

## WHO COUNTS? CENSUS CONTROVERSIES FOR THE MILLENNIUM

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Keywords: Census, Dual Systems Estimation

Recent statements of Congressional leaders, public officials, political commentators and reporters in the print media about the upcoming census fall into the category of myths about the census in the past, rather than as historical statements about what the census has been or descriptions of the census plans for 2000. Census politics burst into the national news in the summer of 1997 when Republicans attached to the flood relief bill for the Dakotas a rider banning the use of sampling in the 2000 census. The President vetoed the flood relief bill and after several more months of negotiation and politics, Congress and the President compromised on language in the appropriations bill. That compromise created a Census Board to monitor plans for and administration of the 2000 Count and effectively put off the resolution of the sampling dispute to 1998 and beyond. The Census Bureau and the Clinton administration promote the 2000 plan as thoughtful and innovative methods within the time honored tradition of counting. Republican Congressmen and a number of state and local officials conjure up a pending disaster, political manipulation of the count and general incompetence within the Census Bureau officialdom. Speaker of the House Newt Gingrich and the Southeastern Legal Foundation have filed separate lawsuits in federal court against the Clinton administration in an effort to block key aspects of the 2000 Census Plan (United States House of Representatives et al., vs. United States Department of Commerce, et al.; Glavin, Barr et al., vs. Clinton et al.). Our goal is to identify the myths to provide an alternative history of the plans for 2000 in the hopes of generating some dialog on the difficult technical issues of counting still to be resolved for 2000.

### Part I: Myths in the Making

**Myth 1.** The census is an actual physical headcount of each person: "The First Congress directed federal marshals to locate every person who could be found, and to count each person they identified."<sup>1</sup>

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<sup>1</sup> Memorandum for Plaintiff in Support of its Motion for Summary Judgment, U.S. House of Representatives et al., v. U.S. Department of

**Myth 2.** "[T]he decennial census has been conducted as an 'actual enumeration' by counting the national population in every census in the history of this country."<sup>2</sup>

**Myth 3.** The 'actual enumeration' has been highly successful at counting the population: "The 1990 census accurately counted 98.4% of the population . . ."<sup>3</sup>

**Myth 4.** The Constitution requires that each decade the federal government take a census and reapportion 435 seats in the House of Representatives and 535 votes in the Electoral College among the states. The Census Bureau and the Commerce Secretary tell Congress how to reapportion itself each decade.

**Myth 5.** By using sampling the Commerce Department and the Census Bureau are attempting to violate the constitution by not counting everyone:

Defendants [U.S. Department of Commerce] have adopted a program for conducting the 2000 census that abandons any attempt to locate all persons who can be found and count them. Instead, Defendants will estimate the population using statistical methods commonly referred to as "sampling." Defendants' census totals will include millions and millions of people who are simply deemed to exist based upon computations of statisticians advising the Census Bureau. The totals used for apportionment may vary dramatically depending upon which

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Commerce et al., April 6, 1998, p. 1.

<sup>2</sup>Memorandum of Law in Support of Plaintiffs' Motion for Summary Judgment, Glavin, Barr et al., v. Clinton et al., April 6, 1998, p.1.

<sup>3</sup> Drew Days, Solicitor General of the United States, Statement from January 10, 1996 oral argument before the United States Supreme Court in Wisconsin v. New York, 517 U.S. 1 (1996), the 1990 Census adjustment lawsuit.

of a number of demographic and statistical assumptions Defendants choose to make.<sup>4</sup>

**Myth 6.** The Commerce Department plan will manipulate the census totals for the benefit of Democrats. According to the headline from Human Events, of August 22, 1997, "Census Sampling Would Favor Democrats." The 2000 census results, declared Human Events,

will guide the reapportionment process in which congressional district lines are redrawn to conform to population shifts. Statistical errors in the count, accidental or deliberate, could result in as many as 24 GOP seats being lost, according to election strategists.

Human Events quoted the analysis of the Statistical Assessment Service, which claimed that sampling has potential for political corruption:

"This also creates a powerful political temptation for the party in power to skew the sample adjustment its way. The ability to "create" or "eliminate" millions of strategically placed citizens with the stroke of a pen introduces a potent and disturbing new political weapon," they said.

