus on a better integration of social and natural resource sciences in addressing resource and environmental issues. A commitment to the role of social perspectives in policy development and managing natural resources is underscored.

The Journal *Capitalism, Nature, Socialism* will publish a special pedagogy section in its 2nd quarter, 1996 issue on "Teaching Political Ecology." Submissions are invited in the following categories: Course Syllabi (e.g., political ecology; political economy/sociology of natural resources; critical ecological economics; radical geography; industrial ecology; social/socialist ecology; eco-feminism/socialist eco-feminism; environmental justice/racism; development and environment; and related fields); Articles and Pedagogical Notes about teaching political ecology and related topics; and, related Teaching Resources (e.g., reference materials, films, teaching interest groups). Send to: *Capitalism, Nature, Socialism,* P.O. Box 8467, Santa Cruz, CA 95061 by October 1, 1995.

Environmental Sociology

Riley E. Dunlap

[Ed. Note: The following article was cited in E.T&S #77 with the promise that I would publish it in a subsequent issue; so, here it is. Source: **Dunlap, Riley E.** 1994. *Environmental Sociology.* In Eblen, Ruth A. and William R. Eblen (Eds.). The Encyclopedia of the Environment. Boston: Houghton Mifflin. Pp. 655-657.]

Environmental sociology is a new area of inquiry that examines the social dimensions of environmental problems, including the complex interrelations between human societies and their physical environments. It thus represents a major departure from mainstream sociology's focus on the *social* environment.

Sociology emerged as a distinct discipline only in the past century, a unique era of resource abundance, technological progress, and economic growth. As a result sociologists have generally assumed that obtaining sustenance from the physical environment is nonproblematic, at least for industrial societies, and have consequently paid little attention to the environments inhabited by such societies. Indeed, the physical environment was largely ignored, or treated as little more than the stage upon which social life is enacted. In mainstream sociology "the environment" came to mean the social context (e.g., other groups) surrounding the phenomenon under consideration, not its physical setting.

Sociological neglect of the physical environment began to change after our society "discovered" environmental problems in the late 1960s. By the early 1970s a small number of sociologists were studying the emergence of environment as a social problem, especially the nature and activities of the environmental movement, public opinion toward environmental issues, and governmental

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From My Corner

Penelope Canan

Hi from Denver!

The next time I see you will be at the ASA Meetings in Washington, DC. At our Business Meeting on the E&T Section Day, 8/23 — my last as chair — I will be asking for your help in continuing to strengthen the scholarship, teaching, research funding, and community building for environmental sociologists. All ideas are welcome. Here are a few preparatory remarks.

I will be passing around a sign up sheet for a variety of ways to contribute to Section activities. In the meantime, if YOU have an idea and would like to see if others share your interest, let me know so I can include your idea on the sign up sheet.

In preparation you could review the committees listed on this newsletter and think about adding your name to the committee. (Chairs are often, but not always, elected council members, but the committees need to be "deeper" than one person.) Section Committee work is actually fun and a good way to get to know the interesting people and exciting work being done across our subdiscipline. I want to encourage women and minority members to nominate themselves to improve our "mix."

One of our most important tasks is to train the next generation of environmental sociologists. Certainly our new Boguslaw Award for Technology and Humanism is one step in that direction as it is designated to honor the creativity of young investigators. And the Olsen Award taps excellent student scholars.

In addition I would be especially keen to receive your ideas regarding mentorships and apprentice opportunities for ASA honors students (HPSA) and our own graduate student Section members. Likewise I would like us to develop ways to recognize our members who are especially good mentors and teachers of environmental sociology. What are your ideas? (For instance, I understand from my mail that I am the likely winner of the Publishers' Clearinghouse $10 million, and I plan to establish a Teaching Award with part of the money. Can you come up with an alternative idea?)

I think that at a time when government restructuring and deregulation make for a good case of the crazies, we need to band together ever more self-consciously, actively support each other's work, and share already collected data. I believe that we have a lot to say at a juncture when the environment is particularly endangered. We simply must energize each other in the face of some pretty demoralizing events so that our voice is heard. While I expect us to discuss serious ways to act collectively to "crazy times" throughout the Meetings, let's also have some fun at the E&T/Community & Urban Reception on Tuesday, 8/22. Laissez les bons temps rouler, E&T-style!

Finally, I want to thank you for your help over the past few years and thank you especially for the honor of being Section Chair.

