

Testimony of

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"Reducing the Undercount in the 2010 Census"

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Chairman Thomas R. Carper, Ranking Member Tom Coburn, and distinguished members of the Subcommittee. Thank you for the opportunity to appear before you today.

Article 1, Section 2 of the Constitution of the United States, ratified in 1787, mandated that the number of seats in the House of Representatives should be determined and "apportioned among the several States...according to their respective Numbers...." on the basis of a census or enumeration of the population, to be conducted every ten years.¹ This provision both created the decennial census, and at least the seed of a principle, codified by the Supreme Court in a series of decisions in the 1960's, that congressional districts drawn for many state and local bodies, must have approximately equal voting age populations to guarantee each person one vote. The Voting Rights Act in 1965 prohibited states from drawing voting districts for federal, state, or local elections in ways designed to dilute the voting power of minority populations. In many states, accurate counts of racial and ethnic populations are therefore as important to redistricting as an accurate count of the total population.

The integrity of democracy in the United States has solidly rested upon public confidence in fairness and integrity of the decennial census. George Washington himself thought the count of 3.9 million in the first census in 1790 was too low, but it sufficed for apportioning the first Congress. Complaints about undercounts have plagued every census since, although recounts were conducted in several cities in 1870 and 1920, the counts have usually been accepted, as they were in 1790, as adequate for the constitutionally mandated apportionment of the Congress.

Simultaneously, exclusion from the count, beginning with the notorious compromise that counted slaves as 3/5ths of a person for purposes of apportionment and the exclusion of "Indians not taxed," and continuing through undercounts and redistricting practices that diluted minority votes, represents an iconic statement that one in fact *does not count* as fully as others, and provides a measure of how far we stand from full inclusion of all in our society. In this sense, an undercount that does not alter the apportionment of the congress is still not good enough for a society that proclaims the equality of all its members.

A Brief History of the Measured Undercount

Clear statistical evidence of undercount emerged in October of 1940 when the selective service registration found 425,000 more draft age men than the 1940 census count, a 2.8 percent undercount. It also found 229,000 more black men than the census, or an undercount of 13.0 percent. The Census Bureau has since used what is called "Demographic Analysis"— estimates of how the population *should have* changed based upon recorded births, deaths, immigrants and

¹ See Appointment of the U.S. House of Representative in the References.

emigrants, and assumptions about the flow of undocumented immigrants. This process attempts to measure how far each decennial census fell short of the best estimates of the population's size.

Estimates of the net undercount from demographic analyses fell from 5.4 percent in 1940 to 1.3 percent in 1980, before rising again to 1.8 percent in 1990. The undercount for blacks dropped from 8.4 percent in 1940 to 4.5 percent in 1980, and then rose to 5.7 percent in 1990.²

Table 1. Decennial Census Population Net Undercount Rates from Demographic Analysis: 1940 to 2000³

	YEAR						
	1940	1950	1960	1970	1980	1990	2000
Total.....	5.4	4.1	3.1	2.7	1.2	1.8	0.1
Black.....	8.4	7.5	6.6	6.5	4.5	5.7	2.8
Difference: Black – Total.....	3.0	3.4	3.5	3.2	3.3	3.9	2.7

Due to limitations in the identification of race and ethnicity in birth records, Demographic Analysis has only been able to provide undercount estimates for blacks and the total population. Important segments of the statistical community also grew committed to not just improving our ability to measure the undercount, but also to potentially adjust census counts to correct for the undercount. In the 1990 and 2000 censuses, the Bureau conducted carefully designed follow-up surveys to measure the undercount in a different way, not just for blacks and the total population, but also for the other major race and ethnic populations by age, owners and renters, native and foreign born residents, central city residents in large and small metropolitan areas, and non-metropolitan residents. The 1990 Post Enumeration Survey (PES) sampled 170,000 housing units in 5,400 census block or block clusters, and the Accuracy and Coverage Evaluation (ACE) survey sampled 314,000 housing units in 12,000 census blocks or block clusters scientifically sampled to represent the entire country. Extraordinary efforts were made to interview members of every household in these samples, including contacting each household up to six times, and to match them to respondents in the respective census. Households or individuals within households captured in the PES and ACE, but who did not respond to the census were used to estimate the undercount. The PES and ACE also drew samples of completed census forms (E samples) to identify individuals who completed more than one form and were therefore “over counted.” The *net* undercount subtracts the overcount from the number of people missed, and is therefore smaller than the actual number of people that the census missed.

