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SAMPLING AND STATISTICAL ADJUSTMENT IN THE DECENNIAL CENSUS: FUNDAMENTAL FLAWS

FOURTEENTH REPORT

BY THE

COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT

together with

ADDITIONAL AND DISSENTING VIEWS



SEPTEMBER 24, 1996.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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LETTER OF TRANSMITTAL

HOUSE OF REPRESENTATIVES,
Washington, DC, September 24, 1996.

Hon. NEWT GINGRICH,
Speaker of the House of Representatives,
Washington, DC.

DEAR MR. SPEAKER: By direction of the Committee on Government Reform and Oversight, I submit herewith the committee's fourteenth report to the 104th Congress.

WILLIAM F. CLINGER, Jr., *Chairman.*

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104TH CONGRESS, *2nd Session* } HOUSE OF REPRESENTATIVES { REPORT 104–821

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SEPTEMBER 24, 1996.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. CLINGER, from the Committee on Government Reform and Oversight, submitted the following

FOURTEENTH REPORT

together with

ADDITIONAL AND DISSENTING VIEWS

On September 18, 1996, the Committee on Government Reform and Oversight approved and adopted a report entitled "Sampling and Statistical Adjustment in the Decennial Census: Fundamental Flaws." The chairman was directed to transmit a copy to the Speaker of the House.

I. SUMMARY

The decennial census is mandated by the Constitution in order to apportion the Congress. Census data are used by every State for congressional and State redistricting. They are also used to enforce the Voting Rights Act. Numerous Federal and State programs, distributing billions of dollars each year, use decennial census data, or the intercensal estimates derived therefrom, for their implementation.

On February 28, 1996, the U.S. Department of Commerce and the Bureau of the Census publicly announced plans for a "reengineered 2000 Census." The plans call for the use of statistical methods in two separate instances: (1) to sample and estimate the final 10 percent of the population failing to respond in the actual enu-

meration[1] ('sampling'), and (2) to use a separate sample of houses to estimate those persons missed in the actual enumeration and the sample for nonresponse and revise it accordingly ('adjustment').

Statistical techniques have been used by the Census Bureau to assess the accuracy of census counts since 1950, but have never been used to "correct" the original number for use in apportioning Congress.[2]

After the Secretary of Commerce decided in July 1991 not to make a statistical adjustment to the 1990 Census, over 50 lawsuits erupted, culminating in the 1995 case considered by the Supreme Court, *United States* v. *City of New York.* The Court's decision, handed down in March 1996, upheld the Secretary's decision.[3]

The committee finds that the problems that surrounded the issue of statistical adjustment in the 1990 Census also plague the plans for the 2000 Census. This is compounded by the plans to incorporate sampling to complete the actual enumeration.

Findings

1. Sampling/statistical adjustment are inherently problematic given the subjectivity in the various decisions comprising the methodology.

2. The legal provisions that concern the use of sampling for apportionment purposes, both in the Constitution and in Federal law, are variously interpreted.

3. The inherent uncertainties of sampling/statistical adjustment may undermine public confidence in the decennial census and reduce public participation.

4. The Commerce Department and the Census Bureau have not clearly distinguished between the two statistical methods proposed for the 2000 Census: (1) sampling for nonresponse follow-up, and (2) sampling for the Integrated Coverage Measurement (ICM); nor have they clarified issues of accuracy respective to the two sampling techniques.

5. The sampling method for nonresponse follow-up introduces additional error into the process and may compromise the accuracy of small-area data which are important for congressional and State legislative redistricting.

6. The complexity of the two different sampling techniques being planned for the 2000 Census adds a great deal of risk to the operational feasibility of the Bureau's current approach.

Recommendations

1. Congress should work to clarify existing Federal statutes with regard to the use of sampling to make statistical adjustments to the census for apportionment purposes.

2. The Bureau should not use sampling methods to complete or adjust the actual enumeration of the 2000 Census which is constitutionally mandated for purposes of apportionment.

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[1] "Actual enumeration," for purposes of this report, means a count based upon physical evidence using methods such mail-out forms, administrative records, and enumerator visits.

[2] In the 1970 Census, the Census Bureau did rely on sampling to a limited extent when, at the 11th hour, it was discovered that a number of occupied housing units had been erroneously listed as vacant. This was not repeated in subsequent censuses.

[3] Supreme Court of the United States, Syllabus, *Wisconsin* v. *City of New York, et. al.,* No. 94–1614. Argued January 10, 1996—Decided March 20, 1996.

3. The Department of Commerce and the Bureau of the Census should prioritize the constitutional mandate of the decennial census—apportionment of the House of Representatives.

4. The Bureau should emphasize and strengthen its cooperative relationships with State and local elected officials, as well as members of local organizations, who are vital in helping increase response rates to the decennial census.

5. The Bureau should strengthen its plans for a thorough quality check of the 2000 Census and maintain open access to all processes for internal and external review and analysis.

II. BACKGROUND

On October 25, 1995, Congressman William H. Zeliff, Jr., chairman of the Subcommittee on National Security, International Affairs, and Criminal Justice, held an oversight hearing to examine testimony from Census Bureau officials regarding their plans for conducting the 2000 decennial census. Witnesses included Dr. Martha Riche (Director, Bureau of the Census, U.S. Department of Commerce), Francis DeGeorge (Inspector General, U.S. Department of Commerce), and Nye Stevens (Director of Federal Management and Workforce Issues, U.S. General Accounting Office). At the hearing, the Bureau announced a number of new initiatives, including the use of statistical sampling to complete the actual enumeration.[4]

On February 28, 1996, Commerce Department and Census Bureau officials publicly announced that sampling would be used in two different instances to compile the 2000 decennial census. The first use of sampling would be for nonresponse follow-up. After counting 90 percent of the population of a county by an actual enumeration, a sample would be selected from the remaining nonresponding addresses, at a rate of 1 in 10. (Sampling will not be used to complete the enumeration on American Indian reservations, in Alaska Native villages, in the Virgin Islands, or in the Pacific Island territories.)[5] The results of this sample would then be used to estimate the remaining 10 percent of the population.

The second use of sampling would take place essentially after the Bureau has the first census number (based on the 90 percent actual enumeration plus the 10 percent sample for nonrespondents.) This second sampling procedure, called an "Integrated Coverage Measurement," or ICM, would begin with a survey of 750,000 households. The Bureau would then match the responses in the ICM survey to the initial census results, and "equitably determine[s], for states and racial/ethnic groups, the number of people and housing units missed or counted more than once."[6] The Bureau would then integrate these statistical adjustments to the

[4] Martha F. Riche, testimony on behalf of the Bureau of the Census, before the House Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1995.

[5] The Plan For Census 2000, Bureau of the Census, U.S. Department of Commerce, April 5, 1996, p. III–34.

[6] The Plan, p. III–41.

initial results to produce a "one-number" census by the legal deadline of December 31, 2000.[7]

On February 29, 1996, the Committee on Government Reform and Oversight held a hearing to gather testimony from Members of Congress and outside experts regarding the Bureau's new methodology. Witnesses included Senator Herb Kohl (D–WI), Congressman Thomas Sawyer (D–OH), Congressman Thomas Petri (R–WI), Bruce Chapman (president, Discovery Institute, Seattle, WA), Dr. Barbara Bailar (vice president, Survey Research, National Opinion Research Center), Dr. Steve Murdock (director, Department of Rural Sociology, Texas A&M University), Dr. Kenneth Wachter (professor of statistics and demography, University of California at Berkeley), Dr. Charles Schultze (senior fellow, the Brookings Institution), and Dr. James Trussell (director, Office of Population Research, Princeton University).

On June 6, 1996, the Committee on Government Reform and Oversight held another hearing to air questions and concerns about statistical methods planned for the Census 2000. The witnesses were Dr. Everett Ehrlich (Undersecretary of Commerce for Economic Affairs, U.S. Department of Commerce), and Dr. Martha Riche (Director, Bureau of the Census, U.S. Department of Commerce). Congressman Thomas Petri delivered a brief statement on his bill, H.R. 3589, to prohibit the use of sampling in the 2000 Census. However, he did not receive questioning by Members of the committee.

III. FINDINGS

1. Sampling/statistical adjustment are inherently problematic given the subjectivity in the various decisions required

The committee is seriously concerned about the subjective nature of sampling as an estimation technique. The basic decision involved in any sampling methodology is the choice of the sample itself. The determinations of exactly who is in the sample and exactly what characteristics belong to those individuals are inherently subjective. The population and characteristics derived from a sample drawn by one person could look quite different from those drawn by another person.

For ICM, the sampling universe is divided into "post strata". Post strata are demographic subgroups with certain characteristics such as "black male renters age 30–49." An undercount rate is estimated for each post stratum, then assumed to hold constant across relatively large geographical areas. Failures in these assumptions of constancy, called "heterogeneity," caused major problems in the 1990 attempt to statistically adjust the census using a sample of the population, called a post-enumeration survey (PES).[8] Dr. Kenneth Wachter, who was a member of the Special Advisory Panel on Census Adjustment of the Secretary of Commerce from 1989 to

[7] December 31 of every decennial census year is the legal deadline for submission of the census numbers by the Secretary of Commerce to the Congress.

[8] The 1990 adjustment was to be based on a post enumeration survey (PES) of 150,000 households. A PES is a matching study in which an independent sample of households are interviewed at some point after Census Day. The information gathered is compared to census questionnaires from those same households to determine whether each person was correctly counted, missed, or double-counted in the census.

