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INSTITUTE OF BEHAVIORAL SCIENCE ■

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UNIVERSITY OF COLORADO

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## NEWSLETTER

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### PROGRAM ACTIVITIES

#### ENVIRONMENT AND SOCIETY PROGRAM

The Environment and Society Program and the Natural Hazards Center welcome **RoseMarie Perez Foster** as a visiting scholar. Dr. Foster is a research and clinical psychologist with previous appointments at the New York University School of Social Work and New York University School of Medicine, Department of Psychiatry. Her research has focused on immigrant mental health and the interface between pre-migration traumatic exposures and host country adjustment. Currently she is investigating the impact of long-term post disaster psychological sequelae of Chernobyl disaster survivors from the former Soviet Union. She is on the international roster of Fulbright senior specialists in mental health and a recipient of the Frantz Fanon Award for contributions to immigrant mental health and racial issues literature.

#### In Print

**Howe, Charles W.** and John Howe. "The Performance of Water Service Industry Stock Prices and Sensitivity to Highly Publicized Contract Failures." *Water International*, Volume 31, No 4 (2007). In this article on certain aspects of the privatization issue, the authors who are father, Charles, and son, the Missouri Bankers' endowed chair of finance at the University of Missouri-Columbia, first show that an investment in a portfolio of stocks of companies involved in the privatization of urban water utilities would have paid off very nicely from 2001, gaining roughly fifty percent over the period. One can interpret this as an indication of success of the privatization process, at least from an investor's point of view. However, there have been two spectacular failures that have received widespread publicity: the cancellation of a private management contract in Cochabamba, Bolivia in 2000 following violent public demonstrations against privatization with its large price increases; and the cancellation in 2003 of a twenty-year privatization contract with Atlanta following assertions of poor maintenance and poor customer service. While each event momentarily depressed the index of stock prices, "event analyses" of the changes showed they were not significant statistically. These cases suggest the idiosyncratic nature of even these major events and that firms in the risky water service industry should build such possibilities into their planning.

**Howe, Charles W.** "Some Suggestions for Reducing Surface Water/Groundwater Conflicts in the South Platte: Water Law and Economics." *Colorado Water* 24, no. 5 (2007): 6-8. Colorado newspapers have been full of stories about the shutdown of a large number of irrigation wells in 2006 and 2007 in the South Platte Valley, and the subsequent distress as farms and related businesses have had to shut down. While these shutdowns were in keeping with Colorado water law and court decisions of the past several years, it is legitimate to ask if the shutdowns make economic sense, and if not, why there should be such a conflict between water law and the economics of how we use

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our water resources. Are such conflicts likely to increase as pressure on our rivers increases? The author provides background and suggested strategies.

**Hunter, Lori M., Wayne Twine, and Laura Patterson.** “‘Locusts are Now Our Beef’: Adult Mortality and Household Dietary Use of Local Environmental Resources in Rural South Africa.” *Scandinavian Journal of Public Health* 35, no. 3 (2007): 165-174. There is currently a lack of research on the association between demographic dynamics and household use of natural resources in rural Africa. Such work is important because in rural Africa natural resources buffer households against shocks, offering both sustenance and income-generating potential. The article focuses on adult mortality as a household shock, examining use of local environmental resources as related to household dietary needs. The authors analyze two sources of data collected during May-December 2004 in the MRC/Wits Rural Public Health and Health Transitions Research Unit (Agincourt) in rural South Africa. Quantitative analyses use survey data from 240 households, stratified by adult mortality experience. Qualitative data are based on thirty-one interviews with members of households having recently experienced adult mortality. The interviews provide insight into a variety of household-level mortality impacts and also suggest the importance of proximate resources in the maintenance of food security following the loss of an adult household member. Quantitatively, there are significant differences, both in patterns of usage of the natural environment and in levels of food security, between households that have lost an adult and those that have not. The association between mortality and household use of local environmental resources is further shaped by the gender of the deceased and the time elapsed since the death. The authors concluded that adult mortality, particularly the death of a male wage-earner, affects household food security. Time allocation is affected as resource collection responsibilities shift, and wild foods may substitute for previously purchased goods.