**Myth 7.** Sampling is unconstitutional; the federal courts decided during the 1990 census lawsuits that sampling in the census was unconstitutional: "[T]he fact remains that sampling [for the census] is a risky scheme of dubious constitutionality."<sup>5</sup>

**Myth 8.** Sampling or statistical estimation is not scientific. "Sampling is no science."<sup>6</sup>

**Myth 9.** The framers of the constitution were familiar with methods of statistical estimation and rejected their use in the census:

Even though [Thomas] Jefferson [Secretary of State and the official in

charge of the 1790 census] 'was familiar with methods of statistical estimation, having used them effectively in his 1782 survey of Virginia's population, he did not adjust the 1790 census numbers despite his knowledge that the "omissions . . . ha/d/ been very great."<sup>7</sup>

And now everyone is confused:

**Myth 10.** Recent censuses are/are not the most accurate on record: ". . . [T]he 1980 and 1990 censuses are believed to have been far and away the most accurate on record, accounting in net for 98.8% and 98.2% of the population, respectively. . . ." <sup>8</sup> Or: "Census Bureau officials estimate the 1990 undercount was the largest in the census' 200-year history."<sup>9</sup>

## Part II: The Reality

Federal officials have taken a decennial census of the U.S. population every ten years since 1790, as mandated by Article 1, Section 2 of the 1787 Constitution and the enabling legislation for taking the census. The officials in the executive branch in charge of taking the census have traditionally counted the population by establishing procedures to contact the head or reference person of every household in the country in person or by mail. They will do so again in 2000. The head or reference person in each household is in turn responsible for reporting the population in that household and mailing back the form to the federal government or responding to an enumerator. At no point in the nation's history was there is a physical count of each person in the country.

The officials in charge of taking gathering the information from all the households in the country in turn aggregate the results by states and localities and forward the results to Congress. Congress in turn sets

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<sup>4</sup>Memorandum for Plaintiff in Support of its Motion for Summary Judgment, U.S. House of Representatives et al., v. U.S. Department of Commerce et al., April 6, 1998, p. 1.

<sup>5</sup>Rep. Dennis Hastert, R-IL, quoted in Associated Press report, July 14, 1997.

<sup>6</sup> William Safire, New York Times, December 7, 1997

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<sup>7</sup> Memorandum for Plaintiff in Support of its Motion for Summary Judgment, U.S. House of Representatives et al., v. U.S. Department of Commerce et al., April 6, 1998, p. 12.

<sup>8</sup> Memorandum for Plaintiff in Support of its Motion for Summary Judgment, U.S. House of Representatives et al., v. U.S. Department of Commerce et al, April 6, 1998, pp. 13-14.

<sup>9</sup> Philadelphia Inquirer, May 7, 1998.

in motion a procedure to reapportion the seats in the House of Representatives and the votes in the Electoral College on the basis of the reported census results. Congress determines the apportionment method, the size of the House of Representatives, and the dates by which the census results should be reported. Since 1910 Congress has maintained the size of the House of Representatives at 435 members. Prior to 1910, the House size generally changed after each census. Congress, over the course of the nation's history, has employed a number of different apportionment formulas. The 'method of equal proportions' has been in use since 1940.

Federal officials who oversaw the census and Congress have always been aware that there are problems with the accuracy of the census. These problems with accuracy include undercounts, overcounts and erroneous enumerations. Since 1940, the Census Bureau has conducted evaluation studies based on probability samples of subsets of the population to measure the level of accuracy of census results, in terms of both 'coverage errors' - that is under and over enumeration; and 'content error' that is incorrect information on the characteristics of the population. The often reported statistic of the net undercount, 98.4% in 1990, represents, at the national level, the net undercount once undercounts are subtracted from overcounts and erroneous enumerations. It does not mean that 98.4% of the population was counted accurately. The evaluation studies of census coverage have themselves improved over the past twenty years, and have come to include new measures of accuracy, including measures of gross error in the census, that is, the sum of overcounts, undercounts and erroneous enumerations. These studies reveal that the level of gross error is substantial, in the range of 10% of the total population counted, and that the 1990 count had more gross error than did the 1980 census.<sup>10</sup>

