Plan to Assess Census Undercounting Dropped

Researchers have devised a way to count blacks and other minority groups missed by the census, but Commerce has canceled plans to implement it

THE Commerce Department has canceled plans to calculate the number of blacks and other minorities inadvertently missed by the 1990 census, an issue of substantial economic and political importance.

Top department officials say that the plans, formulated by researchers at the U.S. Census Bureau, were dropped because they are based on unsound statistical methods. But researchers in and outside the government assert that the decision was politically motivated. Earlier this month, the head of statistical research at the Census Bureau, Barbara Bailar, resigned in protest of the decision by the Commerce Department, the parent agency of the Census Bureau.

Bailar and her research staff had proposed to conduct a large survey after the 1990 census is taken to calculate the number of minorities omitted by the original count and then to adjust the census figures. If implemented, the plans could change the allocation of federal funds for housing, welfare, education, and transportation, and also affect redistricting and reapportionment in elections for federal, state, and local offices.

Bailar, who is also president of the American Statistical Association, said she quit because "I felt we had proved our case. I think the decision was politically motivated because the Republicans would lose from an adjustment" to the census.

Robert Ortner, Commerce undersecretary for economic affairs, said in an interview, "I haven't seen any evidence that the decision was politically motivated. I would prefer an accurate count." He said that "the statistical community is divided" over the methodology."

Since 1940, the Census Bureau has run into the same problem every 10 years when the nation's population is tallied up: blacks are undercounted by about 5% compared to whites, as measured by demographic procedures. As a result, numerous legal battles have been waged over whether minorities have been getting their fair share of votes and government funding.

The problem has been a tough one to solve because of limited computer capability and the lack of reliable statistical methods to correct the census figures precisely. So when the problem arose yet again after the 1980 census, Bailar and her staff began a major project to develop better techniques to determine the number of minorities omitted from the 1990 census. Given the political sensitivities of census figures, Bailar went so far as to work closely with a National Academy of Sciences' panel and several other groups of outside experts to build and refine the statistical techniques.

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The statistical design of the plan that evolved is rooted in techniques long used by biologists to count animals in a particular area, such as fish in a lake, says Stephen Fienberg, who was until recently chairman of the Academy's panel and is dean of Carnegie Mellon's College of Humanities and Social Sciences. An initial catch is made, the fish are tagged and then thrown back into the lake. A second sample is taken, and the tagged and untagged fish are counted. The ratio of tagged to untagged fish can then be used to calculate the number of fish missed in the first catch and ultimately how many fish are in the lake.

According to the plan proposed by Bailar's group, the census in 1990 would represent the first catch. A survey of 300,000 housing units from across the nation would then be conducted after the actual census. With the help of new computer technology, the survey information—including names and addresses of individuals—will then be matched against persons first counted in the census. Census researchers already put the plan through a dry run in Los Angeles in 1986 and had been planning a final "dress rehearsal" in March. The survey in 1990 would have been the most elaborate survey of its kind conducted by the Census Bureau and, at $30 million, would have been one of the priciest. The cost of the census alone will be at least $2.6 billion.

Debate about the plans for the survey currently revolves around two issues: whether the methodology is sound and whether adjustments to the census based on the survey results can be completed by the congressionally mandated deadline of 31 December 1990 for reapportionment.

Peter Bounpane, assistant director of the Census Bureau, says, "There's not a consensus that the methodology is technically sound." Commerce undersecretary Ortner says that key Census Bureau staff opposed an adjustment of the census because "it was manipulative." An adjustment "would undermine public confidence in the census," he said. "We don't feel we should do anything to manipulate the data."

But several outside expert groups have concluded that the bureau's techniques are solid. The Academy panel "said that the program was methodologically feasible," said Fienberg in an interview. Bailar's staff "did their homework," he says. "Commerce canned the project" because implementing it "will mean more funds and more votes in areas heavily black and urban."

An advisory group of the American Statistical Association said in a May letter to the Census Bureau director John G. Keane that the survey should be given "high priority." A decision not to proceed with the survey would be "regrettable." And James Trussell, chairman of the Census Bureau's advisory committee on population and a professor at Princeton, said, "We definitely believe that the bureau should go ahead with the large-scale survey." Keane himself testified in July before the House subcommittee on the census that "Our advisory groups have urged that we pursue a full-scale . . . survey whether we adjust or not."

Keane also testified that "There is no unanimity among our advisory groups" about adjustment. But the advisory groups from the Academy and the statistical association have recommended that the census figures should be adjusted even if the December deadline cannot be met. The Academy panel said in a letter to Keane that adjusting census counts based on the proposed plan is "technically feasible and statistically sound." The American Statistical Association advisory group recommended in April that the Census Bureau "should plan to provide adjusted counts after the legal requirement dates, if necessary, so we can know as much as we can about the undercount," says Benjamin King, the advisory group's chairman and director of survey methods at the Educational Testing Service.

The advisory committee headed by Trus-

sell, however, was divided about the wisdom of correcting the census. "Some members thought it was unwise to correct the figures while others favored it if the methodology was executed well," Trussell says.

Ortner says that the Commerce Department has decided not to proceed with either the survey or the adjustment calculations. A small survey will likely be conducted after the census to evaluate the number of people omitted. But Fienberg and King say that a sample of 300,000 housing units must be collected to ensure a statistically valid study.