Census 2000, the Undercount, and Adjustment

The ACE was designed not only to improve our estimates of the undercount, but more importantly, to enable the Census Bureau to adjust the census for the undercount. The Bureau of the Census had planned the 2000 Census to be the first in history to adjust for undercounted

² See Clark and Moul (2003).

³ Ibid.

populations. The Bureau planned to interview samples of the households in each census tract that did not respond to the census, and to use their responses to statistically represent all non-responding households in the tract. However, in January of 1999, the Supreme Court ruled that the Bureau could not use adjusted counts produced through such sampling for the constitutionally mandated purpose of apportioning the Congress. The ruling explicitly allowed the Bureau to provide adjusted counts for other purposes, however, including files for redistricting and for allocating funds for federal programs that are based upon census estimates of eligible populations.

The Court's decision forced the Census Bureau to use traditional headcount methods that had produced higher undercounts in the 1990 census, especially among minority populations. Given the growth of hard-to-enumerate populations, including immigrants, non-English speakers, migrant workers, and the undocumented, and deep seated suspicion of government agencies in many minority, poor, and immigrant communities, it seemed that the Census Bureau would do well if it kept the undercount at the same levels as in 1990. The Bureau's newly appointed Director, Dr. Kenneth Prewitt, noted that "using traditional counting methods, [the Bureau] must run harder to stay in place. It will run harder; it hopes to stay in place." The most important additional burden was that instead of enumerating a sample of non-responding households in each area, the Bureau would have to try to reach all non-responding households. The Bureau placed 100,000 more enumerators in hard to enumerate areas. In total, 42 million households were enumerated in a nine week period following April 27th. Perhaps most critically, the Bureau worked with over 140,000 partners, including many minority and civil rights organizations, to try to assure a complete count of the population.

The results of these efforts were striking: the Bureau had done much better than just stay in place. The ACE initially indicated that Census 2000 produced a net undercount of 1.2 percent, a substantial drop from the net undercount of 1.6 percent in 1990. Even more extensive reductions were achieved in the undercount of African Americans and other historically under-enumerated populations. The estimate of the undercount of the black (non-Hispanic) population in the 2000 Census was 2.2 percent, less than half of the 4.6 percent undercount of Blacks in 1990. The undercount of American Indians on reservations in Census 2000 was 4.7 percent, down from 12.2 percent undercount in 1990; the off-reservation undercount was 3.3 percent. The 2000 undercount of Hispanics was 2.9 percent, 40 percent less than the 5.0 percent undercount of Hispanics in 1990. Despite these reductions, the *differential* undercount – the greater likelihood of undercounting African Americans, American Indians and Alaska Natives, and Hispanics – remained large. The undercount for non-Hispanic whites was only about 0.7 in both 2000 and 1990. 4

Renters, another historically undercounted group, were also enumerated more completely in the 2000 census (2.8 percent) than in 1990 (4.5 percent), and the undercount of children was reduced by 50 percent, from about 3.2 percent in 1990 to about 1.5 percent in 2000. The undercount of 18 to 29 year old males, however, was larger in 2000 (3.8 percent) than it was in 1990 (3.3 percent). The Bureau and its partners thus seemed to have won a major victory in the decade

4 See pp. 4-5 in Report of the Executive Steering Committee for Accuracy and Coverage Evaluation Policy.

long struggle to reduce the undercount, particularly among traditionally undercounted populations.