Kirkland, Tracy, **Lori M. Hunter, and Wayne Twine.** “‘The Bush is No More’: Insights on Institutional Change and Natural Resource Availability in Rural South Africa.” *Society & Natural Resources* 20, no. 4 (2007): 337-350. The past decade has brought substantial transition to South Africa. The introduction of democracy in 1994 has yielded important political and socioeconomic transformations affecting millions of people. The authors explore the impact of institutional and structural changes on the availability and management of fuelwood, a key natural resource in rural South Africa. As in other developing regions, many households depend on natural resources for both sustenance and energy needs. Drawing on qualitative data from thirty-two interviews, the author’s objective is to describe, from the perspective of the respondents, (1) resource scarcity, (2) the underlying causes of resource scarcity, (3) the role of traditional authority in managing resources, and (4) strategies used by community members in the face of resource scarcity. The results have important implications for the well-being of both social and natural systems in many transitional and rural developing societies.

### Working Papers

<http://www.colorado.edu/ibs/es/pubs/wp.html>

**Hunter, Lori M., Susan Strife, and Wayne Twine.** “Environmental Perceptions of Rural South African Residents: The Complex Nature of a Post-Material Concern.” (EB2007-0001). The state of the local environment shapes the well-being of millions of rural residents in developing nations. Still, we know little of these individuals’ environmental perceptions. This study presents analyses of survey data collected in an

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## IN FOCUS

## Social Mobility, Well-being, and Development in Latin America



Fernando Riosmena  
IBS Faculty  
Population Program

**In particular, I am interested in the role of informal economic participation in migration decisions, given the importance of the latter in many developing countries and as the opportunity costs of migration might be lower for those in jobs without basic benefits...**

*Fernando Riosmena recently joined the University of Colorado as a member of the IBS Faculty in the Population Program and Assistant Professor in the Department of Geography. After receiving a B.A. in Marketing in 2000 from the Monterrey Institute of Technology in Guadalajara, he attended the University of Pennsylvania where he received his M.A. in 2000 and a Ph.D. in 2005 in Demography. He held post-doctoral fellowship positions with the Population Program of the International Institute for Applied Systems Analysis (Laxenburg, Austria) and the Center for Demography and Ecology, University of Wisconsin-Madison.*

My research interests intersect the fields of formal and social demography with an emphasis on how demographic processes are associated with social mobility, well-being, and development in Latin American societies and immigrant communities from said region in the United States. I have done work on the formal demography of (labor) migration, the role of social ties and their legal status in explaining inter-country differences in U.S. migration dynamics in Latin America, and the association between migration and other life course events.

In my doctoral dissertation, I studied the three aforementioned issues in the context of Latin America – United States migration dynamics. First, using a parity-duration formal demographic model, I assessed how the likelihood that a Mexican male would engage in U.S.-bound or return migration trips has changed through time, emphasizing the differences in migration dynamics between traditional and non-traditional origins. Mexicans from traditional origins have engaged in fewer but longer trips in more recent times. On the other hand, people from non-traditional origins evinced later-fewer-longer trips and thus quite distinctive dynamics, a topic worthy of further research. Second, I compared the out- and return migration dynamics of Mexicans, Puerto Ricans, Dominicans, Nicaraguans, and Costa Ricans. Cross-country differentials in U.S.-bound migration were mostly explained by differential access to social ties with migration experience (including relatives with permanent legal residence), while cross-country differentials in trip durations were just partially accounted by differences in access to legal documents and the underlying within-family gender and generational dynamics in each country, thus challenging a mere cultural-cum-familial explanation. Finally, I analyzed how the association between U.S. migration and marriage varies across socioeconomic settings for various cohorts of Mexican males. While people were slightly more likely to become U.S. migrants while single rather than married, this gradient was most conspicuous in industrializing communities with more economic opportunities (including those for females in manufacturing) while it was less sharp in traditional rural areas with lesser economic opportunities and, possibly dual-earner households and better access to housing and credit markets. While spending the 2005-06 academic year in the World

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Population Program at the International Institute for Applied Systems Analysis (Laxenburg, Austria) as a Luis Donaldo Colosio Research Fellow, I started an ongoing project devoted to the study of the role of population dynamics, including those already imprinted in the age structure, in human capital accumulation in Mexico and its future prospects at the regional level. I also collaborated on a project at the Vienna Institute of Demography that focused on the role of election policies in shaping the age structure of academies of science in Europe while studying the mathematics of these populations under different policy constraints. During my fellowship at the University of Wisconsin, I began a collaboration with Alberto Palloni from the University of Wisconsin and Rebeca Wong from the University of Maryland, studying the health conditions of adults in Latin America and how these conditions relate to the Hispanic health paradox in the United States.