1991, reminded the committee in his February testimony that heterogeneity impaired the results of the 1990 adjustment sample, and he warned that it is still a problem which remains unsolved as we approach the year 2000.[9]

There is also the question of the adjustment methodology itself. For example, in its plans to implement the 2000 census ICM sample survey, the Bureau has yet to decide between two distinct estimation methodologies, "CensusPlus" and "Dual System Estimation" (DSE). In a Census Bureau document detailing the results and decisions of the 1995 Census Test, a discussion of these two methodologies gets to the heart of the problem. According to the memo:

> The potential sources of error and the implications of the quality of the raw data for the two methods are examined. *The effects sometimes are different for the two methods because the assumptions underlying them are different.*[10] (Emphasis added)

In fact, in a final comparison between the two choices for implementing the ICM, the Bureau memorandum states:

> As designed and implemented in the 1995 Census Test, dual system estimation (DSE) increases the estimate after nonresponse follow-up in the traditionally undercounted groups, primarily Blacks and renters, while CensusPlus does not. However, both CensusPlus and DSE increase the post nonresponse follow-up estimates for Hispanics. Only DSE increases the estimate for Asians and Pacific Islanders.[11]

That a choice of estimation methodologies, or a change in assumptions, can so directly change the results of the survey, is very disturbing to the committee. The inherent subjectivity of sampling, and choices of estimation methodologies, whereby outcome can be manipulated by a change in assumptions, bears directly upon issues of quality, accuracy, and fairness.

In deciding against adjustment in 1990, Commerce Secretary Mosbacher expressed concern that "adjustment would open the door to political tampering with the census."[12] Secretary Mosbacher noted the important distinction between actual enumeration and statistical adjustment. The unsettling danger of statistical adjustment "is that the choice of the adjustment method selected by Bureau officials can make a difference in apportionment, and the political outcome of that choice can be known in advance," while "the outcome of the enumeration process cannot be directly affected in such a way."[13]

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[9] Kenneth Wachter, testimony before the House Government Reform and Oversight Committee, February 29, 1996.

[10] Memorandum No. 46, "1995 Census Test Results," by E. Ann Vacca, Mary Mulry, Ruth Ann Killion, Decennial Statistical Studies Division, April 1, 1996, p. 25.

[11] Id., p. 38.

[12] Decision of the Secretary of Commerce on Whether a Statistical Adjustment of the 1990 Census of Population and Housing Should be Made for Coverage Deficiencies Resulting in an Overcount or Undercount of the Population, July 22, 1991, 56 Federal Register 33582 at 33583.

[13] Id.

2. The legal provisions that concern the use of statistical adjustment for apportionment purposes, both in the Constitution and in Federal law, are variously interpreted

There remains an important legal issue of whether sampling/adjustment for apportionment among the States is actually permitted by the Constitution. Article I calls for an "actual Enumeration . . ." and Section 2 of the 14th Amendment reads: "Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State . . .". In addition 13 U.S.C., Section 195 reads: "Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as "sampling" in carrying out the provisions of this title." Interpretations vary with regard to both the Constitution and Title 13.

In "The Plan For Census 2000," the claim is made with regard to statistical methods that, "[w]e are on solid Constitutional grounds. Our proposal will withstand all legal challenges . . ."[14] The committee is concerned about the use of such claims when the issue of the constitutionality of statistical methods has never been decided by the Supreme Court—the final court for constitutional questions. In addition, the issue of sampling for nonresponse to complete the actual enumeration has never been before *any* court.

3. The inherent uncertainties of sampling/statistical adjustment may undermine public confidence in the decennial census and reduce public participation

Two concerns Secretary Mosbacher raised in his decision not to adjust the 1990 Census were that: (1) the uncertainty of sampling and the potential for political manipulation would erode public confidence in the census numbers; and (2) by making a statistical adjustment, participation would decline both at the State and local levels and at the individual level.[15] Committee hearings have shown that these concerns still remain.

SAMPLING/ADJUSTMENT MAY ERODE PUBLIC CONFIDENCE

In deciding against adjustment, Secretary Mosbacher found it "unsettling that a subjective choice of statistical methodology can create such a dramatic practical difference in apportionment."[16] The shortcomings generally inherent in statistical formulations are that assumptions are the basis of any statistical formula attempting to establish precise populations. These assumptions are subjectively chosen and weighed, and thus potentially wrong.[17] In addition, adjusted numbers are no more than estimates and—unlike the actual enumeration, which is based on some verifiable physical

[14] The Plan, p. II–6.
[15] Secretary Mosbacher's Decision, 56 Federal Register 33582.
[16] Id., at 33583.
[17] Brief of U.S. Senators Herb Kohl, Arlen Specter and Russell Feingold, as Amici Curiae in Support of Petitioners, *United States Department of Commerce, et. al.,* v. *City of New York, et. al.,* November 9, 1995, p. 18.

evidence—entirely the product of statistical inferences with no physical evidence for verification.[18]

Because the assumptions on which the statistical adjustments rest are subjective, they are changeable. In comparing the two post-1990 census adjustment results released by the Bureau, it was found that minor technical differences caused substantial differences in results. The differences in terms of apportionment were extraordinary. Under one method, two seats in the House of Representatives moved, while under the other plan, only one seat moved.[19]

According to one expert reviewing post-1990 adjustment alternatives, among five reasonable alternative estimation methods, none of the resulting apportionments of the House of Representatives were the same. Eleven different States either lost or gained a seat in at least one of the five models.[20]

In the committee's February 29, 1996 hearing, several witnesses expressed concerns that the inherent uncertainties in sampling/adjustment may erode public confidence in the census numbers. Bruce Chapman, former Census Bureau Director under President Reagan, addressed the need to ensure that public perception is a key component of the Census 2000 plan.

> The current Census Director herself has spoken of the three legs of the census stool that must dictate the process: cost, accuracy, and *public perception.* The first two legs are important, as I have acknowledged, but if the latter breaks, the whole construction comes down. The term "public perception" could also be described as trustworthiness. In a time when public mistrust of government is rife, I question a change that would introduce the invention of statistical persons into the census—robots constructed of sampled data and intellectual abstractions—to stand in the place of real human beings.[21]

Congressman Tom Sawyer (D–OH) also underscored the importance of public confidence:

> I think that the underlying question that touches every one of the concerns that has been raised is one of confidence. If the count of the nation does not enjoy the confidence of the people that are being counted, it will not work, no matter what techniques, technologies, or other kinds of re-engineering take place.[22]

A ONE-NUMBER CENSUS WILL NOT AVERT POTENTIAL CRITICISM & LAWSUITS

"For 1990, the release of the figures from the original enumeration and from the Bureau's statistical procedures and evaluations

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[18] Id.
[19] Secretary Mosbacher's Decision, 56 Federal Register 33582 at 33583.
[20] Id.
[21] Bruce Chapman, testimony before the House Government Reform and Oversight Committee, February 29, 1996.
[22] Congressman Thomas Sawyer, testimony before the House Government Reform and Oversight Committee, February 29, 1996.

were available for independent analysis."[23] Skepticism and criticism of the statistical procedures became public knowledge from many of those independent reviews. In addition, over 50 lawsuits were subsequently filed over the 1990 census adjustment. However, the Bureau believes that by incorporating the sampling/adjustment procedures into the actual enumeration to produce a "one-number census," and avoiding a two-number census, such comparisons will be precluded, lawsuits will be avoided, and public confidence will not be undermined.

In Bureau Director Martha Riche's October 25 testimony, she stated, "we must produce a 'one-number census' that is right the first time and allows the decennial results to be determined by statisticians at the Census Bureau, not by lawyers and judges."[24]

Indeed, it is the thinking of many that after the 2000 Census, there will be, as there was after the 1990 census, a flood of lawsuits because of the controversial use of sampling to adjust the actual enumeration. Congressman Petri stated in his oral testimony before the committee on February 29, 1996 that:

> It [adjustment] will not settle or end litigation; it will just add to litigation, because you will have a floating undercount estimated number added to the basic head count, which then will be allocated on a political basis and lead to endless litigation and uncertainty, meanwhile undermining the integrity of the whole process, increasing cynicism, and reducing participation in future censuses.[25]

Former Census Bureau Director Bruce Chapman echoed the belief that more litigation will result from the Bureau's efforts to statistically adjust the 2000 Census. Referencing a news article with the Bureau's claim that an adjusted "one-number" census would help the Bureau get past the legal problems, he warned that, ". . . you at least ought to consider the possibility that you will have far more lawsuits in the future if you undertake sampling."[26]

Somewhat contradictory to its claim that lawyers and judges will not be determining the census totals, the Bureau's Plan for Census 2000 acknowledges that the Bureau must allocate funding for anticipated lawsuits because, "regardless of the census design chosen, the Census Bureau must prepare for legal challenges to census results and procedures."[27]

SAMPLING/ADJUSTMENT MAY DISCOURAGE STATE AND LOCAL PARTICIPATION

In deciding not to adjust the 1990 census, Commerce Secretary Mosbacher expressed concern that adjustment would remove the incentive of States and localities to join in the effort to get a full and complete count.[28] Historically, the Census Bureau has relied extensively on State and local leaders to encourage census partici-

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[23] Kenneth Wachter, testimony before the House Government Reform and Oversight Committee, February 29, 1996.

[24] Martha Riche, testimony before House Committee on Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1996.

[25] Congressman Petri, testimony on February 29, 1996.

[26] Bruce Chapman, oral testimony on February 29, 1996.

[27] The Plan, p. III–55.

[28] Secretary Mosbacher's Decision, 56 Federal Register 33582 at 33584.

pation. Acknowledging that it "cannot accomplish its goals for Census 2000 working alone",[29] the Bureau states that it "must build partnerships with state, local, and tribal governments and community groups." [30]

Because the census numbers are the basis for political representation at all levels and Federal funding allocations, States and localities have a vital interest in achieving the highest participation rates possible under traditional enumeration methods.[31] However, if civic leaders and public officials believe that statistical adjustments will remedy undercounts, it will be difficult for them to justify expending large amounts of money and resources on promotion and outreach programs. Without their support in creating public awareness and a sense of involvement in the census, participation is likely to decline further.