Despite these dramatic improvements, the 2000 Census is estimated to have missed 6.4 million people, and double counted 3.1 million, producing a net undercount of 3.3 million. In 1990 the census missed 8.4 million people, double counted 4.4 million, producing a net undercount of 4 million.

There still seemed to be substantial reasons for adjusting the census to correct for these undercounts. The January of 1999, the Supreme Court decision had specifically noted that although adjusted counts could not be used for apportioning the Congress, they could be used for redistricting in the states, and for allocating federal funds. Most observers were therefore stunned on March 1st, 2001, when the Bureau's professionals recommended *against* adjusting the 2000 Census, because they could not be certain that adjusted data would be more accurate for use in redistricting than the unadjusted data. One major concern was that the adjusted figure would be more than 5 million higher than the estimates derived from demographic analyses that updated the 1990 census using birth, death, and immigration records. This discrepancy could occur because the undercount in 1990 was larger than previously believed, or because the demographic analyses failed to capture all the population's growth, including, perhaps, undocumented immigrants. Others were concerned that the ACE was missing duplicate records and underestimating the overcount. Some experts argue that the demographic analyses are indeed flawed⁵ and that adjustment should not have been rejected on these grounds. However, the committee noted it could not resolve these issues before the April 1st deadline for releasing redistricting files that the states needed to redraw the districts for congressional and state legislative seats.⁶

A re-analysis of the ACE revised the post-stratification factors and found additional erroneous enumerations. The March 2001 ACE estimated a population of 253 million and an undercount of 3.3 million. The revised October ACE II population was 248.3 million, suggesting a net overcount of 1.9 million, with 4.7 million additional erroneous enumerations detected by ACE Revision II. The revised estimate of the undercount of blacks was 1.8 percent (down from 2.2 percent in the initial ACE and 4.6 percent in the 1990 PES), and the revised estimate for Hispanics fell to 0.71 percent, which is not statistically different from zero. The initial ACE estimate of the 2000 Hispanic undercount had been 2.9 percent, the 1990 PES estimate 5.0. The initial ACE estimated undercount of American Indians on reservations was 4.7 percent, down from 12.2 percent in the 1990 PES. The revised ACE estimated a net undercount of only -0.88 percent for American Indians on reservations, an undercount not significantly different than zero.⁷

If one accepts the ACS Revision II estimates, the decision that census counts estimated from the initial ACE could not be taken as more accurate than the unadjusted counts was correct. More important, the results suggest that the longstanding undercount of the population and the differential undercount of minorities and children was dramatically reduced in the 2000 census,

5 See <http://www.cmbp.gov/downloads/study-030601-passel.pdf>

6 See pp. 11-12 in U.S. Census Monitoring Board (2001).

7 See pp. 4-5 in Mule (2003).

and perhaps even eliminated for Hispanics and American Indians on reservations.

Implications for 2010

What can this teach us about reducing or eliminating undercounts in the 2010 census?

First, that it can be done – the 2000 census came within reach of this historic goal.

Second, that it will remain a challenge to maintain or improve upon the relative success of the 2000 census. Distrust and fear of government agencies will almost certainly remain barriers to enumeration, and one could not be surprised if perceived trade-offs between civil liberties and homeland security, and perceived hostilities and threats to immigrant and undocumented workers will make some populations more wary of this process. The Bureau will have to work as diligently and as creatively as it did in 2000 just to maintain the low or reduced undercount rates of 2000.

Third, that the Partnership and Marketing Program (PMP) made critical contributions to the success of the 2000 census. A recent paper⁸ estimates that the PMP increased the mail return rate for the census questionnaire, which correspondingly reduces the much more expensive resources that would have to be devoted to non-response follow-up. More importantly, the PMP is estimated to have achieved the greatest increases in the mail return rates in tracts identified as economically disadvantaged. Since these types of tracts tend to also have the highest undercounts, increasing their mail return rates would constitute a critical step towards reducing their undercounts. The paper also found above average increases in mail returns in tracts with high percentages of young, mobile and single individuals, and those with ethnic enclaves of renters and of homeowners. These types of tracts also have higher than average undercounts. This research on the 2000 PMP provides a very strong foundation for identifying comparable types of census tracts that could be targeted with large PMP resources in 2010.