I plan to continue my work on issues of migration and health, the interrelation of migration, the life course, and SES conditions in origin, as well as population dynamics and aging. I will also be developing a CU Population Center-sponsored project entitled “Evaluating the SES Health Gradients of Mexicans, the Migration Selection and Acculturation Hypotheses, and the SES Health Gradients of Mexicans Using Clinically-Reported Measures” that will be based on the combination of nationally representative data in both Mexico and the United States and looks at the association of clinically- and self-reported health measures in light of the Hispanic paradox. The project will include studying how migration transitions in different stages of the life course differ according to socioeconomic conditions in origins. In particular, I am interested in the role of informal economic participation in migration decisions, given the importance of the latter in many developing countries and as the opportunity costs of migration might be lower for those in jobs without basic benefits, among other reasons. Finally, as many people hold these types of jobs and in light of impending population aging, I plan to study the potential evolution of the labor force in Latin America while considering how rates of transition in and out of the formal economy might affect different types of pension and health care systems. I look forward to collaborating with IBS and CU faculty.

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impoverished, rural region in the northeast of South Africa, with the aim of better understanding the socio-economic-demographic factors that shape concern with local environmental issues. The authors make use of the Post-materialist Thesis to theoretically explore the foundation of environmental concern, with the results revealing the importance of both cultural and physical context. Also, gendered interaction with natural resources shapes perceptions, as do local resource constraints. Both theoretical and policy implications are discussed.

### Natural Hazards Center

Leysia Palen, Sarah Vieweg, **Jeannette Sutton**, Amanda Hughes, and **Sophia Liu** presented their paper, “Crisis Informatics: Studying Disaster in a Networked World,” at the Third International Conference on E-Social Science in Ann Arbor, MI, October 7-9. They argued that serious crises and disasters have micro and macro sociological arrangements that differ from routine situations, as the field of disaster studies has described over its one hundred year history. With increasingly pervasive information and

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communications technology (ICT) and a changing political arena where terrorism is perceived as a major threat, the attention to crisis is high. Some of these new features of social life have created real change in the sociology of disaster that we are only beginning to understand. However, much of what might seem to be new is not; rather ICT makes some behaviors more visible, in particular first response and altruistic activities. With each new crisis event, the calls for technological solutions and policy change come fast and furious, often in absence of empirical research. Their lab is establishing an area of sociologically informed research and ICT development that they call “crisis informatics.” They report on some of the challenges and findings when conducting empirical studies where the subject of attention is dispersed, emergent and increasingly expanding through on-line arenas. They specifically consider the challenge of studying citizen-side information generation and dissemination activities during the April 16, 2007 crisis at Virginia Tech, which they have investigated both on-site and on-line.

**Christine Bevc** presented her paper, “Working Together: A Social Network Comparison of Interactions Within Urban Area Security Initiative Regions,” as part of a workshop on Computational Methods for Dynamic Interaction Networks sponsored by the Center for Discrete Mathematics and Theoretical Computer Science at Rutgers University, September 24. The paper identifies similarities across multiple social networks to better understand local preparedness in urban areas around the country.

The center welcomes new two new graduate research students. **Brandi Gilbert** is a PhD student in the Department of Sociology at CU. She is currently working on the center’s Bay Area Disaster Preparedness Initiative. Her research interests are the role of educational, community, and religious organizations in disaster preparedness and recovery initiatives. **Alexandra (Ali) Jordan** is also a graduate student in the Department of Sociology’s PhD program. She earned her bachelor’s degree in political science, with an emphasis on terrorism and genocide, at the University of Southern California. Before coming to CU, Jordan worked for the U.S. Senate Sergeant at Arms Office of Security and Emergency Preparedness as a government contractor. She is currently working on the center’s Consortium for the Study of Terrorism and Response to Terrorism (START) project. Ali is also interested in perceptions of risk, community resilience, terrorism, and using GIS as a tool for analysis in disaster research.

Also new to the Natural Hazards Center is **Liesel A. Ritchie** who holds joint appointments with the center and the Evaluation Center at Western Michigan University. Her dissertation on social impacts of the 1989 Exxon Valdez oil spill was the first study to examine the relationship between technological disasters and social capital. In 2005, she spearheaded efforts to establish an American Evaluation Association topical interest group on Disaster and Emergency Management Evaluation and is currently chair of that group. Liesel is currently studying tsunami awareness and preparedness in Alaska through a National Science Foundation grant. She recently led a study of three New Orleans communities hit by tornadoes in February 2007, and has also been involved with evaluation of long-term recovery organization responses to disasters, as well as studies of social impacts of Hurricane Katrina. She will be working on the center’s Bay Area Disaster Preparedness Initiative project.

