

# Who Should Count in the 1990 Census?

*A session at the AAAS meeting focused on disputes over undercounting of some minority groups and whether illegal aliens should figure in the formula for apportioning congressional seats*

THE 1990 CENSUS does not officially take place for another 14 months, but it is already the subject of two lawsuits. More are sure to follow. The 1980 census drew 54 legal challenges.

As Margo Anderson, a historian at the University of Wisconsin at Milwaukee, pointed out at a session on the census at the AAAS annual meeting last month, these disputes are neither new nor surprising. The nation's decennial stocktaking may seem like a politically aseptic head count, but it is really an instrument "for apportioning political power and economic resources among the diverse elements of the American population."

Census figures directly affect the distribution of seats in national and local legislatures and the disposal of more than \$30 billion a year in federal funds. They have also become an important resource for demographers and other social researchers and are used extensively in the direct marketing of consumer goods.

The census itself is a massive undertaking. Short questionnaires will be mailed to every household in the country—about 106 million—within a few days of 1 April 1990, the official census date. Follow-up calls will be made to the 20% who fail to return the

forms. In addition, one household in six will receive a longer questionnaire asking for information on income, education, housing, and so on. The entire operation, including exhaustive analysis and checking, will cost about \$2.7 billion.

Two issues have come to dominate the debate over the census: the chronic undercounting of blacks and members of other minority groups, and the inclusion of undocumented (or "illegal") aliens in the formula used to apportion seats in the House of Representatives. These are the subjects of the suits already filed against the 1990 census and were the topics of the session at the AAAS meeting.

The 1990 census will take place on the 200th anniversary of the first count, which was conducted 3 years after the requirement for a decennial census was written into the U.S. constitution. As Barbara Bailer, a former Census Bureau official, noted, the record shows "200 years of undercounting, particularly of minority groups."

The first census counted 3.9 million people; the true population was thought to be more like 4 million. For most of the first 100 years, part of the undercount was deliberate: slaves were officially counted as three-fifths of a person.

In recent years, the chief problem has been in getting an accurate count of minorities, particularly in the inner cities. The 1980 census is estimated to have missed about 1.4% of the total population, but undercounted blacks by about 5.9%. In some areas, as many as 18 to 24% of black males may not have been tallied, Bailer said.

Nobody disputes that a substantial minority undercount exists. The question is what to do about it. Since the 1980 census, the Census Bureau has been developing a technique to obtain a statistically valid assessment of the undercount, which could be used to correct the official census figures. The idea would be to conduct a separate, intensive survey of some individual areas such as city blocks and match the results with the census returns. The undercount for specific groups would then be used to adjust the counts for similar groups in other areas.

A survey along these lines was tried with the 1980 census, but the Census Bureau determined that the methodology was not sufficiently developed to adjust the count. According to Bailer, improvements since then, such as the use of computers to match the survey results with the census count, convinced the bureau that a reliable technique for adjustment is now available. The bureau recommended that a major survey, involving some 300,000 households, be conducted along with the 1990 census. The approach was endorsed by outside advisory groups, including a committee of the National Academy of Sciences.

Officials in the Commerce Department, the bureau's parent agency, did not accept the recommendation, however. They ruled against adjusting the census count and approved a survey for research purposes involving only 150,000 households. In a statement released at the time, the department said there was no unanimity in the statistical community on the matter. Bailer, who headed the adjustment effort, resigned in protest (*Science*, 29 January 1988, p. 456).

The Commerce Department's decision sparked a lawsuit by several jurisdictions that would potentially stand to gain political power and federal funds if a more accurate figure for minorities were available. They include New York State and California and the cities of New York, Los Angeles, Houston, and Chicago. The suit, filed on 3 November in the federal court in New York, seeks to force the Commerce Department to conduct the full survey proposed by the bureau and adjust the count accordingly.

Time is running short, however. A decision will have to be made soon in order to conduct the survey in time to make the adjustment. Bailer, who is now executive director of the American Statistical Association, says the survey could still be done if a decision is made by early summer. Census bureau officials, who would carry out the survey if it were to go ahead, unfortunately could not discuss any of this at the AAAS meeting. They said they are under orders not to talk about the undercount.

Time is also running short for resolution of the dispute involving the counting of illegal aliens. Here, the issue boils down to the fact that including illegal aliens in the figures used to apportion congressional seats can result in some states gaining at the expense of others. Jeffrey Passel, assistant chief of the population division in the Census Bureau, said that the estimated 2 million illegal aliens in the 1980 count probably resulted in California and New York gaining congressional seats that might otherwise have gone to Georgia and Indiana.

The bureau has always tried to count



Theil Photography

**Barbara Bailer.** The record shows "200 years of undercounting."

everybody in the U.S. population, however, regardless of his or her immigration status. Bureau officials maintain they have a constitutional requirement to include all those resident in the United States. They also point out that it would be a statistical nightmare to sift out those here illegally.

Last February, however, 42 members of Congress, together with the states of Pennsylvania, Kansas, and Alabama, filed suit to force the Census Bureau to remove illegal aliens from the population base used for congressional apportionment. The states represented in the suit are generally those likely to gain a seat if illegals are excluded.

