

The Unexpectedly Large Census Count in 2000
and Its Implications

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On January 25, 1999, the Supreme Court prohibited the use of statistical sampling to adjust census data for undercount for purposes of apportioning Congressional seats and electoral votes among the 50 states. Writing for a 5 to 4 majority, Justice O'Connor observed that throughout recent history, identifiable groups including minorities, children and renters were undercounted in the census, and then described sampling and demographic procedures that would likely produce more complete counts. But she concluded that the Constitution required an actual enumeration of the population for determining congressional representation (*Department of Commerce v. U. S., House of Representatives*, 1999). The Supreme Court decision neither called for nor prohibited the use of adjusted census data for drawing congressional or other legislative districts within states, or for allocating federal spending to local governments. Presumably, a state legislature could use either actual census counts or adjusted counts when determining who lives in which congressional district.

The Census Bureau drew a sample of 314,000 housing units included in the enumeration of April 1, 2000 and reinterviewed their occupants to determine over- and undercount for specific geographic areas and for the different races (U. S. Bureau of the Census 2000a). In February of 2001, senior officials of the Census Bureau will determine whether the Accuracy and Coverage Evaluation (ACE) program evaluating the Census of 2000 produced population counts that were more complete and accurate than the head count. If they conclude that the ACE program effectively adjusted for both under- and overcount, they will recommend issuing two sets of population figures for all geographic areas—the actual enumeration and the count adjusted for over-and undercount. Final decisions about the public release of adjusted data will likely be made by White House officials, Secretary of Commerce Donald Evans or, perhaps, by federal courts.

On December 28, 2000; the Census Bureau announced a surprisingly large count—281,422,000 residents of the 50 states and the District of Columbia and 576,000 federal employees and their dependents living overseas that were attributed back to states (U. S., Bureau of the Census, 2000b). The enumerated resident population was 6.9 million *greater* than the Census Bureau's estimate of how many lived in the country on April 1 of last year; that is, the census counted 2.5 percent *more* than the estimated population. In every state and the District of Columbia, the census count was greater than the estimate. The differences were surprisingly large in many places. In Washington, D.C., the count was 11 percent greater than the estimate, in Nevada, 7 percent greater, and in Rhode Island, 6 percent greater. These comparisons exclude those enumerated overseas.

The Census of 2000 differs greatly from the previous one. In 1990, the census count was 0.7 percent *below* the Census Bureau's estimate for April 1 of that year. Ten years ago, there were only 15 states in which the enumerated population exceeded the Census Bureau's estimate (Anderson and Fienberg, 1999: Table 6.1).

Two colorful maps illustrate the great change that occurred over the decade and suggest—at first glance—a tremendous improvement in the census count. The map in the upper panel shows how census counts differed from estimates for states in 1990. Red indicates that the count fell more than 2 percent below the estimate, yellow reports an undercount of zero to 1.99 percent. The green and blue states are those in which the census counts were greater than the estimate by at least one percent. Red and yellow dominate the map for 1990.

The map below illustrates comparable finding from last year's census.¹ Green and blue dominate, meaning that counts exceeded estimates. In all but 5 states in 2000, the actual count was at least one percent greater than the Census Bureau's estimate.

Did the Census of 2000 eliminate net census undercount? Findings from the Census Bureau's ACE and from demographic analyzes will provide an answer later this year. We know now that the count last April exceeded the expected population by a substantial margin, even when adjustments are made for undercount in the Census of 1990. The most cited estimates and "official" estimates from the Census Bureau's evaluation of the enumeration of 1990 reveal that there was a net undercount of 1.8 percent or about 5 and one-quarter million persons (U. S. Bureau of the Census, 1999). If the 1990 numbers are adjusted for those omissions and projected forward to April 1, 2000 using the annual growth rates based on births, deaths and net immigration; you get an estimate of 278,900,000 residents of the 50 states and District of Columbia on April 1, 2000. The Census of 2000 counted 2.6 million *more* people or just about one percent *more* than expected on the basis of the last enumeration adjusted for undercount.