Current Research

Tom W. Smith, Director of the General Social Survey (GSS) reports that the 1993 International Social Survey Program's (ISSP) study on the environment will be available from the Inter-university Consortium for Political and Social Research (ICPSR), University of Michigan in late 1995. Data from the U.S. alone is currently available from ICPSR as part of the 1972-1994 GSS. The 1993 ISSP study of the environment was fielded in Australia, Austria, Britain, Bulgaria, Canada, the Czech Republic, Germany, Hungary, Italy, Japan, New Zealand, Norway, the Philippines, Poland, Russia, Slovenia, Sweden, and the United States. The surveys include items about the seriousness of such concerns as pesticides, nuclear energy, water pollution, cars, and global warming; science knowledge; pro-environmental activities; public policies; animal rights; basic values; and related areas. For more information, contact Tom Smith, NORC, 115 East 60th St., Chicago, IL 60637 (312-753-7877). For information on obtaining the 1972-1994 GSS contact ICPSR, Box 1248, Ann Arbor, MI 48106 (313-763-5010).

Dennis S. Mileti, Dept. of Sociology, University of Colorado at Boulder is Principal Investigator of a study titled *Assessment of Research and Applications on Natural Hazards,* funded by NSF, FEMA, USEPA, and the US Forest Service. The project is designed to summarize, assess and evaluate knowledge in all fields of the physical, natural, social, and behavioral science and engineering regarding natural and technological hazards and disaster. The assessment is divided into three related parts: review the past, take stock of and integrate the present, and create a future. Currently, 60-80 experts have been recruited from varied fields, universities, and agencies to the assessment and are working on specialized project parts, nine experts have taken on subgroup leadership roles, and five graduate students are employed and plan project-related dissertations. Experts are still being added. This study will examine why communities appear to be more susceptible to disaster losses by examining loss data, mitigation efforts, hazards policy, and institutional/organizational arrangements. Mitigation strategies will be examined in terms of land use and planning, emergency planning and response, and engineering codes and practices. The applicability of mitigation strategies to foster long-term sustainability in terms of resiliency from disaster losses will be examined, and then integrated to create mitigation management tools for local decision making.

Bob Brulle has just finished his disseration (under **Tom Dietz** of George Mason University) on the topic of the environmental movement. Bob is doing some scoping research for a couple of projects on the anti-environmental movement and should definitely be contacted for information on either the movement or its organized antagonists. He can be reached by phone at 703-490-4612 and by fax at 703-643-2905.

Publications

Bowden, Gary (Ed.). 1994. *Special Issue on the Environment.* The Canadian Review of Sociology and Anthropology. University of Toronto Press. (August).

Brown, Phil and **Faith Ferguson.** 1995. *"Making a Big Stink': Women's Work, Women's Relationships, and Toxic Waste Activism.* Gender & Society. Vol. 9, No. 2. Pp. 145-172.

Clayton, Susan and Susan Opotow (Eds.). 1994. *Green Justice: Conceptions of Fairness and the Natural World.* Journal of Social Issues. New York: Plenum Press.

D'Antonio, W.V., M.S. Sasaki and Y. Yonebayashi (Eds.). 1994. *Ecology, Society and the Quality of Social Life.* New Brunswick, NJ: Transaction Publishers. This edition consists of papers presented at the 1991 meeting of the International Institute of Sociology. It includes chapters by Anthony Giddens on *Industrialization, Ecology, and the Development of Life Politics,* Riley Dunlap and William Catton on *Toward an Ecological Sociology,* Edward Borgatta on *Sociology and the Reality of the Press of Environmental Resources,* and several on quality of life.

Dunlap, Riley E., Loren A. Lutzenhiser and Eugene A. Rosa. 1994. *Understanding Environmental Problems: A Sociological Perspective.* Pp. 27-49 in Beat Burgenmeier (Ed.), Economy, Environment and Technology: A Socio-Economic Approach. Armonk, NY: M.E. Sharpe.

Mehta, Michael D. and **Éric Ouellet** (Eds.). 1995. *Environmental Sociology: Theory and Practice.* Ontario: Captus Press. This volume of original articles, by leading North American researchers, academics and practitioners in the fields of sociology, environmental studies, geography and political science, provides a foundational framework for a more integrated environmental sociology. It defines and synthesizes the various theoretical perspectives in the field and contains a number of case studies for practical reference. For more information contact Captus Press (416) 736-5537 or <captpress@io.org>.

