SOCIAL SCIENCES

Making Social Science Data More Useful

OTTAWA—How has the North American Free Trade Agreement (NAFTA) affected the economies and labor markets of Canada, the United States, and Mexico? Historian Steven Ruggles of the University of Minnesota, Minneapolis, thought he'd find the answer by examining census data, which include such factors as nature and location of occupation. But such an analysis requires a common database. And that, Ruggles discovered, doesn't exist.

Not yet, anyway. Last month, Ruggles received a $3.5 million grant from the National Science Foundation (NSF) to help develop an international database of uniformly coded historical censuses from as many as 20 countries. The database could shed light not just on the economic fallout from NAFTA but also on trends in the labor market and related phenomena, including immigration patterns. Tracking the movement of Norwegians to the Americas earlier this century, for example, could illuminate how immigration affects family structure. "How much change [in families] is the product of immigration, and how much of it is just changes that are going on anyway?" Ruggles asks.

Ruggles's grant is one of six awarded through a $23 million program, "Enhancing Infrastructure for the Social and Behavioral Sciences," created by Bennett Bertenthal, outgoing NSF assistant director for the Social, Behavioral, and Economic Sciences (see table). Bertenthal was also co-chair of a workshop held here earlier this month sponsored by the 29-nation Organization for Economic Cooperation and Development (OECD). It was the first of four international workshops aimed at "reinventing" the social sciences to make them more empirical and relevant to policy-makers.

The NSF initiative addresses the serious underfunding of databases, high-speed computers, and networking technologies that has left the social and behavioral sciences far behind the natural and life sciences. The OECD workshops are designed as a forum for applying these and other results to public concerns, from childhood poverty and illiteracy to an aging workforce. "With the scaling up of sciences comes an increase in expectations," says Bertenthal. "We need to be prepared to provide more comprehensive answers to the questions that are important at the beginning of the 21st century."

BUILDING CAPACITY IN THE SOCIAL SCIENCES

Grantee	Amount	Purpose
Michael Gazzaniga, Dartmouth College	$4.68 million over 5 years	To provide access to a common set of brain images from fMRI
Michael Goodchild, UC Santa Barbara	$4.29 million over 5 years	A national center to promote social science use of GIS, GPS, and remote-sensing data
John Abowd, Cornell U.	$4.08 million over 5 years	To link job, household, and census data from the U.S. and Europe for use by researchers
Steven Ruggles, U. Minnesota	$3.5 million over 5 years	To create largest public-use demographic database with census data from seven countries
Richard Rockwell, U. Michigan	$1.47 million over 3 years	To improve user services on the Inter-University Consortium for Political and Social Research Web site
Brian MacWhinney, Carnegie Mellon U.	$1.44 million over 5 years	To develop computational tools for linguistic analysis of transcripts in the Child Language Data Exchange System

But, although the future may lie in international comparisons of national social conditions, policies, and programs, the 60 senior researchers and administrators gathered here quickly ran up against the hard realities of a world in which countries hoard their microdata like gold, and statistical agencies often refuse access to researchers on the grounds of preserving confidentiality. There's also a dearth of trained researchers capable of crunching the numbers. And sometimes, as with census information, the data are simply incompatible.

"Unless the information has been categorized in the same way in different countries, you don't know if you're comparing apples to oranges or apples to apples," says University of Ottawa historian Lisa Dillon, chair of the International Microdata Access Group (IMAG), which is working with Ruggles on the historical censuses database.

Gaston Schaber, president of the Luxembourg research center CEPS/INSTEAD, has firsthand experience with that problem. He has spent the last 17 years trying to harmonize data from national household surveys throughout Europe. The creation of standardized international data sets, he argues, would allow governments essentially to test proposed social policies before implementing them. And help is on the way: The European Commission has just approved $1 million to develop a consortium that will create an international database containing longitudinal household surveys from 16 European countries, the United States, and Canada.

A more general solution, says Research Council of Norway science adviser Trygve Lande, would be a manual to standardize national data-collection methods and definitions. However, a few delegates worried that standardization might intrude on their freedom to design their own surveys, while others said that getting the OECD's elaborate and sluggish bureaucracy to approve such a manual would simply take too long. One way around that problem, says forum co-chair Marc Renaud, president of the Social Sciences and Humanities Research Council of Canada, is to create a high-level task force that would report directly to OECD president Donald Johnston. That approach and other topics will be discussed next spring at a workshop in Bruges, Belgium, on "social sciences evidence-based policies." A third workshop next fall in Tokyo will examine how the social sciences can spur social innovations.

Meanwhile, Ruggles and IMAG plan to keep looking for common denominators among the census data that they can apply without sacrificing important details. "Except for age and sex," says Ruggles, "none of the variables that look the same are actually identical." —**WAYNE KONDRO**

Wayne Kondro writes from Ottawa.

JAPAN

Millennium Projects May Provide Science Bonanza

TOKYO—Japan's scientists are cautiously applauding the government's choice last week of the types of high-profile science and technology projects to be funded next year as part of a special $5 billion economic restructuring initiative. The so-called Millennium Projects, initiated by Prime Minister Keizo Obuchi, could add as much as $2.4 billion to next year's science budget in information technology, genetics, and environmental studies.

"We're very happy," says Ryu Ohsugi, director of the Genome Research Office of the Ministry of Agriculture, Forestry, and

SOURCE: NATIONAL SCIENCE FOUNDATION