Committee members and witnesses at the February 29, 1996 hearing also expressed concerns that sampling/adjustment would discourage both State and local promotion and outreach efforts as well as individual citizen participation. Congressman Thomas Barrett (D–WI) stated in questioning the panel of Congressmen that, "the attitude that I think many Wisconsinites have on the attempts for the post-census adjustment was that we got these beautiful awards from the Federal Government telling us what a great job we had done and how proud they were of us, and that they were going to take away millions of dollars and [a] congressional seat as a result of the fine job that we did." [32]

In response to Congressman Barrett's question of whether the Bureau's move toward a sampling/adjustment approach creates disincentives for States to conduct promotion and outreach efforts, Congressman Thomas Petri (R–WI), asked rhetorically, "if the adjustment is going to be done in any event, why should they spend any money at the local level to encourage compliance with the census procedures?" [33]

Congressman Sawyer agreed with Congressmen Barrett and Petri that "that kind of response, that kind of participation should always be rewarded in a democracy, and [he] would not want to do anything to undermine the importance of that in the public mind." [34] Congressman Petri later stated that:

> We have an important national obligation, as a Congress, to attempt to overcome [the declining response rate] through the best public relations campaign we can do of emphasizing to people that this is a responsibility and privilege of citizenship to be counted, and, if we think that people are not participating in it, to reach out and commu-

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[29] The Plan, p. II–2.

[30] Id.

[31] Secretary Mosbacher's Decision, 56 Federal Register 33582 at 33584.

[32] Congressman Thomas Barrett, in questioning witnesses at the House Government Reform and Oversight Committee hearing, February 29, 1996. The State of Wisconsin conducted a statewide public awareness campaign and a targeted outreach program which included a matching grant program aimed at traditionally undercounted groups. As a result of State and local efforts, Wisconsin had the highest voluntary mail response rate in the country—75 percent] compared to 64 percent nationwide. The Census Bureau formally recognized Wisconsin's efforts. Despite the accomplishment, the post-census adjustment proposed by the Census Bureau would have caused Wisconsin to lose a seat and a portion of its Federal funds.

[33] Congressman Thomas Petri, testimony before the House Government Reform and Oversight Committee, February 29, 1996.

[34] Sawyer, testimony, February 29, 1996.

nicate more, and send people by, or try to get in touch with their communities, and use 101 techniques to involve them in the process, not just to give up and then try to adjust it through the political process and think that we've accomplished something.[35]

SAMPLING/ADJUSTMENT MAY CAUSE FURTHER DECLINE IN PUBLIC PARTICIPATION

Voluntary participation is the cornerstone of the decennial census because voluntary public response through mail-back is the most accurate, effective and efficient source of census data.[36] The significance of a large mail-back response it not just that it reduces the staff, time and money required, but that it produces the best quality census data.[37] When voluntary participation in the census declines, the costs rise exponentially while accuracy decreases. Each percentage point of mail-out nonresponse will cost an additional $25 million for the 2000 Census which is an $8 million increase over the cost of the 1990 Census nonresponse rate. Accordingly, a "high level of public cooperation is the key to obtaining accurate data at a reasonable cost." [38]

Although sampling for nonresponse to complete the count may reduce the need for staff and reduce costs, the use of statistical adjustments may discourage citizen participation and erode public confidence in the census numbers. While the Bureau's research shows that a number of demographic, socioeconomic and attitudinal variables affect public response rates, Bureau data also suggests that the public's willingness to cooperate is, at least in part, within the Bureau's control.[39] However, sampling/adjustment is not an effort directed at increasing response rates, it simply is a response to declining public participation. The census questionnaire's length, complexity and intrusiveness have all been identified as discouraging respondents from completing the form. The committee is concerned that, if individuals believe they will be counted regardless, they will not expend the time and effort to respond, causing what Undersecretary Ehrlich referred to as "participation meltdown." [40]

4. The Department of Commerce and the Census Bureau have not clearly distinguished between the two statistical methods proposed for the 2000 Census: (1) sampling for nonresponse follow-up, and (2) sampling for the Integrated Coverage Measurement (ICM); nor have they clarified issues of accuracy respective to the each of these sampling techniques

In the public document entitled "Plan for Census 2000," revised April 5, 1996, the Department and Bureau claim that sampling for nonresponse follow-up will reduce cost *and improve accuracy.* Spe-

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[35] Petri, testimony, February 29, 1996.
[36] General Accounting Office, "Decennial Census: 1990 Results Show Need for Fundamental Reform," GAO/GGD–92–94, June 1992, p. 35.
[37] Id., p. 36.
[38] Id., p. 35.
[39] Id., p. 5. The Bureau is planning a number of improvements to increase response rates, i.e., more user-friendly forms, multiple mailings, reminder cards, making the forms more available, and forming partnerships with State, local, and community groups.
[40] Everett M. Ehrlich, oral testimony before the Committee on Government Reform and Oversight, June 6, 1996.

cifically, on page II–5, the public is guaranteed that this sampling technique will "ensure that Census 2000 is built around a solid core of field results, while reducing the cost *and improving the accuracy* of the data on the final increment of the population." (Emphasis added) This statement would have the public believe that the 10 percent sample of the hardest to reach populations will increase the accuracy of the count for these populations over a 100-percent physical enumeration.

However, on May 17, 1996, at a meeting of the Census 2000 Advisory Committee, Bureau Director Martha Riche stated that the 10 percent sampling for nonrespondents was only meant to address cost concerns; it was *not* an effort to address the differential undercount.[41] This statement was reiterated by other Bureau officials on May 24, 1996, in a meeting with committee majority and minority staff. At that meeting, minority staff Ben Cohen questioned Bureau experts about whether their sample for nonresponse would improve the differential undercount. The Bureau's response was that they had no hard evidence that quality would be improved, but they "assume" the quality would be improved; that the sample for nonresponse was primarily an effort to save money.[42]

Congresswoman Carrie Meek (D–FL), at the February hearing, stated that it concerned her that cost seemed to be the driving factor behind the push for sampling for nonresponse follow-up: "I am very concerned that one of the motives here, Mr. Sawyer, may be to save money. I don't think this is the place we can save money . . .".[43] Indeed, as Bureau officials have stated, saving money has been a primary element driving the Bureau toward use of sampling for nonresponse follow-up.

5. The sampling method for nonresponse follow-up introduces additional error into the process and may compromise the accuracy of small-area data which is important for congressional and State legislative redistricting

In hearings before the committee, concerns were raised by both Members and outside experts regarding the introduction of sampling error into the count. At the October 25, 1995 hearing of the Subcommittee on National Security, International Affairs, and Criminal Justice, GAO testified that, "[t]he nature of sampling itself, however, increases the statistical uncertainty of the data on nonrespondents at lower geographic levels. The magnitude of statistical uncertainty is dependent on the size of the sample, the method used to draw the sample, and the size of the universe being sampled."[44] In other words, the uncertainty of the sampling methodology for nonresponse follow-up is inherent given the indeterminate configuration of the nonresponding households which comprise

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[41] House Government Reform and Oversight Committee staff notes, Meeting of the Census 2000 Advisory Committee, May 17, 1996.

[42] The meeting on May 24 included committee majority staff, Jane Cobb; minority staff, David McMillen, staff of Representative Carrie Meek, Ben Cohen; and Census Bureau officials Robert Marx, Paula Schneider, and John Thompson, among others.

[43] Congresswoman Carrie Meek, oral comments, House Government Reform and Oversight Committee hearing, February 29, 1996.

[44] L. Nye Stevens, testimony of the General Accounting Office before the House Government Reform and Oversight Committee, Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1995.

that particular sample universe and the method used to select the sample households.

The Bureau itself admits the negative implications of the 10-percent sample for nonresponse follow-up. "The Plan For Census 2000" indicates:

> Visiting only a sample of nonresponse housing units raises issues of equity, reliability, and the size of the margin of uncertainty associated with the totals obtained. These issues are particularly important for small population groups and for populations in small towns and neighborhoods.[45]

The problem of accuracy was identified in testimony received at the October 25, 1995 hearing of the Subcommittee on National Security, International Affairs, and Criminal Justice. In his evaluation of the Bureau's plans to conduct the 2000 Census, Commerce Inspector General Francis DeGeorge testified that, "using a 1-percent sample of the entire population to represent the last 10 percent may introduce statistical uncertainty, producing lower quality information. At 90 percent, the people who have not yet responded are the hardest to count, so a disproportionate number of them will be represented in the sample, possibly leading to missing information and thus introducing statistical bias." [46]

In its April 5, 1996 version of "The Plan For Census 2000," the Bureau admits also that, "[s]ampling for nonresponse will increase the margin of uncertainty for estimates obtained from the sample form data items." [47] The sample form, or "long form," which gathers socio-economic information, goes to one in six households during the decennial census.

In testimony received by the committee on February 29, 1996, issues of accuracy and the erosion of data quality were major concerns among the witnesses. Dr. Robert Murdock, a rural demographer and professor at Texas A&M University, testified that:

> I am particularly concerned about this issue from our experience base in working in rural areas across the south, because the areas that we have found it most difficult to get an adequate sampling frame have been those areas that have hard to enumerate populations, particularly rural minority populations. In sum, about this issue, I am concerned that the use of sampling to complete the census count will lead to a degradation in the quality of statistics, the quality of data from the census for small rural areas. According to Census' own figures, 48 percent of the 39,000 governmental units in the United States in 1990 had populations of less than 1,000. And two-thirds, more than 67 percent, had less than 2,500 persons.[48]

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[45] The Plan, p. III–35.

[46] Francis D. DeGeorge, testimony of the Inspector General of the Department of Commerce before the House Government Reform and Oversight Committee, Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1995.

[47] The Plan, p. III–35.

[48] Robert Murdock, oral testimony before the House Government Reform and Oversight Committee, February 29, 1996.