Fourth, the large increase in enumerators targeted to hard-to-count areas was a *sine qua non* for success after the Bureau had to thoroughly redesign its census operations after the Supreme Court decision banned sampling for non-response only a little more than a year before Census day. The unavailability of hand-held collection instruments and the cutbacks in verifying the occupancy status of housing units in the dress rehearsals create challenges that must be overcome if the undercount is not to rise. However, these challenges hardly seem greater than those overcome by the Bureau in the year before the 2000 census, and can be overcome given strong leadership within the Bureau and focused attention and commitments to address these problems in the Administration and the Congress.

Fifth, providing multiple ways of being counted, including the “Be Counted” forms in local stores and public agencies, telephone modes, and, perhaps in 2010, internet access, improved response rates but also probably generated duplicate records will certainly enhance the accuracy of the count. Most census evaluation reports expressed confidence in the ability of highly

⁸ Bates, Nancy and Mary H. Mulry (2007) *Segmenting the Population for the Census 2010 Integrated Communications Program*.

improved technologies and procedures for identifying such duplicates. Extensive provision of multiple opportunities to respond seem essential for reducing undercounts in some populations. Implementing state-of-the art procedures for identifying and resolving possible duplicates therefore seems essential.

Sixth, about half of the undercount arises from missed housing units and households. The sharing and updating of the Bureau's Master Address File (MAF) by localities almost certainly contributed to reducing undercounts in the 2000 census, and an even stronger and more effective Local Update of Census Addresses (LUCA) will be needed for the 2010 census to be as successful, especially in localities with substantial numbers of newly constructed or vacated units. Units that homeowners, landlords, or renters have created without permits or permissions (e.g. sublets, converted garages or basements) have higher rates of being missed, and assurances are needed that the census does not disclose these to local agencies.

Seventh, findings of the PMP cited above point to the high value of the 140,000 partnerships that the Bureau formed with a wide spectrum of organizations, especially those serving hard-to-enumerate communities and populations. Many within household misses arise from the very complex set of 31 residence rules governing who should and should not be counted within households. A Bureau evaluation report strongly recommended that these be simplified, but it does not seem that much progress has been made in doing so. In 2010, special attention should be given to training partners in the rules most relevant to those they serve, and to enabling them to promote awareness of these and/or assistance, to their constituents.⁹

Few who had contact with some of these efforts would doubt that the partnerships played an irreplaceable role in promoting the 2000 census, in explaining its importance to specific communities of interest, and in overcoming sources of hesitancy and distrust specific to those communities. Together, they constituted perhaps the single greatest movement of civic awareness and participation since the Civil Rights Era, creating in many communities a sense that being counted by the census was a civic and moral duty, second (but as many came to understand, logically prior in many ways) to registering to vote.

Finally, however, it seems critical that operational problems, such as those reported with the handhelds, be resolved within a period of time that Bureau and the oversight committees deem appropriate. Alternative plans for the handhelds and any other operational components that did not function adequately in the dress rehearsals should be developed and prepared for implementation.

If efforts to maintain low undercounts or reduce them succeed, and as the likelihood that undercounts would affect apportionment or that differential undercounts would substantially alter redistricting for state and local offices, or affect the relative shares of funds allocated to different communities, perhaps the most important reason we must reduce and eliminate it is to affirm that each and every one of us, in all the diversity of our origins, communities, families, and perceptions, each and every one of us has a sacred civic duty to be counted in the census, and

⁹ See Report of the Executive Steering Committee for Accuracy and Coverage Evaluation Policy.

being counted is the first but necessary step to full and equal participation in our society.

Thank you for your attention. I will be happy to answer any questions you may have.

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