The 2000 census plan proposes to employ some time-honored methods of counting and some new innovations which have never been used in the history of the decennial census. The time honored methods include the use of a mail census as the primary means of contacting households. The mail census was first used in 1970. In that year about 60% of American households received their census form in the mail and were instructed to fill it out and mail it in. In 1980

and 1990 over 90% of households were contacted by mail. For the parts of the country that cannot be reached by mail, the Census Bureau uses enumerators to canvass a particular geographic area. This method was the fundamental enumeration procedure from 1790 to 1960. The Census Bureau will also use enumerators to contact households that do not return the mail census form in a timely manner, in the counting phase known as 'non response followup.' The 2000 census plan also proposes collecting additional detailed information on the population through the use of a 'long form' sample in conjunction with the short form complete count. The long form sample began in 1940. And the Census Bureau will evaluate the quality of coverage of the count with a post enumeration sample survey, a procedure begun in 1950 and used in one form or another since.

The new methods envisioned for 2000 include sampling for 'non response follow up.' It is this new procedure that has generated some of the most heated objections in Congress. Officials know from past experience that residents at about one third of addresses will forget to fill out and mail back a census form, will ignore the form, or perhaps not receive it in the first place. The Census Bureau 'follows up' on these addresses to retrieve the census information, sending an enumerator to the address. This phase of the count starts in late April, and is designed to retrieve information from the households that have not responded to that point. In 1970, 1980 and 1990, nonresponse follow up was conducted for all households that did not mail back their census forms. The evaluation results of the last two censuses indicated that the quality of the data collected by enumerators from nonresponding households got much poorer the longer it took the enumerators to collect it. That is, responses gathered from households in June or later were significantly more error filled than those collected in April and May, Thus the bureau concluded that a higher quality sampling process for nonresponse followup would produce better data than 100% follow up because the process could use better trained employees and be done more quickly. The Census Plan envisions counting 90% of the population in each census tract, and then extrapolating the results to 100% of the tract. The opponents of sampling for nonresponse followup, as noted above, claim that the Census Bureau has given up the effort to contact everyone, and will "make up people" — a process which could be manipulated to the benefit of Democrats.

The other significant and controversial innovation of the 2000 Census Plan is the integration of the post enumeration survey process into the

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<sup>10</sup>See for example, Eugene Ericksen and Teresa Defonso, "Beyond the Net Undercount: How to Measure Census Error," *Chance*, 6 (Fall 1993): 14, 38-43.

'traditional enumeration.' In 1990 the Census Bureau took a post enumeration survey and produced 'adjusted' census counts on the basis of the survey results. But the 1990 census did not fully integrate of the PES and the traditional enumeration to produce adjusted census counts on the basis of dual systems estimation. Rather the bureau released the results of the April, or 'traditional,' enumeration in December 1990 and then released 'adjusted' results in June 1991. There were eight years of litigation on the quality and legality of the two sets of figures. As we will see below, the 1990 experience is echoing through the current plan. This decade, the Census Bureau is proposing a "one number census" -- that is, procedures that would produce a final census count which could not easily be disaggregated into the 'traditional' enumeration and the adjustments made on the basis of the results of dual systems estimation. Again, critics charge, the adjustment process is subject to political manipulation, 'making up people.'

### Part III: The Context of the Current Controversy

Every ten years, the federal government, in particular the United States Bureau of the Census, counts the American population and reports the results to Congress. Congress, state legislatures, and local representative bodies then use the census results to undertake the decennial process of reapportioning themselves in light of population growth and change. New census numbers also trigger changes in legislative formulas that allocate tax revenue among the various levels of government through revenue sharing and grants-in-aid systems. Government policymakers, scholars, the media, and the private sector eagerly await the census results each decade and use the information for myriad public and private uses.

