
Howe, Charles W., and Jeffrey W. Jacobs. “U.S. Water Services Privatization.” The Water Report, no. 12 (2005). The issue of privatizing social services like potable water supply and waste water treatment remains highly controversial. “Privatizing” can stand for many levels of public-private collaboration, from the “outsourcing” of meter reading and other auxiliary services to the operation and maintenance of a publicly owned system, and, finally, to the outright sale of the water system assets to a private company. Most current privatizing takes the form of contractual operation and maintenance of publicly owned systems. Privatization at one level or another can promise several advantages for towns: the large companies that seek contracts for operation and maintenance have capital resources often lacking in the city. Many urban utilities have large backlogs of maintenance but an inadequate tax base to catch up. The large water companies have engineering and administrative skills possibly not present in the urban utility staffs. Private companies have been successful in consolidating smaller systems to take advantage of scale economies. In cases where the sale of utility assets is under consideration, the private firms (often foreign owned) can offer substantial “up front” cash payments. Private ownership places the water utility under the supervision of the state public utilities commission, partially relieving the city government of oversight responsibility (political responsibility for results is never escaped). So there are situations in the U.S. where consideration of some degree of privatization is sensible. However, there are cautionary considerations on both sides of privatization. The city and its citizens fear loss of control, especially in situations where the system breaks down. Impacts on the local workforce are a matter of concern, as are concerns about maintenance of the watershed and the provision of services frequently provided by the water utility (chemical testing, vehicle maintenance). Writing contracts with adequate safeguards is complex. On the private company’s side, there are problems of competing for complex contracts with no guarantee of success. Some cities have cancelled contracts while others have requested competitive bids to stimulate improved performance of their utility with little intent of actually privatizing. Privatization in Third World settings raises other difficult issues of equity and performance guarantees.

Howe, Charles W. “The Functions, Impacts and Effectiveness of Water Pricing: Evidence from the United States and Canada.” International Journal of Water Resources Development 21, no. 1 (2005). There are several types of numbers that are commonly
referred to as “the price of water.” Among them would be contractual prices between an irrigation district and its customers, but these “prices” might be on a volumetric basis, on an acreage basis, or in the form of periodic payments over many years. At times, water service is paid for through real estate taxes. In many cases, the most relevant prices are reflected in active water markets through which water can be transferred from one large scale user to another. In cities, individual users typically pay according to a rate structure that depends on the volume of water used. Each of these prices serves some function: an unchanging contractual price may be important in figuring a farm budget but irrelevant to the farmer’s decision about crops, acreage, and irrigation intensity. Payment through real estate taxes is important in determining the budget of the taxing water district and the budgets of the farmers paying the taxes but will be relevant only to the farmer’s decision whether or not to stay in business and not to planting and acreage decisions. Thus there are different prices, depending on the type of water service being provided and the decision being made. The “behaviorally relevant” price is the price that an economically rational water user will compare with their marginal benefits when faced with a decision on water use or a water-related investment. Urban water users are typically faced with a rate structure in which the marginal price increases with the (monthly) volume of use, reflecting the increased costs imposed on the water provider by the customer’s use. In most agricultural settings, market prices are the most relevant to both short-run decisions on how much water to use and longer run decisions to remain in business. Prices historically set by irrigation districts are irrelevant to most decisions.

**Hunter, Lori M.,** and Michael B. Toney. “Religion and Attitudes toward the Environment: A Comparison of Mormons and the General U.S. Population.” *The Social Science Journal* 42, no. 1 (2005): 25-38. Religion has been shown to influence attitudes toward an array of social issues. This manuscript focuses specifically on environmental issues, with empirical examination of the distinctiveness of contemporary Mormon environmental perspectives as contrasted with the general U.S. population. A belief in the importance of dominion over the environment is noted, by some, to be reflected in anti-environmental stance characterizing Mormon Culture Region political leaders and church members [Foltz, R. C. (2000). Mormon values and the Utah environment. *Worldviews: Environment, Culture, Religion*, 4, 1–19]. Yet, a set of highly regarded essays by a diverse group of Mormons, including some in church leadership positions, expresses strong personal commitments to environmental causes and point to Mormon teachings and doctrines promoting environmentalism (Williams, Smith, and Gibbs, 1998). The authors examine variation in environmental concern as expressed by Mormons in a local community survey undertaken in Logan, Utah as contrasted with the nationally-representative General Social Survey (1993). The authors find substantial differences between Mormons and the national sample; while Mormons tended to express greater levels of environmental concern, they were less likely to have undertaken specific behaviors reflective of such concern.