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### POPULATION PROGRAM

Population Program graduate students actively participated in this year's Southern Demographic Association's annual meeting held from October 11-13 in Birmingham, Alabama. **Justin Denney** presented "Forecasting Adult Survival," **Jeff Dennis** presented "Race Characteristics of Health Care Use and Delay of Medical Care: The Effects of Sex, Race, Ethnicity and Marital Status," and **Bethany Everett** presented "Trends in Educational Attainment by Sex, Race/Ethnicity, and Nativity in the United States, 1989-2005." The presentations were insightful and well received. The Graduate School, Population Program, and individual grants generously provided travel support.

### Working Papers

<http://www.colorado.edu/ibs/pop/pubs/wp.html>

**Rogers, Andrei** and **Bryan Jones**. "Inferring Directional Migration Propensities from the Migration Propensities of Infants: The United States." (POP2007-04). Beginning with the 2010 decennial census, the U.S. Census Bureau plans to drop its long-form questionnaire and to replace it with the American Community Survey (ACS). The resulting absence of the larger sample provided by the census count will complicate the measurement and analysis of internal migration flows. Additionally, the strategy of averaging accumulated samples over time will mix changing migration patterns. The migration question will refer to a one-year time interval instead of the five-year interval used in the censuses between 1960 and 2000, complicating historical comparisons and the production of multiregional projections based on five-year age groups. Consequently, students of territorial mobility increasingly will find it necessary to complement or augment possibly inadequate data collected on migration with estimates obtained by means of indirect estimation. This paper expands upon a method, previously tested on American, Mexican, and Indonesian data, which allows one to infer age-specific directional migration propensities at the regional level. The method uses birthplace-specific infant population data to approximate infant migration propensities, and from these infers the migration propensities of all other ages. The method is applied at both a four and nine division spatial scale.

**Reniers, Georges**, Tekebash Araya, Yemane Berhane, Gail Davey, and Eduard J. Sanders. "Disclosure of HIV Test Results and Non-response Bias in Seroprevalence Surveys." (POP2007-05 & PAC2007-01). The authors aim to investigate the effect of different study protocols with respect to the disclosure of HIV test results on non-response bias in HIV prevalence estimates. They conducted a nine-month surveillance of hospital admissions in Addis Ababa in which patients were approached for an HIV test. Patients had the choice between three consent levels: testing and post-test counseling (level A), testing without post-test counseling (level B), and total refusal (level C). For all patients, information was collected on basic sociodemographic background characteristics and admission diagnosis. That information is used to predict HIV status in those who refuse testing. The authors first investigate the covariates of different levels of consent and then quantify bias in HIV prevalence estimates due to refusal for testing via Heckman regression models that account for sample selection. They found that refusal positively correlates with the likelihood of infection and that non-response bias in HIV prevalence surveys depends on the study protocol: if disclosure of HIV status is implied in study participation, the bias is likely to be much larger than in a scenario where

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respondents can opt out of post-test counseling. They also found that consent for testing increased since the introduction of antiretroviral therapy in Ethiopia. Other covariates of refusal are age, gender, marital status, educational status, and success of counselors in obtaining consent. Disclosure or non-disclosure of test results is an important consideration in studies that wish to minimize non-response bias in HIV prevalence surveys. The availability of antiretroviral therapy is likely to reduce refusal rates.

**Williams, Jill R., Enid J. Schatz, Benjamin D. Clark, Mark A. Collinson, Samuel J. Clark, Jane Menken, Kathleen Kahn, Stephen M. Tollman.** “Linking Research and Training through Research Data and Transnational Collaborations.” (POP2007-06 & PAC2007-02). A growing number of schools of public health are connected to Health and Demographic Surveillance System (HDSS) field sites in developing countries. These sites collect longitudinal health and demographic data, providing information of considerable use for health program and policy evaluation. Linking training programs with HDSS sites provides important opportunities - and challenges - for students to learn first-hand about health in the populations they intend to serve. This case study describes efforts to overcome the barriers to linking research and training by making HDSS data more accessible and providing intensive training focused on using HDSS data. Specifically, the authors discuss the development of a ten percent sample training database from the Agincourt Health and Demographic Surveillance System in rural northeast South Africa, run by the University of the Witwatersrand School of Public Health. Further, they outline the components of a concordant transnational intensive short course on longitudinal data analysis offered at the University of Colorado at Boulder in 2006 and 2007. Early results from this collaborative effort demonstrate that this program has the potential to improve student research, link students to an international network of scholars, and increase student retention and matriculation. Importantly, the model developed is one that can be adapted to other partnerships between schools of public health and health and demographic research field sites.

