

Geographers Interacting with Colleagues from Other Disciplines

One of the recommendations in the 1997 National Research Council Report, *Rediscovering Geography*, was to place a high priority on increasing professional interaction between geographers and colleagues in other sciences. Although our numbers are growing, geography remains a relatively small and diverse discipline, but with much to contribute once our expertise and skills are made known to those outside geography. Many of us were reminded of this when the August 12, 2005 issue of *Science* was released with a feature section on "Dealing with Disasters." Unfortunately, the seminal work by geographers was notably absent in the issue...perhaps not surprising since geographers do not participate in meetings of the American Association for the Advancement of Science (AAAS) in large numbers. While the socio-economic, psychological, political, and engineering dimensions of disasters are undeniably important, geographic perspectives are also paramount to understanding risk and minimizing the loss of life and property. Those outside of geography need to be reminded of this constantly, and events surrounding Hurricane Katrina provide only the latest example. Thus, one means by which geographers can advertise our potential contributions to solving problems is by increasing our visibility in cross-disciplinary organizations, most especially by participating in the AAAS. Check the *AAG Guide to Geography Programs* for a listing of AAG appointed representatives to various AAAS sections: Jack Shroder was recently elected Chair of Section E-Geology and Geography; Roger Kasperson is Chair of Section K-Social, Economic and Political Science. Kent Mathewson, Katherine Klink, and Ellen Mosley-Thompson serve as AAG representatives to Section H-Anthropology, Section Q-Education, and Section W-Atmospheric Sciences, respectively. As a related way of interacting,

we should invite non-geographers to participate in the AAG Annual Meeting. The AAG provides Enrichment Funds for this express purpose (see the AAG annual meeting website for details).

A second means by which geographers can interact with other disciplines is by supporting the recommendations in U.S. Geological Survey's Circular 1281, *Geography for a Changing World: A Science Strategy for the Geographic Research of the USGS, 2005-2015*. This important planning document was available at the USGS booth at our last annual meeting in Denver and deserves reading by all in our discipline. Circular 1281 presents a science strategy for the geography discipline. Nine general goals and fifty-six specific strategic actions focus on describing, explaining, and predicting the consequences of land change for coupled human-environment systems. Geographers should work to ensure that the next director of the USGS embraces the goals and strategic actions in Circular 1281.

A third means by which geographers can interact with scientists in other disciplines is for geographers to pursue interdisciplinary funding opportunities from the National Science Foundation (NSF), the Environmental Protection Agency (EPA), the National Institutes of Health (NIH), and other agencies that change the infrastructure of science. Highly visible examples of this are the five-year, multi-million dollar "Decision Making Under Uncertainty" Center awards to research teams led by geographers in senior positions at Arizona State University, University of Colorado-Boulder, and the Rand Corporation (see the December 2004 *AAG Newsletter* for details). Multiple-year NSF IGERT (Inter-

grated Graduate Education and Research Training) grants train the next generation of graduate students for interdisciplinary work. Just one example that involves geographers is the IGERT Program in Ecosystem Informatics at Oregon State University, featuring the contributions of geographers Dawn Wright and Julia Jones. The goal of the program is to promote a team-based approach to further ecosystem and natural resource management by fostering collaboration among ecosystem scientists, computer scientists, and mathematicians. Faculty participate from BioEngineering, Computer Science, Fisheries and Wildlife, Forest Science, Geosciences, Mathematics, and Zoology. The NSF Research Experience for Undergraduates (REU) site grants are designed to encourage undergraduate geography students to undertake multi-department research opportunities with a coherent intellectual theme.

A fourth means involves collaborating with faculty from other disciplines on individual research projects. I will list some examples from my own experience in this regard: 1) working with fisheries biologists to understand geomorphic controls on the abundance of freshwater fish and mussels; 2) working with planetary scientists to understand landforms on Mars; 3) working with botanists and landscape ecologists to understand vegetation patterns on floodplains as a response to floods and stream channel instability in France, Brazil, and the USA; 4) working with sociologists, attorneys, ecologists, climatologists, soil scientists, and geologists to formulate a surface coal mine reclamation plan; and 5) working with geologists to explore



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for minerals and petroleum, detect leachate from municipal landfills, determine the cause of floods and mass movement in Nepal, and understand long-term development of Himalayan mountain landscapes.

A fifth means by which geographers can ply their trade among scientists from other disciplines is through participation in government panels. For instance, government agencies at various levels occasionally create conflict-resolution panels, one form of which is an independent scientific review panel (ISRP). In northwest California, I have served on two such multidisciplinary panels that were seeking common ground between timber harvest companies, commercial and recreation fishermen, and state and federal regulatory agencies that address water quality and fisheries. Geographers are well-suited to participating in ISRPs because of our training and expertise in integration

and synthesis. We can help formulate scientific questions in a policy relevant form. We recognize the spatial dependencies of processes and linkages between stakeholders. We can clarify the results and conflicting opinions among scientists, and even the most positivist-oriented scientists recognize that science is a process rather than an outcome or product ... an essential component of adaptive management of natural resources. As just one more example of government panels, the National Research Council (NRC) will convene committees on single issues of national importance that often require geographic expertise. A recent example is the superb NRC published report by the Committee on Endangered and Threatened Species in the Platte River Basin involving geographers Will Graf and Lisa Harrington.

A sixth means, available to all academics, is to team-teach courses with faculty

from other departments and colleges, and to participate in multi-disciplinary centers on campus. Geographers at Kansas State University participate in the Institute for Civic Discourse and Democracy, and most states have a water resources research center ... just to cite two examples. Most of the issues of the day are too complex for any one discipline, including geography, to tackle alone: global environmental change, immigration, globalization, natural and technological disasters, ethnic strife, international conflict, unemployment, social inequality, soil erosion, pollution ... just to name a few. Our discipline is enriched and we as individuals are enriched by collaborating with practitioners from other disciplines in research, teaching, business, and government affairs. ■

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Annual Meeting Presidential Plenary Session

A special Presidential Plenary Session entitled, "Geography: the Original Integrated Environmental Science" will be held at the 2006 AAG Annual Meeting. The session, arranged by AAG President Richard Marston, will feature speakers Jean-Paul Bravard (l'Université Lumière-Lyon), Carol Harden (University of Tennessee), B.L. Turner II (Clark University), and Stephen Walsh (University of North Carolina).

The session will present discussions of geography as the original place-based, environmental science that integrates knowledge, theory, and techniques from the biophysical and human realms. Geographers possess an advantage in understanding human-environment



Bravard



Turner

relations because we recognize that processes are place-dependent and operate at multiple/interacting scales. Moreover, we seek integration of spatial and temporal analyses using modern qualitative and quantitative tools. Four outstanding scholars will present examples and general observations on how they use concepts from both human and physical geography to solve complex environmental problems.

The 2006 AAG Annual Meeting will be held in Chicago in the elegant Palmer House Hilton Hotel located in the heart of the Chicago. Abstracts may be submitted for



Harden



Walsh

the meeting until October 13 at www.aag.org/annualmeeting. A host of special activities are planned for the meeting, including the AAG Banquet featuring Victoria Lawson's Past President's Address and many field trips exploring Chicago's rich cultural and physical geography in addition to over 3,000 scholarly and research presentations. For more information on the meeting, visit the website noted above. We look forward to seeing you there! ■