Dr. Murdock observed further in his written statement that, "[s]ince these elements of inaccuracy would, in turn, likely disproportionately impact minority racial/ethnic groups, such problems could also impact the capability of the Integrated Coverage Measurement procedures to produce accurate estimates of the level of undercount." [49]

At the same hearing, Congressman Sawyer also expressed concerns about losing quality data with sampling. He states in his written testimony that:

> I am also concerned about the Bureau's statement that it plans to hold long form distribution to 'smallest possible sample of households'. . . . If, however, the sample is as small as it can be, I have increased concerns about the use of statistical methods in the completion of nonresponse follow-up in the final 10 percent of households. Long-form data is used for a wide array of applications. It forms the basis of important economic and societal models. The private-sector uses the data for broadly public goods—where to place a 500-job factory, for instance. And local governments—the largest non-Federal user of census—use that information to plan traffic patterns, locate schools and do critical urban planning. A suspect result will compromise expert and public confidence in these numbers that the nation needs to make myriad decisions on long-term planning. . . . Clearly, there are trade-offs in the use of statistical methods. The Bureau must work to limit any potential loss in the quality of the data.[50]

Dr. Charles Schultze, chair of the National Research Council's "Panel on Census Requirements in the Year 2000 and Beyond," while stressing the cost and difficulty of achieving accurate counts in the hardest to enumerate places, admitted in his testimony that, "[o]n the other hand, the use of surveys and sampling techniques will mean that the estimates for very small areas will have greater variation above and below the true count." [51]

Dr. Schultze's testimony centered around the findings of the Census 2000 panel, which produced a book entitled "Modernizing the U.S. Census" (1995, National Academy of Sciences). According to the findings of the panel, data accuracy is relative to the particular size of the geographical or political area.[52] In other words, a census incorporating nonresponse sampling and an adjustment based on the ICM sample could raise the level of accuracy for a numeric estimate at the national level (numeric accuracy). However, the degree of error introduced by those techniques increases as the estimates are applied to the State and then sub-state levels (distributive accuracy). This has implications for congressional and State legislative redistricting, as well as distribution of Federal funds at the State level and below.

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[49] Murdock, testimony, February 29, 1996.
[50] Thomas Sawyer, testimony before the Committee on Government Reform and Oversight, February 29, 1996.
[51] Charles Schultze, testimony before the Committee on Government Reform and Oversight, February 29, 1996.
[52] Modernizing the U.S. Census, National Academy of Sciences, National Academy Press, 1995, p. 35.

Ultimately sampling, be it for nonresponse or ICM, does not allow for knowing definitively the individual attributes of the population it is imputing into an area. In particular, sampling does not allow for knowing where the people missed actually live, so the accuracy of the population distribution becomes inferior. For congressional redistricting and for local-area decisions that involve smaller areas, the relative accuracy of the population count for blocks and aggregations of blocks is very important. In sum, the committee found overwhelming concern among Members of Congress and outside experts that sampling would compromise the quality of data at the small, but critical, geographic areas such as blocks and aggregations of blocks.

Again, while driven toward nonresponse sampling primarily by cost concerns, it appears that the fundamental constitutional purpose for the census—to apportion Congress—has been de-emphasized. The Department of Commerce and the Bureau of the Census should prioritize the constitutional basis of the decennial census as well as their use for congressional and State legislative redistricting. The Bureau should strive hardest for accuracy and fairness in getting the proportional distribution of the population physically right among geographical and political units in order to fulfill our constitutional mandate, first and foremost.

6. The complexity of the two different sampling techniques being planned for the 2000 Census adds a great deal of risk to the operational feasibility of the Bureau's current approach

In 1990, in the attempt to adjust the census, the Bureau sampled 150,000 households in what it called a "post enumeration survey," or PES. The results of the survey were matched to the original count to adjust for the estimated undercount/overcount. This was one of the largest surveys ever undertaken, and it was not free from error, as indicated below. For the 2000 Census, the Bureau plans to sample 750,000 households, or *five* times the number of households in the 1990 sample. The committee has concern about the sheer volume of this sample and the capability of the Census Bureau to operationally carry out a sample of this magnitude and complexity in the time to meet the statutory deadline for completion of the census. The Members are concerned as well that there are no plans for independent analyses of the survey to measure its quality prior to its use in adjusting the census.

Dr. Wachter, who testified as an expert witness for the Government in the 1980 and the 1990 lawsuits over census adjustment, expressed his concern at the February hearing about the complexity of the plans for the statistical adjustments to the 2000 Census:

> The first priority should be a 'Fail-Safe Census'. Statistical methods need to be simple and direct so that malfunctions will be detected and corrected. Unfortunately, the Bureau's plans for Census 2000 add further layers of complexity onto the complications of 1990, and leave the final numbers even more vulnerable to statistical error.[53]

[53] Wachter, testimony, February 29, 1996.

Indeed, with either statistical methodology contemplated for ICM, CensusPlus or DSE, the potential for added error appears great when one considers the numerous sources of error. In the Census Bureau memo detailing the results of the 1995 Census Test (Memorandum No. 46, April 1, 1996), a host of error sources are evaluated, and include: (1) contamination error, (2) reconciliation bias, (3) outmover error, (4) rostering error, (5) combined data collection error, (6) CensusPlus residency coding error, (7) DSE matching error, (8) missing data, and (9) sampling error.[54]

The importance of assessing the quality of a survey, or sample, cannot be overstated. The General Accounting Office, in its 1991 report entitled "The 1990 Census Adjustment," indicates that:

> The difficulties in successfully completing the PES and the fact that the PES, *like all surveys,* is subject to a variety of errors, underscores the importance of completing sound and careful assessments of the quality of the PES. . . . The value of the PES estimates will be appreciably reduced if the error in those estimates is considered significant. Thus assessments of the PES form a critical part of the data the Secretary of Commerce will need to make the adjustment decision.[55]

Yet, under the Bureau's concept for a "one-number census" there will not be a set of figures for the actual enumeration (completed with or without the sample for nonresponse) against which to independently evaluate the ICM estimate. Only the final ICM version will be made available to the public. Dr. Wachter, in his testimony before the committee, also expressed concerned about this issue. "The figures behind the final figures will not be available outside the Bureau. If choices of detail shift a dozen seats in the House of Representatives, we shall never know. If the problems of 1990 are brought under control by the Bureau's new initiatives, we shall never know." [56]

BUREAU'S PLANS LIMIT QUALITY CONTROL

In addition, the Bureau, citing funding constraints, plans only a limited quality control program compared to the 1990 program where quality control was conducted for more operations and with higher sampling rates.[57] For the 2000 Census, the Bureau will implement quality control operations only to detect major errors in data collection and processing operations. The most serious implication of this plan is stated by the Bureau: "Data collection and processing operations may yield results of lower quality than those achieved in the 1990 Census." [58]

Even with the quality control procedures in place for 1990, the committee was reminded of a major problem that arose with the 1990 attempted adjustment. Senator Kohl stated at the hearing in February that, "[i]n retrospect, we were extremely fortunate that

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[54] "1995 Census Test Results," Memorandum No. 46, by E. Ann Vacca, Mary Mulry, Ruth Ann Killion, Decennial Statistical Studies Division, April 1, 1996, p. 28.

[55] "1990 Census Adjustment," General Accounting Office, GAO/GGD–91–42, March 1991, p. 16.

[56] Wachter, testimony, February 29, 1996.

[57] The Plan, p. III–39.

[58] Id., p. III–39.

we did not adjust the 1990 Census. Several months after that contentious decision in July of 1991, the Census Bureau discovered an error in the adjustment procedures that significantly reduced the undercount."[59]

Dr. Wachter echoed this concern about potential errors. He recalled that, "If Secretary Mosbacher had decided to use the statistically adjusted numbers as 1990 census counts, a seat in the House of Representatives would have been shifted from Pennsylvania to Arizona by an error in a computer program. It affected a million people in the count. It remained undiscovered for months after the Secretary's decision, buried under layer upon layer of complications in the statistical procedures."[60]

The computer coding error, according to Dr. Wachter:

> epitomizes the problems of statistical adjustment in 1990. Complications were added in pursuit of incremental gains in accuracy. However, many small gains can be offset by a few large errors. In 1990, the complexity of their modeling systems made it hard for the Bureau to detect big mistakes and uncertainties, until long after the critical decisions had been made. Indeed, we and others inside and outside the Bureau later found systematic errors in the procedures originally used to evaluate the adjustment proposed to Secretary Mosbacher: the original evaluations overstated the merits of adjustment. The more complex are the modeling systems used, and the tighter the constraints of time and money, the harder it becomes to make realistic assessments of the statistical uncertainties in the model outputs.[61]

Dr. Barbara Bailar, former Associate Director for Statistical Standards and Methodology at the Census Bureau, testified about her concerns for the ability to carry out quality control with the complex plans for the 2000 Census:

> I am concerned that the Bureau is instituting so many new procedures and processing steps without having adequate quality control. Not that I am advocating quality control for documentation purposes only, but I believe procedures should be built into the census processes that tell the Census staff quickly if something is going wrong. That the Bureau staff worrries that funding constraints limit their quality control program makes me very concerned.[62]

IV. RECOMMENDATIONS

1. Congress should work to clarify existing Federal statutes with regard to the use of sampling to make statistical adjustments to the census for apportionment purposes

The reason there are so many lawsuits over the issue of sampling/adjustment is because Federal statutes have been interpreted

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[59] Senator Herb Kohl, testimony before the House Government Reform and Oversight Committee, February 29, 1996.
[60] Wachter, testimony, February 29, 1996.
[61] Id.
[62] Barbara Bailar, testimony before the House Government Reform and Oversight Committee, February 29, 1996.

in various ways. It is the desire of this committee to avoid the numerous lawsuits that came after Secretary Mosbacher's decision not to adjust the census. Litigation is expensive for the American taxpayer. Though we do not have exact figures, we expect that it has cost plenty for the Federal Government to argue its cases before the courts. Congress should clarify its intent with respect to sampling/adjustment by amending 13 U.S.C., sections 141 and/or 195.