Redclift, Michael and Ted Benton (Eds.). 1994. *Social Theory and the Global Environment.* London and New York: Routledge. This edition consists of chapters primarily by British sociologists (Buttel and Taylor are the lone Americans) involved with the U.K.'s Economic and Social Research Center's Global Environmental Change Programme, including Redclift, Benton, Brian Wynne, Steven Yearley and Leslie Sklair. A variety of theoretical perspectives on GEC are provided, although a social constructivist orientation is heavily represented.

Copies of the publication *Guidelines and Principles for Social Impact Assessment* (U.S. Department of Commerce, NOAA, National Marine Fisheries Service; May 1994; NOAA Technical Memorandum NMFS-F/SPO-16) are available free of charge from **Peter Fricke,** National Marine Fisheries Service, 1315 East-West Highway (F/CM1), Silver Spring, MD 20910.

The USDA Forest Service's Environmental Coordination Division has sponsored and published the proceedings of the one-day Interagency Symposium on *Sociology and Natural Resource Management* held in conjunction with the Rural Sociological Society meetings for more than a decade now. For information about these publications, contact **Dr. Geraldine Bower,** Chief Sociologist, USDA-FS Environmental Coordination, P.O. Box 96090, Washington, DC 20090-6090.

Position Announcement

The School of Natural Resources and Environment, The University of Michigan, is seeking to fill a full-time, nine-month, tenure-track position in *Environmental Education/Communication* at the level of Assistant Professor, to be filled by September 1996. Note that the review of candidates will start on September 5, 1995. A successful candidate's research would focus on knowledge-based interventions with respect to environmental or resource issues. The acquisition, sharing, effectiveness, or impact of resource/environmental information would all be appropriate aspects of this area of study. Responsibilities will include teaching a minimum of three courses annually, developing a strong conceptually-focused research program, and directing interdisciplinary graduate research. The School's programs are committed to integrative, interdisciplinary problem-solving. Applicants should submit a cover letter with a 1-2 page statement of research objectives and teaching interests, curriculum vitae (including publications), academic transcripts, and the names, addresses and telephone numbers of three persons able to evaluate research and teaching skills to: Chair, Environmental Education/ Communication Search Committee, School of Natural Resources and Environment, 3512 Dana Building, The University of Michigan, Ann Arbor, MI 48109-1115; 313-764-2550.

Papers & Presentations

Howell, Frank M. and **John K. Thomas.** 1994. *The Spatial Visualization of Environmental Equity: Toward an Understanding of Conceptual and Methodological Issues.* Paper presented at the annual meeting of the Mid-South Sociological Association in Lafayette, LA. (October).

Thomas, John K. and **Frank M. Howell.** 1995. *Environmental Justice: Empirical Evidence and Conceptual Prospects.* Paper presented at the annual meeting of the Southwestern Sociological Association in Dallas, TX. (March).

Tsoukalas, Theodore H. 1995. *Environment, Health, and Society: An Analysis of the Technical disputes Over the Health Impacts of Electromagnetic Fields and Lead on Children.* Paper presented at the 1995 Annual Midwest Sociological Society Meeting.

Membership News

Loren Lutzenheiser has been tenured and promoted to Associate Professor at Washington State University.

Loren Lutzenheiser has provided several updates on the National Institute for the Environment (NIE) via ENVTECSOC, including a report that the Committee for the NIE (CNIE) is working hard to secure Republican support and to identify sources of funding from existing environmental research programs. Representative James Saxton (R-NJ) is drafting legislation to establish the NIE. Due to rules in the House of Representatives which require that all new programs result from savings in others, legislation to create the NIE must contain explicit language detailing the source of all funds. The CNIE is working with Rep. Saxton to identify existing programs that could benefit from being transferred to the NIE. Recommendations include moving programs: that are consistent with the NIE's mission to improve the scientific basis for environmental decision-making; that support achievement of competitively awarded, problem-focused, anticipatory, and multi- and inter-disciplinary science; that allow for oversight by a board representing business, environmental, and scientific communities, as well as state and local government; and, that do not bring any regulatory or resource management functions to the NIE. The CNIE can be contacted at (202) 628-4303 with questions or comments. In addition the CNIE Home Page can be accessed at: http://www.inhs.uiuc.edu/niewww/cnie.html

David Sonnenfeld, Sociology Ph.D. Candidate, University of California, Santa Cruz, has been named Switzer Fellow for 1995-96. The Switzer Foundation Environmental Fellowship recognizes excellence in academic and scientific work, and commitment to solving environmental problems. David will apply the $10,000 award towards completing his dissertation, *A Social History of Innovation in Environmental Technology in the Pulp and Paper Industries of Australia, Indonesia, Malaysia, and Thailand.* In addition, David has been awarded the Distinguished Teaching Award in Sociology at the University of California, Santa Cruz. ∞

Environmental Sociology (cont.)

