An “NIH of Geographic Research”

I have long admired the National Institutes of Health as an exemplar of how basic scientific research can be conducted in a government setting, leading to major advances in scientific understanding that ultimately enable us to better understand and meet real needs of people and society. What if there existed somewhere in the federal government something akin to “an NIH of Geographic Research”? Of course, the enormous scale of NIH’s funding for basic biochemistry research within the federal government would not be realistic for many years, if ever, for geography. But the concept of a major federal institute of geographic research, staffed internally by thousands of first rate scientists focused on fundamental research questions at the frontiers of geographic science, is one that is long overdue, and which could play an unprecedented role in enabling us to better understand and address critical needs of our world.

NIH has long been the leading generator of basic research in biochemistry and medical science internationally, and has done so through massive programs of both intramural and extramural research funding. Thus, not only does NIH conduct basic research internally within its twenty major research institutes, but it also integrates and greatly extends this with substantial extramural research grant funding to university and private sector research institutes. Its emphasis on approaching applications through basic research is one that deserves more attention in geography.

The fundamental questions and large research programs of the type that might be undertaken by an “NIH of geographic research” would also help engender team and collaborative research capabilities much needed in geography if we are to address increasingly complex human and natural systems in meaningful ways. Another significant outcome of the intramural/extramural model of research at NIH has been the synergistic interaction and coordination of basic science research agendas among top researchers in federal, university and private research centers. In geography, these inter-sectoral linkages are poorly developed, to the detriment of research progress in the discipline. On a personal note, I have often been struck by contrast between the artificially fractured and often jealously sustained sectoral divisions in geography and the refreshing (and enjoyable) interaction of top scientists from multiple sectors in bio-medical research. My wife and I frequently hosted social gatherings at our home in Washington for my late father-in-law (an NIH biochemist who had received the Nobel Prize), and the guests invariably included leading medical researchers from federal agencies, private research firms, universities, and international institutes. Nobody at those gatherings cared which sector a researcher worked in; what mattered was whether they knew what they were talking about. Perhaps geography could learn a bit from the biochemists in this regard as well.

A few federal agencies, such as NASA, NOAA, USGS, and DOE, do carry out some geographic research internally at a very high level, and Tom Wilbanks’ long and substantive contributions at the Department of Energy are an excellent case in point. The National Science Foundation, of course, also plays a critical role in funding external geographic research and in helping to foster cross disciplinary programs, and we are fortunate to have strong leadership for geography in place at NSF. Unlike the NIH, however, the NSF does not conduct large scale research itself.

Perhaps the one existing federal agency with the greatest potential for developing a major integrated intramural/extramural...
Supporting Geographic Research at the USGS

With this potential in mind, the AAG has been working closely with the USGS to help strengthen geography and geographic research within the agency.

The AAG has recently sponsored several special high-level meetings together with the USGS, including the "USGS Geography Summit" last month at the Cosmos Club here in Washington, DC. USGS Director Chip Groat and I opened the three day meeting of fifty USGS geography division senior staff from across the country, during which we addressed the adoption and implementation of the new USGS ten-year science strategy for geographic research. It was a very productive meeting, with good progress made toward the realignment of geography at the USGS around a research focus and adoption of the proposed new geography science plan by those who will ultimately have to implement this vision. We have also participated in helping to shape and revise the USGS ten-year science plan in several other venues, including recent NRC panel reviews of the science plan.

This past September the AAG also hosted jointly with USGS the "AAG/USGS Geography Land Remote Sensing Workshop," a gathering of thirty-five leading geography-remote sensing experts from the university (e.g., David Skole, Nina Lam, Sam Goward, John Townsend, Carolyn Merry, Joel Morrison, etc.), government (Chip Groat, Barb Ryan, Jay Feuquay, John Kelmelis, Leslie Armstrong, Brad Doorn, Greg Smith, etc.), and the private sector. This two day meeting addressed the needs for continuity and advancement of Landsat and related geography/ecosystem monitoring remote sensing programs within the USGS and the government at large. An AAG publication is forthcoming on the recommendations of that meeting.

AAG staff have also been active members of the USGS’s GAM (Geography Analysis and Monitoring) Program steering committee, and we are key participants in the USGS Coalition here in DC, which supports funding for the agency. The AAG also interacts regularly with USGS regional staff at meetings here in our office or in Reston, in Menlo Park, in Denver, and in Sioux Falls at the Eros Data Center.

Chip Groat will be spending two or three days at our Denver meeting, and he and Barb Ryan will meet with the AAG Council and lead three sessions on the future of geographic research and science in the USGS. I urge you to participate in this important evolving process by attending these sessions.

Although the vision of an “NIH of geographical research” is certainly far from a reality today, and it is not clear exactly where within the federal government a strong geographic research capability might ultimately develop, I am convinced that the need is sufficiently compelling that it will occur somewhere. With prescient leadership at the USGS, and support from the AAG, might we look forward to a greatly expanded basic research program in the future at the "U.S. Geographical Survey"?

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