A prime mover behind the suit is the Federation for American Immigration Reform (FAIR), a Washington, D.C.-based organization. Roger Conner, the president of FAIR, put the issue this way in comments at the meeting: "Should foreigners who enter and remain in our country in violation of our basic immigration laws be entitled to representation in Congress?" Others pointed out, however, that the census figures are also used for purposes such as planning for schools and social services that require as accurate a count as possible.

From a procedural standpoint, a requirement to exclude illegal aliens would cause the Census Bureau serious problems. One possibility would be to include on the short census questionnaire an item asking whether the respondents are American citizens. The noncitizens could then be checked against records kept by the Immigration and Naturalization Service (INS) of those who are legally resident in the United States. Those found to be illegal could be removed from the calculations for congressional apportionment but kept in the overall census figures used for other purposes.

But Passel pointed out that the answers to the citizenship question would be highly unreliable. In previous surveys, he said, some 40% of recent immigrants who declared themselves to be naturalized Americans in fact were not citizens. Another problem is that because the INS no longer requires all aliens who are legally resident in the United States to register each year, the records would be incomplete. An immediate practical issue is that the census forms are about to go to the printer (it takes a year to print all 106 million) and they do not include a citizenship question.

The Justice Department has filed a motion to dismiss the suit on procedural grounds. A similar suit against the 1980 census was in fact thrown out in 1979. A hearing on the matter was held in federal court in Pittsburgh last week, and the judge promised a ruling by the end of March.

■ COLIN NORMAN

## Richard S. Nicholson to Head AAAS



"Science should be seen as an investment, not an expenditure," says Richard S. Nicholson, a chemist and 18-year veteran of the National Science Foundation who has just been named executive officer of the

AAAS. Nicholson notes, for example, that investment in research is important to maintaining U.S. competitiveness, but believes that investment in training is equally important for the long run.

"There are people who believe we can hold off on our investment, who say for instance that 'The stars will be there next year.' But the astronomers won't be if we don't train them," Nicholson observed dur-

ing a recent interview with *Science*.

Education and "human resources" for a scientifically and technologically sophisticated future are among Nicholson's top concerns, as is a desire to make use of AAAS' interdisciplinary membership.

Nicholson graduated in chemistry from Iowa State University in 1960 and earned his Ph.D. at the University of Wisconsin, Madison, in 1964. He was acting deputy director of NSF from 1983-1985, when he was also staff director for the foundation. He comes to AAAS from his post as head of NSF's directorate for mathematical and physical sciences.

Nicholson will take up his new job by 15 April. He succeeds Alvin Trivelpiece, who left on 1 January to be director of Oak Ridge National Laboratory.

■ BARBARA J. CULLITON

## Biotechnology Rules Wither in OMB

Are the Environmental Protection Agency's (EPA) long-awaited rules governing the release of engineered microorganisms dead? For all intents and purposes, say some environmental groups, they may as well be. This is because outgoing administrator Lee Thomas failed to get the rules published before he left office, despite the urgings of the agency's Biotechnology Science Advisory Committee.

Environmentalists now fear that the rules, which would govern microorganisms developed for commercial purposes, could be delayed several more years. Groups such as the National Wildlife Federation (NWF) and the Environmental Defense Fund hoped that Thomas would publish the rules over the objections of the Office of Management and Budget (OMB). It is unlikely, they concede, that incoming administrator William Reilly, will be willing to wage such a battle anytime soon.

For many researchers in industry and the university sector, this may be good news. The draft regulations are supposed to support the coordinated framework established by the White House's Biotechnology Science Coordinating Committee back in 1986 (*Science*, 6 June 1986, p. 1189). The rules, however, have been stuck in OMB since last May. Industry sources say the OMB has stifled them, allegedly because they are too burdensome.

The rules would expand the definition of commercially related releases of altered organisms that would require regulatory ap-

proval. Research conducted by universities would be considered commercial when it involves a joint venture or other financial relationship with a private company. At present, companies are allowed to conduct limited research tests under Toxic Substances Control Act rules.

Officials of the Association of Biotechnology Companies (ABC) and the Industrial Biotechnology Association, which mounted campaigns against the draft rules, argue that there should not be a presumption of risk with engineered organisms. Rather, regulations should be based on demonstrated risk, otherwise small companies and university researchers may be burdened with costly reporting requirements.

Despite the setback handed them by OMB, Margaret Mellon of NWF says her organization and other environmental groups are not giving up their fight to have genetically altered microorganisms screened by EPA before they are released in outdoor tests. Bruce Mackler, general counsel of ABC, predicts that "the battle is going to shift to Congress."

Indeed, members of the House Science, Space, and Technology Committee and Senator Max Baucus (D-MT), chairman of the Senate Environment Subcommittee on Hazardous Wastes and Toxic Substances, may draft bills to give EPA stronger regulatory authority. Baucus introduced legislation late in 1988 to regulate releases of genetically engineered organisms.

■ MARK CRAWFORD