2. The Bureau should not use sampling methods to complete or adjust the actual enumeration of the 2000 Census which is constitutionally mandated for purposes of apportionment

Congress should not allow sampling/statistical adjustment to modify or replace the actual enumeration. The primary reason is that a statistical adjustment is inherently subjective and open to potential manipulation of the final count. It is also possible that sampling/adjustment could undermine public confidence in the census and erode participation by State and local groups, and individuals.

3. The Department of Commerce and the Bureau of the Census should prioritize the constitutional mandate of the decennial census—apportionment of the House of Representatives

It appears that the fundamental constitutional purpose for the decennial census—to apportion the House of Representative—has been de-emphasized. However, this is the element that must take precedence—regardless of cost. The Bureau should strive hardest for accuracy and fairness in terms of getting the proportional distribution of the population physically right among geographical and political units. The committee believes this can only be achieved by performing an actual enumeration.

4. The Bureau should emphasize and strengthen its cooperative relationships with State and local elected officials, as well as members of local organizations, who are vital in helping increase response rates to the decennial census

The committee recognizes and is concerned that there has always been an undercount, and that in the 1990 Census there was an increase in the differential undercount of minorities. This is not the fault of the Bureau of the Census. Socio-economic changes have impacted greatly on the ability of the Bureau to locate everyone. Additionally, there are more people who are skeptical of "government" and who refuse to cooperate with the census. These people exist in all areas of this country, urban, rural, and suburban. However, no-one is omniscient. We do not know for sure exactly what these people look like. We do not know, nor have we ever known, the "true" population.

The Bureau is spending considerable time and resources developing ways to improve response rates and encourage participation in the census. A major effort will be in encouraging stronger relationships with State and local elected officials, as well as nongovernmental organizations, who can help educate communities about the importance of the census to individuals personally. They know their communities better than anyone. And it is clearly in their in-

terest to make sure everyone is counted. To embark on a program of estimating the last 10 percent of the population would certainly undermine this important effort.

5. The Bureau should strengthen its plans for a thorough quality check of the 2000 Census and maintain open access to all processes for internal and external review and analysis

It is disturbing that the Bureau is so dramatically de-prioritizing quality control in the 2000 Census. In doing so, not only is the Bureau jeopardizing the quality of the decennial census, but it is jeopardizing its reputation as the finest statistical agency in the world. Resources must be made available to evaluate the complicated steps in an undertaking of this magnitude. This country can ill-afford a $4 billion mistake.

CLARIFYING COMMENTS OF HON. WILLIAM F. CLINGER, JR.

There are many subjective elements in the adjustment process, including choices of adjustment methodology, statistical models for estimation, post stratification, and sample design. Experience in 1990 showed these choices had substantial impacts, and introduced undesirable, arbitrary elements into the census process. However, with the probability sampling techniques used by the Census Bureau, given the sample design, the choice of the sample itself is objective.

HON. WILLIAM F. CLINGER, JR.

ADDITIONAL VIEWS OF HON. STEVEN SCHIFF

The decennial census and how it is conducted have always been sensitive and controversial matters. The data from the final census are used for a variety of purposes. The Constitutional mandate to apportion the U.S. Congress is by far the most recognized purpose of the Census. But, census data are also used in the allocation of billions of dollars each year in Federal and State grants.

The Census Bureau has decided for the first time to use sampling techniques in the 2000 decennial census to adjust the actual enumeration. With the stakes being so high for States and localities, this is undoubtedly a very important decision.

I agree with many of the recommendations in the committee's report. I especially agree with the recommendation that the Bureau should enhance partnerships with State and local officials in order to provide the most accurate survey possible. This would be most helpful for those areas, such as New Mexico, which have a significant percentage of the population who for a variety of reasons do not wish to respond to the initial mail-out form. In my view, the Bureau should make every effort in conjunction with State and local governments to account for nonrespondents by physical means.

All reasonable efforts should continue to be made to achieve a maximum actual count of individuals. However, after such count is complete, I believe that there is still additional room for finalizing population numbers through the use of sampling.

No one believes that any process of individual identification will produce a totally accurate result. Using reasonable sampling techniques, after a detailed count, will help us achieve a more accurate final result, than by an individual count, alone.

HON. STEVEN SCHIFF.

ADDITIONAL VIEWS OF HON. ILEANA ROS-LEHTINEN

I have several comments about the committee report: "Sampling and Statistical Adjustment in the Decennial Census: Fundamental Flaws" which I am stating here for the record.

The report rejects the use of statistical adjustment to help address the undercount problem in the 1990 census, and in particular, the undercount of minority population. I believe that a statistical adjustment must be looked at as a possible way to improve the census count, but that we must ensure that accuracy is not sacrificed in any adjustment for an undercount.

I am deeply concerned about a possible undercount in the next census in 2000 which would unfairly impact on my home State of Florida and other areas throughout the Nation with high growth rates and high minority populations. The Census Bureau estimates that the last census failed to count 340,000 people in Florida or approximately 2.6 percent of the population and over 60,000 people or 3.0 percent of the population in Metropolitan Dade County. This compares with a 2.1 percent undercount of the total U.S. population at the national level, and an undercount of 4.8 percent of the black population and 5.2 percent of the Hispanic population throughout the Nation.

This undercount costs Florida and other areas untold millions of dollars in Federal funds. It is essential that the 2000 census be as accurate as possible since it determines such important matters as the size of each State's Congressional delegation, its votes for President in the Electoral College, the boundaries of numerous districts at all levels of government, and the determines the distribution of government funding formulas.

I believe that the Census Bureau's proposed plan for sampling for nonresponse in the 2000 census needs further modification, especially in ensuring accuracy for small area population figures which are important in assuring fairness in redistricting based on the census figures. I have joined with my Miami colleague, Rep. Carrie Meek, in co-sponsoring H.R. 3558 which would require the Census Bureau to count 90 percent of the population at the census tract level before sampling.

This approach of sampling at the census tract level is supported by Chuck Blowers, Chief of Research and Oliver Kerr of the Metropolitan Dade County Department of Planning, Development and Regulation. They agree that this requirement "will result in more accurate census counts, especially in areas of minority concentration and those with many recent immigrants."

I strongly concur with the report's recommendation that the Census Bureau "should emphasize and strengthen its cooperative relationships with state and local elected officials, as well as members of local organizations, who are vital in helping increase response rates to the decennial census". My local county planning officials would appreciate having access to the Census Bureau's address listings by tract and block far enough in advance so that they can make corrections to it prior to the next census.

HON. ILEANA ROS-LEHTINEN.

DISSENTING VIEWS OF HON. CARDISS COLLINS, HON. HENRY A. WAXMAN, HON. TOM LANTOS, HON. MAJOR R. OWENS, HON. EDOLPHUS TOWNS, HON. JOHN M. SPRATT, JR., HON. LOUISE MCINTOSH SLAUGHTER, HON. GARY A. CONDIT, HON. BERNARD SANDERS, HON. KAREN L. THURMAN, HON. CAROLYN B. MALONEY, HON. BARBARA-ROSE COLLINS, HON. ELEANOR HOLMES NORTON, HON. JAMES P. MORAN, HON. GENE GREEN, HON. CARRIE P. MEEK, HON. CHAKA FATTAH, AND HON. ELIJAH E. CUMMINGS

The majority has proposed a report that rejects sampling to count the most difficult to count in the census, and adjusting the census for those that cannot be found. Yet both have been proposed by the Census Bureau to constrain the cost of the census and make it more accurate. This outright rejection of sampling and adjustment, without any proposal for achieving the dual charge from Congress of a more accurate and less expensive census, is untenable.

There has been considerable confusion about the proposals to use sampling in the 2000 census. The Census Bureau has proposed two uses of sampling: once 90 percent of the households have been counted, the Census will draw a 1 in 10 sample of the remaining households (commonly referred to as "sampling for nonresponse"); and second, a separate survey will be conducted to determine who was missed or counted twice, and the population counts adjusted accordingly (called Integrated Coverage Measurement by the Census Bureau). Several members have expressed concerns about the implementation of sampling for nonresponse, for example, Rep. Meek has introduced H.R. 3558 to constrain the geography used for this sample.

Passing this report puts the committee on record opposing any adjustment. If the 2000 census is not adjusted for the undercount of minorities, it would continue a 60 year tradition of measuring the problem, but doing nothing about it. Congress has repeatedly called for a more accurate census. With the passage of this report, we will be settling for an inaccurate census.

Dr. Barbara Bryant, Director of the Census Bureau under President Bush, in testimony before the House Committee on Post Office and Civil Service, said that the census had reached the limits of what could be done with traditional methods. Congress has called for a census that is less expensive and more accurate.[1] Three separate panels of experts convened by the National Academy of Sciences have recommended the use of sampling and statistical methods to achieve these goals.

[1] Dr. Barbara Bryant, testimony before the House Committee on Post Office and Civil Service, July 16, 1991.

We agree that the plans laid out by the Census Bureau need further definition, and that the plans for sampling for nonresponse need to be modified. Where we differ is the resolution. The Republican report offers no solutions. We must be sure that methods used to improve accuracy and reduce costs are, as Dr. Kenneth Wachter testified before this committee, "simple, direct, and fail-safe." However, to prohibit new methods that could reduce cost or improve accuracy is premature.

FINDINGS

1.The fundamental purpose of the decennial census of population is to account for all residents of the United States for the purpose of apportioning the seats in the House of Representatives among the States.

2. Sixty years of research on the census has shown that there will always be some residents for whom the census has not accounted. The net undercount has come down from 5.4 percent in 1940 to 1.2 percent in 1980, but rose to 1.8 percent in 1990,[2] suggesting that we may have reached the limit to which we can expect the census to go using traditional direct enumeration methods.

3. It is unlikely that the census can account for the final 1 to 2 percent of the population without employing some type of statistical procedure. In order for these methods to achieve widespread public acceptance, they must be simple. The results cannot be altered by changing the assumptions within the method, and they must be subject to widespread independent review by both the public and the professional community.