**Everett, Bethany G., Richard G. Rogers, Patrick M. Krueger, and Robert A. Hummer.** “Trends in Educational Attainment by Sex, Race/Ethnicity, and Nativity in the United States, 1989-2005.” (POP2007-07). Trends in education are particularly significant because they affect individual life choices and chances. Yet surprisingly few studies have examined differences in educational attainment by detailed demographic subpopulations in recent years. This research documents trends in education by age, sex, race/ethnicity, and nativity between 1989 and 2005 to gain a better understanding of how disparities in education have changed over time. The authors employed the 1989-2005 National Health Interview Surveys (n=1,054,062) and found that among individuals aged twenty-four to forty-four in 2005, foreign-born Mexican American men obtained just 9.5 years of education whereas comparable women had 9.8 years, and foreign-born Cuban American men had 13.2 years of education whereas comparable women had 13.7 years. Also shown were increases in education for all race/ethnic groups over time with the most substantial gains among Hispanic subpopulations. The authors conclude that the results provide insight into trends in education, highlight the value of disaggregating educational attainment levels by demographic subpopulations, and can aid researchers and policymakers in identifying vulnerable populations.

Raymer, James and **Andrei Rogers.** “The American Community Survey’s Interstate Migration Data: Strategies for Smoothing Irregular Age Patterns.” (POP2007-08). Age-

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and origin-destination-specific flows obtained from population samples often contain irregularities. The reason for this has mostly to do with the fact that migrations are relatively rare events. Biases in the analysis of migration flows can arise if these irregularities are not corrected for. Furthermore, accurate migration data are needed to understand population change and migration behavior. The authors illustrate some typical examples of age-specific migration flows with irregular patterns using the 2000-2005 American Community Survey (ACS) data. They demonstrate how model migration schedules, log-linear models or a combination of both can be used to smooth the irregularities. The age-specific interstate migration flows observed in the U.S. West Region during 1995-2000, obtained from the five percent Public Use Microdata Sample (PUMS) of the 2000 Census long-form questionnaire, are used to demonstrate the effectiveness of these models. Because they have the corresponding full sample census data, the accuracy of the various smoothed estimates can be assessed. The models are then applied to smooth 2004 ACS migration flow data which represents a “worse case” type scenario. The results clearly show that more accurate and believable migration data can be provided by applying models to smooth the irregularities in the age patterns caused by relatively small samples.

## BITS AND BYTES FROM CRS

*Computing and Research Services*

CRS welcomes **James Hammond** as the newest member of the computer support team starting in August.

CRS also has a new email address for support requests. Please use the new address, [ibssupport@colorado.edu](mailto:ibssupport@colorado.edu), to contact Gabe and James. They can still be reached at 303-492-2148, however, email is preferred.

## IN THE NEWS

The Office of News Services of the University of Colorado featured David Miklowitz, Problem Behavior faculty research associate, for a new study he will be leading. The news release “CU Professor To Study Effectiveness Of Treating Children At Risk For Bipolar Disorder” discusses his bipolar disorder research and can be heard at [www.colorado.edu/news/podcasts/](http://www.colorado.edu/news/podcasts/). The entire news release can be read at [www.colorado.edu/ibs/news/include/images/pb\\_070904\\_miklowitz.pdf](http://www.colorado.edu/ibs/news/include/images/pb_070904_miklowitz.pdf).

## UPCOMING COLLOQUIA

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

## RESEARCH PROPOSALS SUBMITTED

### Population Program

Downey, Liam	Exploring Micro-level Sources of Environmental Inequality NICHD	07/01/08-06/30/10	New	\$376,320
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## RESEARCH PROPOSALS AWARDED

### Environment and Society Program

Tierney, Kathleen	Bay Area Disaster Preparedness Initiative Fritz Institute	04/15/07-04/14/09	New	\$360,069
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Jane A. Menken, Institute Director

#### Environment and Society Program

Lee J. Alston, Director  
Natural Hazards Center  
Kathleen Tierney, Director

#### Health and Society Program

Richard Jessor, Director

#### Political and Economic Change Program

Edward S. Greenberg, Director

#### Population Program

Richard G. Rogers, Director  
CU Population Center  
Richard G. Rogers, Director

#### Population Aging Center

Jane A. Menken, Director

#### Problem Behavior Program

Terence P. Thornberry, Director  
Center for the Study and Prevention of Violence  
Delbert S. Elliott, Director

#### Computing and Research Services

Jani S. Little, Director

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Melissa McNabb and Marcia Richardson, Co-editors  
Nancy Thorwardson and Thomas Dickinson, Website Coordinators