There are several reasons to believe that the Census of 2000 may have done an excellent job enumerating the population. First, in an innovative development, the Census Bureau paid for advertising so they could target markets and populations known to be difficult to count. Perhaps as a result of effective marketing, the mail-back rate increased. In 1990, 65 percent of households receiving a census form sent it back; in 2000, 67 percent did so, meaning the Census Bureau had to send enumerators to approximately 2.3 million fewer homes and apartments (U. S. Bureau of the Census, 2000b).

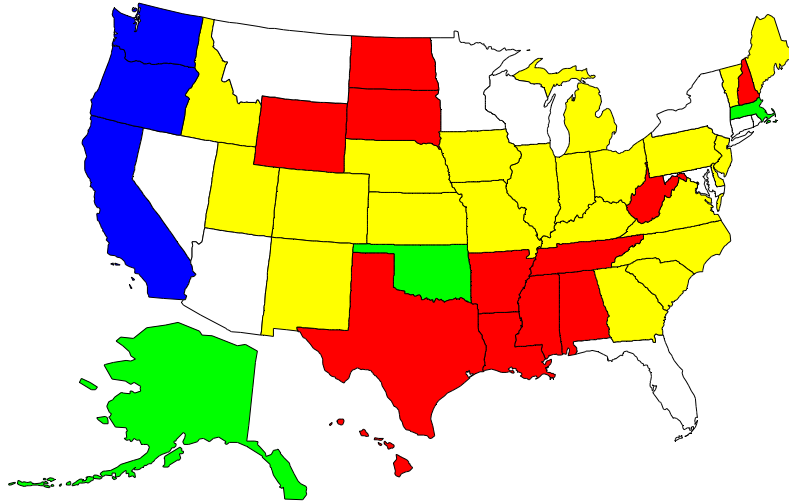
Second, following the January, 1999 Supreme Court ruling, Congress appropriated sufficient funds so that the Bureau could hire as many enumerators as needed for the Non-Response Follow Up stage in April, May and June; that is, enumerators who visited the households who did not send back their forms. In many labor markets, the Bureau's wages were 60 to 80 percent greater than those of fast food restaurants. When recruitment lagged, the Census Bureau was able to quickly raise their wage rate. In the San Francisco area, it eventually went above \$20 per hour. The enumeration job was one in which a worker who spent extra hours on the sidewalk or in the apartment complex was likely to count more people who had not sent back their form. Despite the high wages rates, the Bureau completed the enumeration under budget.

Third, the outreach to immigrants and to those with little facility in English may have been much more effective in 2000 and led to larger counts. Hundreds of immigrant and community organizations developed partnerships with the Bureau since they were strongly motivated to demonstrate their large numbers to local government officials. And the census form itself was distributed in six languages in 2000 in contrast to only Spanish and English in 1990.

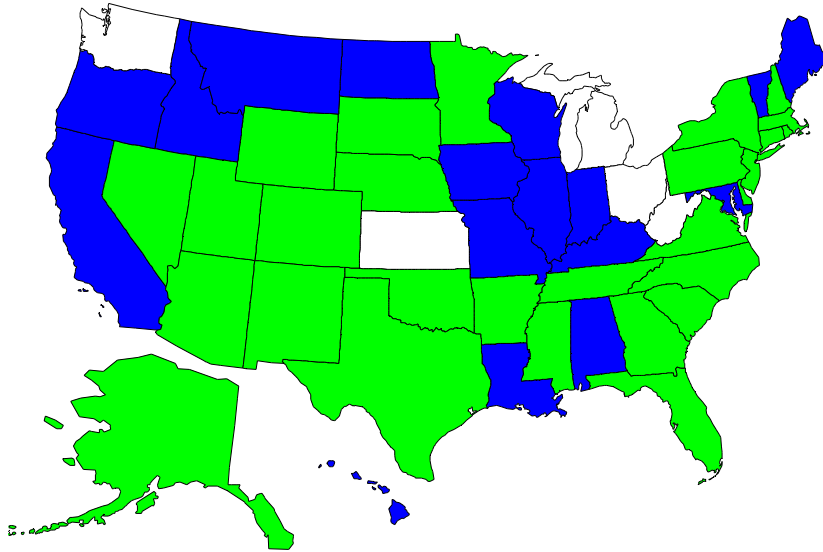
Still, two point six million is a large number—the entire population of a metropolis such as Baltimore, Denver, Minneapolis, Pittsburgh or St. Louis. Why was the count so much larger than expected in 2000? There are several possibilities. First, the Census Bureau may have underestimated population growth during the decade. They estimated the nation grew by 25.7 million in the 1990s but, perhaps, it may have grown by much more. While births and deaths are almost completely enumerated, it is possible—although unlikely—that current demographic procedures overestimate out-migration from the nation while simultaneously underestimating undocumented immigration.