**Natural Hazards Center**

**Jeannette Sutton** participated in a seminar on the South Asian tsunami on the Boulder campus January 26. The panel was composed of CU faculty members with expertise in earthquakes and tsunamis, the sociology of disasters, and the various cultures and politics of the Indian Ocean region. Jeannette discussed warning systems and the need to include public education in the design of effective systems.

Program Activities continue on page 4
Bernardo Mueller, Visiting Scholar with the Environment and Behavior Research Program for the academic year of 2004-2005, is an Assistant Professor in the Department of Economics at the University of Brasilia, Brazil. He received a B.A. in Economics from the University of Brasilia in 1987 and a Ph.D. in Economics from the University of Illinois in 1994.

In 1994 I was completing my Ph.D. at the University of Illinois at Champaign-Urbana when my advisor Lee Alston (current director of the Program on Environment and Behavior at IBS) moved to Boulder to spend a sabbatical leave at the CU Department of Economics. As I was in the final stages of writing my dissertation and was also the research assistant for a large project Lee was initiating on property rights for land in the Amazon, I accepted his invitation to spend the last six months of my doctorate in Boulder. During those six months I was so enchanted with this town and the University of Colorado that I had always hoped to somehow come back. Ever since my return to Brazil in 1995 I have been regularly collaborating with Lee, so that when he took his position at IBS in 2002 there was no doubt as to where I would spend my first sabbatical year (August 2004 to July 2005). The first six months as a visiting scholar at IBS have been a very productive time (including learning how to ski and having my two children, ages 2 and 4, now speaking English).

The common element in the several areas of research that I have been pursuing is the incorporation of institutions to the standard instruments of economic theory. Together with Lee Alston and Gary Libecap (University of Arizona) I use this tool kit to analyze the effect of insecure property rights in the Brazilian Amazon and on land reform policy in Brazil as a whole. In our book Titles, Conflict and Land Use: The Development of Property Rights and Land Reform on the Brazilian Amazon Frontier (1999) we show how increased deforestation results from the attempt of land claimants to strengthen their property rights. We also model and test the interaction between landless peasants, landowners, and the government to show how land reform policy in Brazil generates more, rather than less, rural conflict. The landless peasants base their strategy of invading unproductive land on the constitutional requirement that land fulfill its “social function.” Landowners, in turn, invoke the civil code that upholds the sanctity of private property to appeal to the courts to have the landless removed. This incompatibility of the laws weakens property rights as there is no arbitrating mechanism. The situation gets resolved by the government stepping in and expropriating the land from the farmer (with compensation) and settling the peasants as part of the land reform program. Because there are more landless than the government’s capacity to settle, it is those groups that create the greatest commotion through invasion and conflict that get settled first. Thus the more land reform that gets done, the greater the incentive for further invasions and more conflict ensues.

We show…that in Brazil the strong presidential powers, coupled with a series of institutional checks, provide incentives for the president to pursue national interest and responsible macroeconomic policy together with the instruments to achieve those goals at low costs.
Another recent area of research (also with Alston) has been the study of executive-legislative relations in Brazil. Brazil, as is the case with several other Latin American countries, has a presidential system that grants very strong powers to the president vis-à-vis other political actors. The literature has generally considered this as a negative characteristic, evoking visions of past Latin American dictators. We show, however, that in Brazil the strong presidential powers, coupled with a series of institutional checks, provides incentives for the president to pursue national interest and responsible macroeconomic policy together with the instruments to achieve those goals at low costs. In addition to this study we have just completed a broader project on political institutions in Brazil for the Inter-American Development Bank called *Political Institutions, Policymaking Processes and Policy Outcomes in Brazil*.