The census and reapportionment process are one of the oldest and most venerable parts of the American political system. The framers of the federal constitution wrote the census mechanism into the political system in 1787. The nation began counting its population in 1790 and has continued regularly each decade since. On the face of it, counting the population is a simple matter, of collecting information on the characteristics of members of each household and aggregating it from the household to the block, to the census tract or local neighborhood, to the town or municipality, to the county, and finally to the state and the nation. Census data is as familiar as an old shoe; we look it up in almanacs, expect to see population signs at city limits.

Nevertheless, for the past generation, the census, and the United States Bureau of the Census, has been under a darkening cloud. The bureau has had

to defend its ability to count the population precisely and accurately (and recently efficiently). Congress, local government officials, and the public have increasingly complained that the census is not as accurate as it should be and it thereby fails to provide a proper a legitimate basis for legislative apportionment and funding allocations. It counts some groups in the population better than others and that this 'differential undercount' --especially of minority and poor, inner city residents -- undermines legislative apportionments and policy based upon the numbers. If not rectified, critics argue, a flawed census will damage the very fabric of the polity.

From the perspective of many state and local officials, federal officials have failed to respond to the challenges to count better. Accordingly, coalitions of state and local officials and private parties have sued the Census Bureau each decade since 1970, challenging the methodology and results of the census. Though the government has by and large prevailed in court, these lawsuits have become more elaborate each decade, and more damaging to the legitimacy of the census. At the 1990 census, a coalition of city and state governments, led by New York City, sued the bureau before the count. Filing in November 1988, they claimed that even before the census took place, they knew that the 1990 census would be plagued by a differential undercount, and they asked the court to institute new procedures for counting to improve the enumeration. The New York lawsuit, as it came to be called, from initial filing to its final resolution before the United States Supreme Court in March 1996 raised complex questions of how to count the population and has had a major impact on the plans for 2000.

Lawsuits are the most visible evidence of the controversies surrounding the capacity of the census to count fairly and efficiently. Since the latter half of the 1980s, however, a second major example of census controversy has opened in the visible disagreements between Congress and the Executive Branch over the proper methods and goals of the decennial census. Census controversies have become partisan, first as a Democratic Congress lambasted the policies of Republican officials in the Commerce Department and Census Bureau, and since 1994, as a Republican Congress has viewed the Clinton administration's census policies with equal suspicion.

Parallel to these political controversies, and related to them, is the technical controversy surrounding sampling as a form of counting. The advocates of 'dual systems estimation' claim that the census can be made more accurate by integrating a sample post enumeration survey and dual systems estimation with traditional census practices. The

bureau can do a better job of counting the population, and the federal government violates the constitutional requirements for a "one person, one vote" legislative apportionment system if it does not use the technique.

#### Discovery of the Undercount

The differential undercount of certain portions of the population was conceptualized in its modern form in the 1940s. Federal officials since George Washington had complained that the census was incomplete, and local officials had sometimes succeeded in getting their local areas recounted if they felt that the first count was too low. Many of the innovations in censustaking over the years were aimed at improving the count to find households that had been overlooked and to minimize errors. But it was not until the growth of other large scale administrative data systems --vital records, and public health data in particular -- and the development of the disciplines of demography and statistics that census officials could actually measure the undercount. These other data systems generated alternative estimates of the population or segments of it which had to be reconciled with the census counts. Accordingly, both the professional community of statisticians and demographers and census officials began to conceive of measuring the undercount precisely for particular segments of the population.

The issue began to be framed precisely after a somewhat serendipitous natural experiment in 1940. The selective service registration of October 1940 allowed demographers to compare the April 1940 census counts of men of draft age (21 to 35) with the counts of men who registered for the draft. As Daniel O. Price reported in his 1947 article,<sup>11</sup> nationally the census underreported about 2.81% of the men in the age cohort since the draft registration recorded some 453,000 more men than the census did. More significantly, though, was the finding that the level of the undercount varied by region and race. Some 13% of the black men of draft age were missed in the census.

Nationally, 229,000 more black men registered for the draft than would have been expected from the census estimate. Price also demonstrated that the black men registered for the draft in dramatically higher numbers in urban states than would have been expected from the April census counts. He could not, however, determine if such men had migrated to an

urban area between the time of the census and the registration date, or whether the census did a poorer job of counting urban residents.