(continued from page 4)

policy-making. These efforts mainly involved applying traditional sociological perspectives (e.g., social movements theory) to environmental issues, and have been termed the "sociology of environmental issues."

The energy crisis of 1973-74 added a new dimension to sociological interest in environmental topics, highlighting the dependence of industrialized societies on fossil fuels. Increased awareness of potential resource based limits to growth, along with growing evidence of the seriousness of problems such as air and water pollution, gradually led some sociologists to examine the interrelations between human societies and their physical environments: how societies affect their environments and, in turn, are affected by changing environmental conditions. This concern with societal-environmental interactions represented the arrival of a true "environmental sociology," and by the late 1970s it had become a small but vigorous area of inquiry.

Environmental sociology lost momentum in the 1980s, as the Reagan era deflected societal attention from environmental problems. Nonetheless, the field persisted, and studies of toxic-contaminated communities such as Love Canal attracted considerable attention. In recent years recognition of the reality of human-induced global environmental change, such as climate change and ozone depletion, has sparked renewed interest in environmental sociology. Indeed, global change represents a paradigmatic example of societal-environmental interactions, for the changes are caused by human activities and in turn portend enormous consequences for human societies.

Environmental sociologists currently conduct a wide range of research. Studies of environmentalism and public opinion toward environmental problems (now including risk perceptions) remain prominent, as do studies of energy use and conservation. Other major emphases include analyses of societal reactions to environmental hazards, both natural (e.g., floods and earthquakes) and human-created (e.g., toxic waste sites); the impacts of natural resource development (e.g., off-shore oil drilling, strip mining, and timber harvesting) on local communities; and analyses of environmental protection policies.

Environmental sociology provides insight into the social dimensions inherent in most environmental problems. For example, environmental sociologists emphasize that conditions such as factory smoke may be seen as problematic in one society but not another, or as a sign of economic vitality in one era but as pollution in another. Sociologists thus point to the importance of understanding how conditions come to be recognized as problematic and defined as environmental problems, highlighting the differing roles played by activists, industry, media, and government agencies. In conflict-laden settings such as those surrounding the discovery of local environmental hazards (as occurred, e.g. at Love Canal), special attention is paid to sources of competing definitions of the situation and the tactics used by differing parties to gain official acceptance of their definitions.

Environmental sociologists also examine both the causes and consequences of environmental problems. Their contributions to understanding the causes of environmental degradation can be clarified via the "IPAT equation" made famous by biologists Paul Ehrlich and Barry Commoner in an extended debate over the relative importance of population growth and technological development in generating environmental problems. The equation states that the environmental *impact* (I) of a society is a product of the society's population size (P), the level of technology (T) and the average level of affluence (A), or that $I = P \times A \times T$. While Ehrlich stresses the importance of population, and Commoner that of technology, sociologists emphasize the impact of people's lifestyles on the environment. People in poorer nations like India, for example, consume far fewer resources and produce much less pollution than do residents of affluent nations like the U. S.

Environmental sociologists also emphasize that affluence is an inadequate way of conceptualizing the social dynamics involved in environmental degradation. In particular they note that affluence calls attention to consumption and ignores the production sphere of society. The inherent need for growth leads producers to "create" consumer demand through advertising and planned obsolescence, and the need for profit leads them to produce goods regardless of their environmental consequences. Thus, sociologists argue that the decisions of those in charge of the means of production (e.g., corporate executives) have a much greater impact on the environment than do the choices of individual consumers.

More generally, environmental sociologists point to the complex interconnections between population, technology, and what they prefer to call social organization (rather than level of affluence). Poverty, for example, breeds rapid population growth, and technological advances are stimulated primarily by the economy, making it difficult to single out the effects of either population or technology per se on the environment. Environmental sociologists have been especially critical of simplistic, single-factor explanations of environmental degradation that stress either population or technology as the primary causal factor.

Conversely, environmental sociologists examine the complex set of consequences that can be produced by environmental problems, as exemplified by the potentially vast ramifications of global warming (on agriculture, energy use, migration and settlement patterns, etc.). The current emphasis on understanding the human dimensions - as both cause and consequence - of global environmental change suggests a vital future for environmental sociology. This is reflected by the rapid growth of international interest in the area.