An adjustment would have the biggest effect on the distribution of government funds, says Terri Ann Lowenthal, staff director of the House census subcommittee. In fiscal year 1984, the federal government alone allocated $31 billion on the basis of the census figures. "If we don't have the right numbers, we don't know whether the money is getting to the people who need it," she says. Adjustment would likely shift some district boundaries affecting local and state governments.

Representative Mervyn M. Dymally (D–CA), chairman of the census subcommittee, has introduced legislation requiring the Census Bureau to correct census figures using "the best available methodology." But Bailar notes that time is running out for the survey's dress rehearsal this spring.

Fienberg told the subcommittee, "This is not the time to be winding down research on adjustment, nor is it wise to reduce the scale of the . . . survey. We must take full advantage of the momentum of this remarkable research. . . . Otherwise I fear we shall be going through much of this same exercise in 1993 and beyond." ■ **MARJORIE SUN**

AIDS Vaccine Trial Expanded

The first approved clinical trial for a candidate AIDS vaccine in the United States will be broadened with six medical centers joining a testing program already under way at the National Institutes of Health. The original trial, an intramural effort headed by Clifford Lane of the National Institute of Allergy and Infectious Diseases (NIAID), will remain as initially planned last summer.

The entire trial, including the new portion, is designed to measure the safety of the potential vaccine, which is based on a modified protein from the AIDS virus—the gp160 protein that makes up the viral coat and a membrane-spanning part of the molecule. Malcolm Martin of NIAID and Mark Cochran and Gale Smith of MicroGeneSys, in West Haven, Connecticut, collaborated to construct the vaccine.

Lane and Anthony Fauci, director of NIAID, have not been able to recruit volunteers into the intramural trial as quickly as they predicted last summer. This is due to a complex set of factors, says Fauci, which include medical reasons for eliminating someone as a candidate, and the possible stigma perceived by volunteers of developing antibodies to the AIDS virus.

The six centers to be added to the trial are so-called vaccine evaluation units, established 5 to 10 years ago for testing other vaccines. They have now geared up to test potential AIDS vaccines. "About a month ago, we decided to expand the group," says Fauci. "We went to the Food and Drug Administration (FDA) and asked them to review the proposal," because the new portion of the trial differs in two major ways from the intramural NIAID trial.

First, the design of the original intramural trial called for 81 men, most of whom are homosexual, to participate. Now, an additional 72 people, women as well as men, will be recruited by researchers in the six centers. "We thought it was appropriate to test the safety of the vaccine in women as well as men," says Fauci. To qualify, the volunteers must be "as low-risk as possible" for aquiring AIDS, according to Wayne Koff of NIAID, who will coordinate the multicenter portion of the trial.

The second change is in one of the two control groups. In the NIAID intramural trial, one control group will receive a natural blood protein obtained from sea mollusks instead of the AIDS vaccine. But in the multicenter study, the comparable control group will receive hepatitis B vaccine. According to Fauci, this will allow researchers to compare directly the immunological responses of volunteers to two different products—the AIDS and hepatitis vaccines—that are similarly prepared by genetic engineering techniques.

The six centers now included in the trial are: the Johns Hopkins University in Baltimore, Maryland; Baylor College of Medicine in Houston, Texas; Marshall University School of Medicine in Huntington, Vermont; the University of Rochester School of Medicine in Rochester, New York; the University of Maryland School of Medicine in Baltimore; and Vanderbilt University in Nashville, Tennessee.

Fauci and Koff predict that the initial phase, including the multicenter study, will be completed within a year. ■

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J&J Finds a Place in the Sun

Johnson & Johnson stock jumped over $8 in 2 days last week, to $79.78, following publication of a single study, involving 30 subjects, that suggests that a common and relatively inexpensive acne medication can smooth wrinkles and otherwise reverse the signs of aging caused by excess sun. In a 4-month clinical trial, reported in the 22 January issue of the *Journal of the American Medical Association*, daily applications of tretinoin cream, marketed under the name Retin-A, reduced wrinkles, improved skin texture, and imparted a "rosy glow" to the skins of almost all of the experimental subjects.

The subjects, aged 35 to 70, applied Retin-A to one forearm and a control cream to the other once nightly. Half the group applied Retin-A to their faces as well. The most pronounced benefits were a reduction in fine wrinkles and improved skin color, though coarse wrinkles and roughness were also reduced and, in some cases, sun spots faded. Biopsies taken from the forearm revealed histological improvements as well. The trial, conducted by John J. Voorhees and his colleagues at the University of Michigan Medical School, was funded in part by Ortho Pharmaceutical Corp., a Johnson & Johnson subsidiary that manufactures the acne medicine.

The catch, however, is that the drug can also cause dermatitis. Almost all the subjects suffered from redness, swelling, and mild scaling in the treated areas that lasted from 2 weeks to 3 months. Eleven required steroid treatment to reduce inflammation. In addition, the improvement was much more striking on the forearm than on the face.

Questions also remain about how well the treatment will work on severely damaged skin—the subjects had only mild to moderate sun damage—and whether improvement will be sustained after therapy, or even during continued therapy, as Barbara Gilchrest of Boston University points out in an accompanying editorial. In addition, the study did not assess the effects of tretinoin on "intrinsic" skin damage, caused by normal aging processes.

Such questions, however, are unlikely to dampen the expected clamor for the drug; indeed, some dermatologists are already prescribing the acne medicine for treating sun-damaged skin. Several other clinical trials are now under way, according to Johnson & Johnson, which plans to seek FDA approval to market the drug for this new use. ■

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