4. The cost of a traditional census has increased dramatically, doubling in constant dollars from 1970 to 1980, and increasing another 25 percent in 1990. Part of the cost increase is the result of a declining percentage of forms returned by mail, from 78 percent in 1970 to 75 percent in 1980 to 65 percent in 1990; however; the largest increase in cost does not correspond with the largest drop in the mail-back response rate.[3]

5. The Census Bureau has proposed a budget of $3.9 billion for the 2000 census,[4] with major savings achieved by accounting for the last 10 percent of the population through a 1 in 10 sample. However, Congress has shown a reluctance to fund the census at this level. Both the FY 1995 and FY 1996 budget resolutions funded below the requested level, and the chairman of the Commerce, State, and Justice Appropriations Subcommittee has indicated that the Census Bureau will not be funded at the requested level for FY 1997.[5] Both the House and Senate Appropriations subcommittees have proposed funding only about two-thirds of the increase requested to fund 2000 census activities in FY 1997.

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[2] Hogan, Howard and Gregg Robinson, "What the Census Bureau's Coverage Evaluation Programs Tell Us About Differential Undercount," unpublished paper.

[3] *Decennial Census: 1990 Results Show Need for Fundamental Reform,* U.S. General Accounting Report GAO/GGD–92–94, June 1992. Other factors for declining mail returns, cited by the General Accounting Office, include illiteracy, non-English-speaking immigrants, concerns about privacy, the hectic nature of modern living, undocumented aliens, growth in commercial mail and telephone solicitations, lack of confidence in civic institutions, and increasing numbers of nontraditional households and family arrangements.

[4] *The Plan for Census 2000,* Bureau of the Census, U.S. Department of Commerce, April 1996.

[5] Roll Call, May 6, 1996.

6. The implementation of sampling to account for the last 10 percent has not received wide-spread public acceptance. Members of Congress, as well as the Census Bureau's African-American Advisory Committee,[6] have expressed strong reservations about the choice of geography and detrimental effects on the count of minorities. On the other hand, a National Academy of Sciences panel,[7] convened at the request of the Census Bureau, strongly supported sampling to account for the last 10 percent. In testimony before the Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, both the General Accounting Office[8] and the Department of Commerce Inspector General[9] supported sampling.

BACKGROUND

Finding 1. The fundamental purpose of the decennial census of population is to account for all residents of the United States for the purpose of apportioning the seats in the House of Representatives among the States.

The decennial census of population was created in Article I, Section 2 of the Constitution:

> Representatives and direct Taxes shall be apportioned among the several States which may be included in the Union, according to their respective Numbers, . . . The actual enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct.[10]

The Constitution makes no mention of any criteria for being included in the census other than residence. Both the courts and Congress have affirmed that the census is to include all residents. In 1990, the U.S. District Court in Pittsburgh, PA threw out a lawsuit that would have blocked the Census Bureau from counting illegal aliens in the 1990 census. A similar suit was dismissed in 1980.[11] In August 1989, Congress rejected an amendment to the FY 1990 appropriations for the Department of Commerce that would have required the Census Bureau to exclude illegal aliens from the 1990 census count.[12] Rep. Stephen Horn expressed these sentiments at the February 29, 1996 hearing of the Committee on

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[6] "Minutes of the December 1995 Meeting of the Minority Advisory Committees", U.S. Bureau of the Census, unpublished.

[7] White, Andrew A. And Keith F. Rust, eds., *Sampling in the 2000 Census: Interim Report I,* Panel to Evaluate Alternative Census Methodologies, Committee on National Statistics, National Research Council, National Academy Press, Washington, DC, June 1996.

[8] L. Nye Stevens, Director of Federal Management and Workforce Issues, U.S. General Accounting Office. Testimony before the House Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1995.

[9] Francis DeGeorge, Inspector General, U.S. Department of Commerce. Testimony before the House Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1995.

[10] *The Constitution of the United States,* Article I, Section 2.

[11] Rich, Spencer, "Suit to Block Illegal Aliens From Census Count Voided," the Washington Post, May 10, 1989, p. A 17.

[12] Biskupic, Joan, "Dodging Touchy Census Issue, House Passes Funding Bill," Congressional Quarterly, August 5, 1989, p. 2047.

Government Reform and Oversight, ". . . as you know, the Constitution says nothing about citizens; it's 'persons.'" [13]

In *Franklin* v. *Massachusetts* [14] the Supreme Court rejected a claim by the State of Massachusetts and two of its registered voters. Massachusetts argued that the method used by the Census Bureau to count Federal employees serving overseas was consistent with the constitutional language and goal of equal representation. The Supreme Court upheld the authority of the Secretary of Commerce to define the boundaries of "usual residence".

Finding 2. Sixty years of research on the census has shown that there will always be some residents for whom the census has not accounted. The net undercount has came down from 5.4 percent in 1940 to 1.2 percent in 1980, but rose to 1.8 percent in 1990,[15] suggesting that we may have reached the limit to which we can expect the census to go.

There has been marked improvement in reducing the undercount since the first estimates from a Census Bureau program called Demographic analysis. Demographic Analysis is limited because it only gives measures for the whole country, and cannot provide estimates for ethnic groups or racial groups other African-American. However, it has a long history of research, provides more age detail than other measures, and provides greater confidence in describing differences in the undercount between groups.[16] The table below gives the net undercount for the United States from 1940 to 1990.[17]

	1940	1950	1960	1970	1980	1990
Total	5.4%	4.1%	3.1%	2.7%	1.2%	1.8%
Black	8.4%	7.5%	6.6%	6.5%	4.5%	5.7%
Nonblack	5.0%	3.8%	2.7%	2.2%	0.8%	1.3%
Difference (Black - Nonblack)	3.4%	3.6%	3.9%	4.3%	3.7%	4.4%

While the net undercount for the United States has declined, the black/nonblack differential has increased with each census, with the exception of 1980, reaching the highest measured difference in 1990. This differential draws into question the equity of the census data, especially when used for apportionment, and by extension the electoral college, as well as for distributing Federal funds. It shows clearly that the census does not account for all residents of the United States. Over 4 million people were left out of the 1990 census.[18]

In addition to racial differentials, the undercount varies by geography. Following the 1990 census, the Census Bureau conducted a

[13] Transcript of the Committee on Government Reform and Oversight hearing "The 2000 Census: Putting Our Money Where it Counts," February 29, 1996, p. 48.
[14] 505 U.S. 788 (1992).
[15] Hogan, Howard and Gregg Robinson, "What the Census Bureau's Coverage Evaluation Programs Tell Us About Differential Undercount," unpublished paper.
[16] Ibid. p. 5.
[17] Ibid. p. 5.
[18] The undercount for the census is always reported as a net figure which includes both people counted more than once, and people not counted at all. In 1990 approximately 10 million people were missed in the census and 6 million people were counted twice, resulting in a net undercount of 4 million.

"post-enumeration survey" which provides more geographic detail than demographic analysis as well as estimates for other racial and ethnic groups.

The post-enumeration survey shows considerable differences in the net undercount from State to State, from a low of 0.3 percent in Pennsylvania to a high of 3.4 in the District of Columbia. The undercount is often talked about in terms of the problems of enumeration in urban areas and the problems of high undercounts for minorities. However, many non-urban States with a larger than average rural population have undercount rates above the national average of 1.6 percent:[19] Idaho (2.0 percent); Montana (2.4 percent); Mississippi (2.1 percent); North Carolina (1.8 percent); and South Carolina (2.0 percent). Large undercounts also occur in States like California (2.7 percent), Florida (2.0 percent); Louisiana (2.2 percent), Maryland (2.1 percent); New Mexico (3.1 percent) and Texas (2.8 percent).[20]

Finding 3. It is unlikely that the census can account for the final 1 to 2 percent of the population without employing some type of statistical procedure. In order for these methods to achieve widespread public acceptance, they must be simple. The results cannot be altered by changing the assumptions within the method, and they must be subject to widespread independent review by both the public and the professional community.

The demands of a statistical adjustment are severe. The census counts people block by block across the country, and those counts by block are used to build congressional districts, State legislature districts, and to allocate funds for a variety of Federal programs like the grants to school districts for disadvantaged children under Title I of the Elementary and Secondary Education Act.

Debate over the proposed adjustment for the 1990 census was fierce. Dr. Barbara Bryant, Director of the Census Bureau during the 1990 census, acknowledged that the procedures were ones over which reasonable demographers and statisticians could disagree. Some, like the State of Wisconsin, argued that adjusting the census would be unfair to those States that made an effort to get a complete count. Others argued for the fairness of an adjustment. Peter Chacon, then chairman of the California State Assembly Elections and Reapportionment Committee testified "I would close my testimony by urging the Subcommittee to do all in its power to impress upon the Secretary of Commerce that he should order an appropriate adjustment of the 1990 census so that undercounted minorities can achieve the political representation to which they are entitled." [21]

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[19] The estimate of a 1.6 percent net undercount is from the post-enumeration survey. The estimate of 1.8 percent is from demographic analysis. The two methods yield slightly different estimates for the same group, but there are no distinct differences.

[20] Hogan, Howard, "The 1990 Post-Enumeration Survey: Operations and New Estimates," paper presented at the 1992 Annual Meetings of the American Statistical Association, August 1992, U.S. Bureau of the Census, Washington, DC, and unpublished tables provided by the Bureau of the Census.

[21] Chacon, Peter, testimony at the joint hearing before the Subcommittee on Census and Population of the House Committee on Post Office and Civil Service and the Subcommittee on Government Information and Regulation of the Senate Committee on Governmental Affairs, March 19, 1991, Serial No. 102–5.