For Further Reading: Frederick H. Buttel, *New Directions in Environmental Sociology,* Annual Review of Sociology (1987); Riley E. Dunlap and William R. Catton, Jr., *Environmental Sociology,* Annual Review of Sociology (1979); William R. Freudenburg and Robert Gramling, *The Emergence of Environmental Sociology,* Sociological Inquiry (1989).

Book Review

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(Co-editors: Ann Coons and Michelle Young)
University of Denver

William R. Freudenburg and Robert Gramling. 1994. *Oil in Troubled Waters: Perceptions, Politics, and the Battle Over Off-Shore Drilling.* New York: SUNY Press.

Off-shore oil development is a volatile topic. Northern California and western Louisiana are locations of opposite attitudes concerning off-shore drilling: California vehemently opposes what Louisiana has embraced. The central question of this book is Why? The authors show that opposing convictions regarding ecology and technology are based on historical, social, and biophysical factors. There are also varying degrees of trust in private industry and government agencies involved in Outer Continental Shelf (OCS) drilling.

In their book *Oil in Troubled Waters,* Freudenburg and Gramling seek a better understanding of the "chronic impacts" of OCS drilling on human, marine and coastal environments by providing an account of OCS activities from a sociological perspective. They emphasize history, statistics, and a balanced presentation of public opinion and agency policy. Their analysis is based on documentary sources, extensive in-depth interviews, and first hand observations and experience. Freudenburg and Gramling open their discussion with an historical overview of off-shore oil drilling and pertinent government policy. They see Californian and Louisianan attitudes as reflecting "sociohistorical realities" and OCS drillers and governmental agents as having the erroneous self-perception of impartiality. In their collection of interviews with the citizens of Louisiana and California, they found that the differences in attitudes between Louisiana and California residents towards OCS activities are broad and deep. Their differing attitudes are influenced by local culture, political power, ecology, and the physical character of the land. In addition, risk perception as it applies to the individual, the community, and the environment differs between the two regions.

The study was funded, but not influenced by, the Minerals Management Service (MMS) which is "the federal agency within the Department of the Interior that bears the responsibility for the off-shore drilling program" (p. 14). The MMS is an agency that is historically more apt to research economic and political factors related to their activities. Freudenburg and Gramling believe that social science must play a more active role in policies that affect the environment and that regulatory agencies must adopt more clear and concise policies. Since there have been only unsuccessful attempts to deal with long term socio-economic issues of OCS drilling, Freudenburg and Gramling propose solutions for future efforts to understand the human environment as it is affected by oil drilling. They conclude with an overview of the ideology of community conflict and a framework for dealing with the impacts of oil drilling.

The authors use colloquial language and jargon-free social science. They offer a balanced, reasonable, and informative overview of the problems associated with OCS drilling. They fail, however, to embrace the principles of a free-market system and how those principles affect the actions of governmental agencies like the MMS. While offering a sociological interpretation of economic growth and development in these areas, the authors readily agree that governmental agencies repeatedly overlook the sociological perspective. Their book is adaptable to a wide audience and should be read by all governmental agencies, not just those directly involved with oil drilling, in order to sensitize them to the importance of the human condition when affected by technology. Freudenburg and Gramling give a factual and lively account of OCS drilling in northern California and western Louisiana, keeping a wide range of readers both interested and informed. As members of a university environment exposed to differing opinions and facts, we feel that Freudenburg and Gramling's book is an important tool for classes seeking to understand contemporary environmental issues.

Meetings

The Society for Human Ecology will hold its Eighth International Conference on *Livelihood & Liveability,* October 19-20, 1995, at the Granlibakken Conference Center at Lake Tahoe, Tahoe City, CA. For further information contact: Nancy Markee (702) 784-1674.

A conference on *Environmental Enhancement Through Agriculture* will be held in Boston, MA, Nov. 15-17, 1995. It is being organized by Tufts University, Center for Agriculture, Food & Environment, the American Farmland Trust, and the Henry A. Wallace Institute for Alternative Agriculture. This conference will examine how agriculture can contribute positively to the environment while remaining productive and profitable. The goal is to foster strategies that go beyond merely reducing the damage that agriculture imposes on the environment. The conference will show how appropriately managed farms can do more than that, actually enhancing the environment in important ways. For more information, contact: <WLockeretz@Infonet.Tufts.edu>