How Actual Census Counts Differed from Census Bureau Estimates for State Populations: 1990 and 2000

1990



2000



- More than 2.00% Below the Estimated Count
- 0.0% to 1.99% Below the Estimated Count
- 0.0% to 0.99% Above the Estimated Count
- 1.00% to 1.99% Above the Estimated Count
- More than 2.00% Above the Estimated Count

Second, perhaps net undercount in 1990 was much higher than the reported 1.8 percent. This seems unlikely. There are two methods to determine how many people were missed or counted more than once in the enumeration. The demographic procedure takes into account the history of births, deaths and immigration in the decades before the census and ascertains how many “should” be counted at each age and in each race. This procedure led to the conclusion that a net 1.9 percent of US residents were missed in 1990 (Robinson et. al., 1993). The second method, the Post Enumeration Survey (PES) procedure, is based on the careful and thorough revisiting of a sample of housing units included in the census to ascertain who was missed and who was counted at two or more locations. For 1990, this procedure estimated a net undercount of 1.8 percent—just about the same as the demographic procedure.

Third, it is possible that there was an over-count—at least of some groups—in the Census of 2000. In 1990, the PES found that the white population was over counted in five states. New Jersey benefited the most since 1,006 whites were counted there for every 1,000 whites who actually resided in the Garden State. Perhaps, the analyses now being conducted at the Census Bureau will identify more states in which some groups were over counted. In 1990, the number of white homeowners in the Census was 100.3 percent the actual number, while the Census counted 101.4 percent of Asian homeowners—that is, they over counted these groups (Hogan, 1993: Table 3). Interestingly, in 1990 there were no states in which the black, the Asian or the Spanish-origin populations were over counted. Indeed, for African-Americans in 1990, the count was most complete in Alabama and Michigan where the net under count rate was 3.3 percent. At the other extreme, 8 percent of blacks living in Arizona, California, Colorado and Nevada were not included in the 1990 enumeration.

The census count in 2000 was unexpectedly high. And there is no obvious reason why the count should have exceeded the Census Bureau’s estimates by two and one-half million. Does this mean that the data showing the population in 2000 adjusted for net undercount are not needed? That is not necessarily the conclusion.

The key constitutional issue is the one discussed by Justice O’Connor in her majority decision. It is a question of differential inclusion in the census. In New York state in 1990, fewer than one white in 10,000 was missed, but 6 percent of African-Americans, 6 percent of Hispanics and 3 percent of Asians were omitted (U. S. Bureau of the Census, 1999). If the Bureau’s ACE finds that the completeness of count was much the same for central cities, for suburbs and for rural areas and that whites, blacks Asians and Latinos were just as likely to be counted, there will be no constitutional issue. No race nor the residents of any area could plausibly claim that their share of representation in elected bodies or their fair share of federal spending was diminished by undercount in the census. But if, as has been the case since 1940, there are substantial geographic and racial differences in the completeness of census counts, adjusted data may effectively be used to level the playing field (Anderson and Fienberg, 1999: Table 6.2).

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