The fundamental uses of census data require that any shift from the traditional methods be done with a clear focus on public perception. In his testimony before the Committee on Government Reform and Oversight, Rep. Tom Sawyer said "We are talking about accuracy; we are talking about cost; and we are talking about confidence." In answering questions he elaborated, "I think we need to be able to adjust the techniques that we use, but we should do so in a way that sustains the broad public confidence and improves the accuracy."[22] Dr. Kenneth Wachter echoed this sentiment when he said "Statistical methods need to be simple and direct so that malfunctions will be detected and corrected." He went on to state, ". . . if statistical methods are to be given a role in the generation of the Census 2000 counts, then those methods should be simple, direct, and fail-safe."[23]

Finding 4. The cost of the census has increased dramatically, doubling in constant dollars from 1970 to 1980, and increasing another 25 percent in 1990. Part of the cost increase is the result of a declining rate of forms returned by mail, from 78 percent in 1970 to 75 percent in 1980 to 65 percent in 1990, however; the largest increase in cost does not correspond with the largest drop in the mail-back response rate.

Between 1984 and 1993, the Census Bureau spent $2.6 billion to plan, conduct, process, and publish the 1990 census.[24] The Census Bureau and GAO estimate that the same census in 2000 would cost $4.8 to $5 billion.[25] The 1970 census cost $10 per household. In 1980, the cost per household, in constant dollars, was $20 per household, and in 1990, the census cost $25 per household. The $3.9 billion estimate would hold the cost in constant dollars to about $25 per household.

At the same time costs have been escalating, participation in the mail-out/mail-back portion of the census has been declining. In 1970 the Census Bureau began to use the U.S. Postal Service to deliver census forms. During that census, 78 percent returned the form by mail. In 1980, 75 percent of the households returned the form by mail. For the 1990 census, the Census Bureau budgeted for a 70 percent mail-back return rate, however, only 65 percent were return by mail. Current research by the Census Bureau suggests that the comparable rate for 2000 will be approximately 55 percent. Response rates also vary by geography. Large metropolitan areas usually experience the lowest mail-back rates, and 23 of the 32 largest cities had response rates lower than the national average. Boston, Chicago, Cleveland, New Orleans, New York, and Washington, DC, all had mail-back response rates below 55 percent.

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[22] Transcript of the Committee on Government Reform and Oversight hearing "The 2000 Census: Putting Our Money Where it Counts," February 29, 1996, p. 21 and p. 44.

[23] Ibid., p. 117.

[24] According to Census Bureau figures, data collection accounted for 49.7 percent of the total cost. Data processing and geographic support accounted for an additional 28.6 percent. The remaining 21.7 percent was for planning and direction (6.6 percent), data dissemination (5.8 percent), research and evaluation (4.4 percent), promotion and outreach (2.8 percent), and other activities (2.1 percent).

[25] *The Plan for Census 2000,* Bureau of the Census, U.S. Department of Commerce, April 1996.

The decline in participation, particularly in returning the form by mail, is often identified as a major source of the increased cost of the census. The National Academy of Sciences panel on census requirements stated "A substantial decline in the population's response rate to the mailed census questionnaire . . . has been an important cause of the cost escalation, . . ." [26] Similarly, Dr. Everett Ehrlich, Under Secretary for Economic Affairs at the Department of Commerce, at the June 6, 1996 hearing before the Committee on Government Reform and Oversight, said "The cost of the census per respondent in 1990 dollars went up very dramatically, particularly, in 1990, up to 25 1990 dollars per respondent, and it did so because of this fundamental failure of design that I discussed earlier. That is, participation rates were falling, . . ." [27]

The doubling of cost between 1970 and 1980 corresponds with a 3 percentage point decrease in the mail-back response rate. Between 1980 and 1990, the mail-back response rate fell 10 percentage points, but corresponded to a 25 percent increase in cost. The National Academy of Sciences panel suggests that this anomaly may be due to a more intensive effort to enumerate everyone through labor-intensive measures, a decline in the quality of temporary personnel, and an increased demand for accurate counts at small geographic levels.[28]

Finding 5. The Census Bureau has proposed a budget of $3.9 billion for the 2000 census, with major savings achieved by accounting for the last 10 percent of the population through a 1 in 10 sample. However, Congress has shown a reluctance to fund the census at this level. Both the FY 1995 and FY 1996 budgets were funded below the requested level, and the chairman of the Commerce, State, and Justice Appropriations Subcommittee has indicated that the Census Bureau will not be funded at the requested level for FY 1997.

On February 28, 1996, the Census Bureau announced its plans for the 2000 census. Innovations to past censuses include a redesigned "user-friendly form; plans to mail reminder letters and replacement forms to those who do not return their form by mail; a plan to account for the last 10 percent of the population with a sample (sampling for nonresponse); and an adjustment procedure incorporated into the census called "integrated coverage measurement." [29] The estimated cost for the 2000 census is $3.9 billion; just under the $25 per household cost of the 1990 census. Sampling for nonresponse accounts for about $500 million of the $900 million savings over the estimated $4.8 billion cost of repeating the procedures from 1990.

Congress has shown a reluctance to fund the 2000 census even at the $3.9 billion estimated by the Census Bureau. In FY 1994, the first year of the 2000 census budget cycle, the Census Bureau

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[26] Edmonston, Barry and Charles Schultze, eds., *Modernizing the U.S. Census,* Panel on Census Requirements in the Year 2000 and Beyond, Committee on National Statistics, National Research Council, National Academy Press, 1995, p. 44.

[27] Dr. Everett Ehrlich, transcript of testimony before the Committee on Government Reform and Oversight, June 6, 1996, p. 72.

[28] Op. Cit. p. 53.

[29] *The Plan for Census 2000,* Bureau of the Census, U.S. Department of Commerce, April 1996.

requested $23.1 million for census 2000 activities, and was allocated $18.7 million by the Appropriations Subcommittee on Commerce, Justice, State and Judiciary. In FY 1995 the Census Bureau requested 48.6 and received $42.1 million. The Census 2000 request for FY 1996 was $60.1 million, and the appropriation was $50.6 million. In FY 1997, the Census Bureau has requested a total of $105 million for the 2000 census activities. Following the Appropriations Subcommittee hearing on the Census Bureau budget, Chairman Hal Rogers was quoted as saying that the $3.9 billion is "entirely too much money" and said that he was "disinclined to agree to the funding request" of $105.[30] Both the House and Senate Appropriations Subcommittees have proposed funding only about two-thirds of the increase requested to fund 2000 census activities in FY 1997. At the June 6, 1996, Committee on Government Reform and Oversight hearing, Rep. Gene Green said, ". . . you cannot have it both ways. If we are going to cut the budget for the census, we are going to have to sample more. . . ."[31]

Finding 6. The implementation of sampling to account for the last 10 percent has not received wide-spread public acceptance. Members of Congress, as well as the Census Bureau's African-American Advisory Committee, have expressed strong reservations about the choice of geography and detrimental effects on the count of minorities. On the other hand, a National Academy of Sciences panel, convened at the request of the Census Bureau, strongly supported sampling to account for the last 10 percent. In testimony before the Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, both the General Accounting Office and the Department of Commerce Inspector General supported sampling.

The implementation of sampling to account for the last 10 percent has not received wide-spread public acceptance. At the February 28, 1996, announcement of the 2000 plan, the Census Bureau reported that following the second questionnaire mailing, it would either phone or visit households that had not mailed back the form, until it had counted 90 percent of each county. At the December 1995 meeting of the minority advisory committees, Dr. Robert Hill, a member of the African-American Advisory Committee, commented that he "had not seen evidence that the Bureau would do extra outreach activities in minority communities; distributing paper advertisements will not suffice."[32] Ms. Barbara Sabol, also a member of the African-American Advisory Committee supported his comments, and said that she "visualized a disproportionate under representation of African-Americans. . . ." She went on to say that "the Bureau placed more emphasis on reducing the cost of the census than on reducing the differential undercount.[33] Dr. Juliette Thorpe Okotie-Eboh, chair of the African-American Advi-

[30] Roll Call, May 6, 1996.
[31] Transcript of testimony before the Committee on Government Reform and Oversight, June 6, 1996, p. 25.
[32] Minutes of the joint meeting of the Census Advisory Committee on African American, American Indian and Alaska Native, Asian and Pacific Islander, and Hispanic Populations, December 11–13, 1995, p. 53.
[33] Ibid.

sory Committee, criticized the choice of counties as the geographic level for sampling.[34]

At the Government Reform and Oversight hearing on February 29, 1996, following the announcement of the census 2000 plan, Rep. Carrie Meek raised concerns about the use of sampling, and the possibility of aggravating the undercount.[35] Rep. Meek subsequently introduced H.R. 3558 which would require the Census Bureau to count 90 percent of the population at the census tract level before sampling.

Others have been more strident in their criticism of sampling. Rep. Thomas Petri said "As many members of this committee are aware, I believe sampling techniques should be used only for guidance in conducting the census and not for adjusting the final numbers. To rely on sampling rather than the final census count would be comparable to changing election returns if they are at variance with public opinion polls."[36] Rep. Thomas Barrett said ". . . it seems to me that reliance on sampling, then, would allow—using your statement of a bicoastal tendency—would allow Congress, the House of Representatives, since you have much more electoral strength in California, New York, Florida, those States, to use mechanisms that we pass here in the House to benefit those States. They've got the votes here. Let's just use a sampling that benefits those areas of the country."[37]

On the other hand, a National Academy of Sciences panel, the General Accounting Office, and the Department of Commerce Inspector General all endorse the use of sampling. Francis DeGeorge, Department of Commerce Inspector General, testified before the Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, "The bureau has selected a design for the 2000 census that includes some sampling but does not go far enough. . . ."[38] L. Nye Stevens, Director of Federal Management and Workforce Issues, U.S. General Accounting Office, testified "We are particularly encouraged by the decision to adopt sampling among the nonresponse population as a basic foundation of the count. We have long advocated this step."[39]

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[34] Ibid.

[35] Transcript of testimony before the Committee on Government Reform and Oversight February 29, 1996, pp. 54–58.

[36] Ibid., p. 31.

[37] Ibid, pp. 42–43.