Finally, I have an interest in environmental economics, mostly in the area of property rights to natural resources and environmental regulation. I am currently associate editor of *Environment and Development Economics*, a journal that focuses on environmental issues in developing countries.

**PROGRAM ACTIVITIES**

Greg Guibert and Kathleen Tierney represented the Natural Hazards Center at the UN Conference of World Disaster Reduction in Kobe, Japan. The week-long gathering of government delegates, NGO representatives, activists, and donors highlighted the pressing need to integrate comprehensive natural hazard planning into the development process. Just three weeks after the South Asian tsunami, a number of thematic sessions were devoted to examining specific issues of recovery and response. Other featured topics included climate change and disasters, women and social vulnerability, and effective public education. Tierney gave a presentation entitled, “Response, Recovery, and Resilience.” While in Kobe she also participated in the First International Conference on Urban Disaster Reduction.

Kathleen Tierney spoke about her research on disasters (earthquakes, hurricanes, and terrorist attacks) February 10 at the CU Boulder Koenig Alumni Association. Her talk “The Truth about Homeland Security” was part of the Newsworthy@CU series sponsored by the CU Alumni Association.

**POLITICAL AND ECONOMIC CHANGE PROGRAM**

John O’Loughlin and Lynn Staeheli are organizing a conference for the Political Geography Specialty Group of the American Association of Geographers (AAG) that will be held at the University of Colorado, April 3-5, immediately prior to the annual meetings of the AAG. This year’s theme, “Political Geography: Retrospect and Prospect” is in recognition of the 25th year of the journal, *Political Geography*, a publication which has changed quite dramatically since the time when the original editorial board posed a research agenda for the sub-discipline. The conference will offer an opportunity to reflect on what political geography has—and has not—achieved in the intervening years. The conference, sponsored by the Institute of Behavioral Science, the Council on Research and Creative Work, the College of Arts and Sciences, and Elsevier Science Publishers and held in conjunction with a similar conference organized by the Developing Areas Specialty Group, will include some joint sessions and events.
UPCOMING COLLOQUIA

Please refer to the following webpage for the IBS colloquia schedules: http://www.colorado.edu/ibs/events/colloquia.html.

RESEARCH PROPOSALS SUBMITTED

Environment and Behavior Program

Alston, Lee
On the Road to Good Governance? Political Institutions and Policy Outcomes in Brazil, 1988-2004
NSF 07/01/05-06/30/08 New $636,428

Flores, Nicholas
Collaborative Research: Household and Community Response to Wildfire Risk: Social and Landscape Dynamics
NSF 07/01/05-06/30/08 New $243,444

Environment and Behavior Program and Political and Economic Change Program

Mobarak, Mushfiq
The Politics of Watersharing, Water Pollution, and Decentralized Management: Evidence from Brazil
NSF 07/01/05-06/30/07 New $189,271

Mobarak, Mushfiq
Socio-biological Tradeoffs of Consanguinity in an Arranged Marriage Market
(Khan, Nizam, Co-PI) NSF 12/01/05-11/30/08 New $519,779

Health Behavior Program

Jessor, Richard
The National Longitudinal Study of Adolescent Health
(as Co-PI to John Hewitt, IBG) NIH 11/01/05-10/31/10 New $920,252

Political and Economic Change Program

Brown, David
Backlash in the Backlands?: The Brazilian Landless Peasant Movement and Its Electoral Impact
NSF 09/01/05-08/31/07 New $291,315

Greenberg, Edward
Work-Family Conflict: Measures, Models, and Evaluation
NIH 07/01/05-06/30/08 New $1,101,092

Population Processes Program

Menken, Jane
Bangladesh Health and Socioeconomic Survey
(Kuhn, Randall and Khan, Nizam, Co-PIs) NIH via Harvard University 12/01/05-11/30/10 New $457,265

Rogers, Andrei
Doctoral Dissertation Research: Religion and Demography in the United States
(Jordan, Lisa, Co-PI) NSF 01/01/05-12/31/05 New $1,789

Rogers, Richard
NICHD Population Center
NICHD 07/01/05-06/30/10 New $1,080,916

Research Proposals Submitted continues on page 6
## RESEARCH PROPOSALS SUBMITTED
*continued from page 5*