[38] Transcript of testimony before the Committee on Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1995, p. 13.

[39] L. Nye Stevens, Director of Federal Management and Workforce Issues, U.S. General Accounting Office. Testimony before the House Government Reform and Oversight Subcommittee on National Security, International Affairs, and Criminal Justice, October 25, 1995.

In its first interim report, the National Academy of Sciences panel on census methodology stated "We support the use of sampling procedures in the follow-up of households that do not respond by mail (or telephone call) to the census. . . ." [40]

HON. CARDISS COLLINS.
HON. HENRY A. WAXMAN.
HON. TOM LANTOS.
HON. MAJOR R. OWENS.
HON. EDOLPHUS TOWNS.
HON. JOHN M. SPRATT, JR.
HON. LOUISE MCINTOSH SLAUGHTER.
HON. GARY A. CONDIT.
HON. BERNARD SANDERS.
HON. KAREN L. THURMAN.
HON. CAROLYN B. MALONEY.
HON. BARBARA-ROSE COLLINS.
HON. ELEANOR HOLMES NORTON.
HON. JAMES P. MORAN.
HON. GENE GREEN.
HON. CARRIE P. MEEK.
HON. CHAKA FATTAH.
HON. ELIJAH E. CUMMINGS.

[40] White, Andrew A. And Keith F. Rust, eds., *Sampling in the 2000 Census: Interim Report I,* Panel to Evaluate Alternative Census Methodologies, Committee on National Statistics, National Research Council, National Academy Press, Washington, DC, June 1996.

ADDITIONAL VIEWS OF HON. THOMAS M. BARRETT

I agree with the concerns expressed in this report about the sampling and statistical adjustments in the Census Bureau plan for the upcoming decennial census, and the subjectivity involved with such methodologies.

As the 1990 Census demonstrated, our current decennial census methodology, based on actual enumeration, is far from perfect. The 1990 Census resulted in significant undercounts in many areas in our Nation, specifically in communities with high numbers of minority residents.

The undercount problem must be addressed. The census determines how entitlement and other resources will be distributed and plays the central role in the apportionment of Representatives in Congress. The census updates the status and provides data about who Americans are and how Americans live. The census forms the base core of information that affects policy and planning decisions in all levels of our public and private sectors. Census results affect every American. For our Nation to obtain a useful accounting, every American resident deserves to be counted. If we are to have a fair and just society, the undercount problem must be resolved. Yet, we know we will never be able to count absolutely everyone.

My concern revolves around how we remedy the undercount problem. I strongly believe that we must mount a strong and dedicated effort to vastly improve our system based on actual enumeration. The way to do this is to spend the dollars necessary for an accurate count.

In converse to actual enumeration, sampling would reduce incentives for States and local governments to strive for an accurate count because they could rely on the inaccuracies of sampling to make up for deficiencies.

In these politically volatile times, I do not believe we should go down the road of picking and choosing a census methodology reliant on sampling and statistical adjustments which contain subjective criteria and assumptions. A methodology that may benefit minority groups today could be later modified or exchanged for another that could be designed to the detriment of specific minority populations. As we well know, political and judicial winds do shift. The people, however, do not go away; and their actual existence cannot be politically modified. Therefore, we need to find ways to actually count them.

Unlike many of my colleagues, I am not opposed to any and all proposals to adjust the census. I also disagree with many of my colleagues who seem satisfied with the status quo. Those of us who oppose the Census Bureau's sampling proposal must put the money

where our mouths are and adequately fund the Census Bureau and State and local entities involved with census efforts. I am disappointed that the majority of this Congress has expressed their disagreement with the Census Bureau's sampling proposals by slashing the Census budget.

HON. THOMAS M. BARRETT.

ADDITIONAL DISSENTING VIEWS OF HON. CARRIE P. MEEK

Not fully counting African-Americans in the decennial census originates with the Constitution. Article 1 section 2 of the Constitution, as ratified in 1788, provides that only three-fifths of the actual number of slaves should be counted in the decennial census for purposes of determining the number of Representatives each State shall have.

While this constitutionally mandated undercount of African-Americans was repealed in 1868 by the ratification of the 14th amendment, we continue to see its legacy in the taking of the census. The committee's report, unfortunately, takes a complacent view of the continuing failure to count all African-Americans and other minorities.

In August 1992, the Census Bureau reported that the 1990 decennial census had failed to count about 4 million persons—or about 1.6 percent of the Nation's population. This undercount was not random. The Census Bureau further reported that the undercount in the 1990 census was above average for African-Americans and other minorities. For African-Americans, the undercount was 4.4 percent. For Hispanics, the undercount was 5 percent. For American Indians, Eskimos, and Aleuts it was 4.5 percent. For Asians and Pacific Islanders, it was 2.3 percent. The committee's report could have stated these simple facts about the undercount, but inexplicably failed to do so.

When I was a teacher, I noticed some students sat in front and always volunteered. Others sat in the back and never wanted to be noticed. They were all important to me.

The Constitution now requires that we conduct the 2000 census in the same way as a good teacher conducts a class. We must try to count everyone, not just those who are easy to count.

The committee's report attacks the use of sampling, but the report is unfair because it does not explain why the Census Bureau is proposing use sampling in the 2000 census. Look at the six findings of the report. There is no finding explaining why the Census Bureau has recommended two types of sampling for the 2000 census. There is no finding explaining that the Census Bureau is proposing to use sampling for two simple reasons: to come closer to counting everyone and to reduce costs.

One type of sampling—called Integrated Coverage Measurement—calls for a sample of 750,000 households to correct for the undercount that has been present in all past censuses and was worse in the 1990 census than in the 1980 census.

This undercount deserves recognition by the committee as a serious problem. But the 21 page single-spaced report almost completely ignores the undercount problem.

There is no mention of the undercount on page 1.

There is no mention of it on page 2.

There is no mention of it on page 3.
There is no mention of it on page 4.
There is no mention of it on page 5.
There is no mention of it on page 6.
There is no mention of it on page 7.
There is no mention of it on page 8.
Pages 9 and 10 briefly refer to an undercount, but don't explain what the undercount problem is.
There is no mention of it on page 11.
On page 12 there is a brief discussion of whether sampling will help solve the undercount problem, but there is still no explanation of what the undercount problem is.
There is no mention of it on page 13.
There is no mention of it on page 14.
There is a one-sentence reference to undercount on page 15, but again there is no explanation of what the problem is.
There is no mention of it on page 16.
There is no mention of it on page 17.
There is no mention of it on page 18.
There is no mention of it on page 19.
Finally, in one sentence near the bottom of page 20, the report says the committee "is concerned that there has always been an undercount, and that in the 1990 Census there was an increase in the differential undercount of minorities." That is the report's entire explanation of the problem that led the Census Bureau to recommend the Integrated Coverage Measurement type of sampling for the 2000 census.

The committee's report is backward. The problem should be fully explained at the beginning, not barely mentioned at the end.

Since the report almost completely ignores the undercount problem, it is important to remember the undisputed facts about the undercount in the 1990 census.

The Census Bureau reported in 1992 that for some States the 1990 undercount was above the national average of 1.6 percent. For example, in California about 835,000 people—or 2.7 percent of the population—were not counted. In New Mexico about 48,000 people—or about 3.1 percent of the population—were not counted. In Florida about 260,000 people—or about 2 percent of the population—were not counted.

The Census Bureau also reported in 1992 that the 1990 undercount for certain areas within a particular State was well above the national average of 1.6 percent. For example, in Long Beach City, CA, 17,000 people—or 3.7 percent of the population—were not counted. In Dade County, FL, 74,000 people—or 3.7 percent of the population—were not counted. In Fairfax County, VA, 15,000 people—or 1.8 percent of the population—were not counted.

The other type of sampling proposed by the Census Bureau is the so-called "sampling for nonresponse." For the 2000 census the Bureau proposes taking a 1 in 10 sample of nonrespondents after 90 percent of the households in a county have responded. The Census Bureau estimates that this type of sampling will save $500 million as compared to trying to count everyone directly.

I have criticized the details of this proposal, and my bipartisan bill, H.R. 3558, would require that the sampling be done within census tracts and not within counties.

But criticizing the details of a sampling proposal is a far cry from a wholesale condemnation of any type of sampling.

The committee's report does not recognize that many experts support the use of sampling in the 2000 census if it is done carefully. The June 1996 Interim Report of the Committee on National Statistics of the National Research Council, entitled *Sampling in the 2000 Census,* concluded that "A combination of sampling for nonresponse follow-up and for integrated coverage measurement is key to conducting a decennial census at an acceptable cost, with increased accuracy and overall quality, and reduced differential undercoverage." The September 1996 report of a panel of the American Statistical Association concludes that the use of sampling in the 2000 census "has the potential to increase the quality and accuracy of the count and reduce costs."

The committee's report is opposed by many groups whose members will use the 2000 Census. A letter form Ann Azari, the mayor of the city of Fort Collins, states that the Advisory Committee opposes the committee's report and supports the use of sampling to improve the accuracy and reduce the cost of the 2000 census. The members of the Advisory Committee include the American-Arab Anti-Discrimination Committee, the Business Roundtable, the National Association for the Advancement of Colored People, the National Association of Counties, the National Association of Towns and Townships, the National Conference of State Legislatures, the National Council of LaRaza, the National Congress of American Indians, the National Governors Association, the National League of Cities, the U.S. Chamber of Commerce, and the U.S. Conference of Mayors. The Japanese American Citizens League, in a separate letter, says it opposes the committee's report because barring the use of sampling in the 2000 census means that "the outcome of the 2000 census will be no different from those past: unequal and unfair."

In conclusion, the committee's report is a one-sided attack on any use of sampling in the 2000 census. The report does not fairly reflect the concerns of those members of the committee who believe that the careful use of sampling in the 2000 census will help this Nation erase the bitter legacy of the original constitutional mandate to not fully count African-Americans.

HON. CARRIE P. MEEK.

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