### Problem Behavior Program

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<td>Elliott, Delbert</td>
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## RESEARCH PROPOSALS AWARDED

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Jane A. Menken, Institute Director

**Research Program on Environment and Behavior**
Lee J. Alston, Director
Natural Hazards Research and Applications Information Center
Kathleen Tierney, Director

**Research Program on Health Behavior**
Richard Jessor, Director

**Research Program on Political and Economic Change**
Edward S. Greenberg, Director

**Research Program on Population Processes**
Richard G. Rogers, Director
Population Aging Center
Jane A. Menken, Director

**Research Program on Problem Behavior**
Terence P. Thornberry, Director
Center for the Study and Prevention of Violence
Delbert S. Elliott, Director

**Computing and Research Services**
Jani S. Little, Director

**IBS Newsletter Staff:**
Barbara McLean and Marcia Richardson, Co-editors
Sean Blackburn and Thomas Dickinson, Website Coordinators
The Institute of Behavioral Science (IBS) is a research institute within the Graduate School of the University of Colorado, Boulder. Since its establishment in 1957, it has provided a setting for interdisciplinary, collaborative research on problems of societal concern. By engaging faculty from all the social and behavioral sciences at the University of Colorado, Boulder, IBS encourages work that transcends disciplinary boundaries, that illuminates the complexity of social behavior and social life, and that has important implications for social policy.

IBS is organized into five research programs, each defined by an interdisciplinary area of research and directed by a senior research scientist. Three programs have centers which specialize in research topics consistent with the broader goals of the Program. Computing and Research Services provides computing and information technology services for IBS research activities.

IBS Director, Jane Menken

Five Research Programs and Three Centers with Computing and Research Services Support:

- Environment and Behavior – Lee J. Alston, Director
  - Natural Hazards Center - Kathleen Tierney, Director
- Health Behavior - Richard Jessor, Director
- Political and Economic Change - Edward S. Greenberg, Director
- Population Processes - Richard G. Rogers, Director
  - Population Aging Center - Jane A. Menken, Director
- Problem Behavior - Terence P. Thornberry, Director
  - Center for the Study and Prevention of Violence - Delbert S. Elliott, Director
- Computing and Research Services - Jani S. Little, Director

Two Graduate Training Certificate Programs:
- Interdepartmental Program in Demography - Andrei Rogers, Director
- Program in Applied Behavioral Science - Edward S. Greenberg, Director

Departments Represented: Anthropology, Economics, Geography, Law, Pediatrics, Political Science, Psychology, and Sociology

Summary of Extra-Mural Support as of February 1, 2005:
Number of Grants in Force: 44
Total Amount of Grants in Force: $29,645,538

Fiscal Year Expenditures:

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Sources of Extra-Mural Support: National Science Foundation; National Institutes of Health (National Institute on Aging; National Institute on Alcohol Abuse and Alcoholism; National Institute on Child Health and Human Development; National Institute of Drug Abuse; National Institute of Mental Health); Office of Behavioral and Social Science Research; National Park Service; National Oceanic and Atmospheric Administration; Department of the Navy; Department of Justice; Office of Juvenile Justice and Delinquency Prevention; State of Colorado; Colorado Trust; San Diego State University; Public Entity Risk Institute; Department of Agriculture; Desert Research Institute; Andrew W. Mellon Foundation; City of Boulder; U.S. Army Corps of Engineers; Centers for Disease Control and Prevention; U.S. Department of Transportation; U.S. Environmental Protection Agency; Federal Emergency Management Agency; U.S. Forest Service; U.S. Geological Survey; National Aeronautics and Space Administration.

Personnel Summary:

| Faculty: 37 | Graduate Research Assistants: 15 |
| Research Associates: 19 | Graduate Student Advisees: 15 |
| Professional Research Assistants: 24 | Undergraduate Student Assistants: 17 |
| Classified Staff: 20 | Visiting Research Faculty: 1 |
| Research Professor: 1 | |

Physical Facilities:

| Buildings: 10 | Assignable Square Feet: 31,759 |