Additional studies followed in later years. In 1955, Ansley Coale, as part of the general project of developing a definitive demographic analysis of the American population, published a "revision of census figures" by "age, sex, and color" for 1950.<sup>12</sup> Coale estimated a net census undercount of about 3.6 percent. He also concluded that the census undercounted "nonwhites" dramatically --by 12-13 percent in 1950.

In the 1950s, the Census Bureau also began evaluation studies of undercounts as part of their larger evaluation program. One research thrust employed the method of "demographic analysis" as the techniques used by Coale and Price came to be called. The disadvantage of demographic analysis is its inability to pinpoint exactly why the undercount (or overcount) exists. As an aggregate methodology, it cannot identify which particular individuals were missed, nor can it provide more specific information on the sources of undercount beyond the information available from the original cohort variables.

To overcome these disadvantages, the Census Bureau developed new techniques, particularly the Post Enumeration Survey. After the 1950 census, the bureau undertook a sample reenumeration of the country to try to identify households missed by the enumerators, household members who were not reported within households, as well as other classification and categorization errors in the original enumeration.<sup>13</sup>

By the time of the 1960 census, census officials and the community of professional demographers were well on their way to understanding census undercounts. What was still missing from the undercount discussion was any sense that there were any larger political or social implications of the 'discovery' of the undercount. From the 1940s through the mid-1960s, the literature was totally "methodological," of interest to demographers,

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<sup>12</sup>Ansley Coale, "The Population of the United States in 1950 by Age, Sex, and Color: A Revision of Census Figures," Journal of the American Statistical Association, 50 (1955): 16-54.

<sup>13</sup>Leon Pritzker and N.D. Rothwell, "Procedural Difficulties in Taking Past Censuses in Predominantly Negro, Puerto Rican, and Mexican Areas," in Social Statistics and the City, ed. David Heer (Cambridge: Joint Center for Urban Studies of M.I.T. and Harvard University, 1968), pp. 55-79.

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<sup>11</sup>Daniel O Price, "A Check on Underenumeration in the 1940 Census," American Sociological Review, 12 (February 1947): 44-49.

statisticians and survey researchers, but not to Congressmen, policymakers or the undercounted communities. This situation was to change dramatically in the mid-1960s.

### The Undercount is Politicized

Three separate trends merged to propel the census undercount onto the political stage in the mid-1960s. First, Congress had continued to build the grants-in-aid system as a mechanism for allocating revenue to state and local governments. Second, in 1962, the Supreme Court ruled that malapportioned state legislatures were unconstitutional and opened the way for the decade of lawsuits that led to the "reapportionment revolution" of the sixties. Third, the Civil Rights movement of the 1950s and 1960s framed many of its arguments about discrimination in the labor force, in public participation in the community, and access to housing, in terms of underrepresentation of minorities in these areas of American life. Again, census data would have a direct impact on a highly charged political issue.

During the planning phase for the 1970 census all of these issues came into sharp focus. The differential census undercount of hard to count populations ---especially minorities and the urban poor --took on new meaning. Once the Supreme Court had invalidated the massive legislative malapportionments of the past, the statisticians and politicians realized that the census undercount also could have the effect of denying representation to the uncounted. The undercount ceased to be a technical problem of census field procedures; it became an explosive political issue. The 1967 conference on "Social Statistics and the City" marked the change.<sup>14</sup> At that conference, census officials and prominent social scientists met in Washington to discuss the extent and cause of the undercounts. They articulated the constitutional principle which made eliminating the differential undercount imperative. "Where a group defined by racial or ethnic terms, and concentrated in special political jurisdictions" wrote David Heer, in the Conference report, "is significantly undercounted in relation to other groups, then individual members of that group are thereby deprived of the constitutional right to equal representation in the House of Representatives and, by inference, in other legislative bodies." They are also "deprived of their entitlement to partake in federal and other programs designed for areas and populations with their characteristics." In other words, miscounting the population could

unconstitutionally deny minorities political representation or protection under the Voting Rights Act. It could also deny local jurisdictions grant funds from federal programs.

### Techniques for Eliminating the Undercount

From the late 1960s to the late 1980s, the Census Bureau and statisticians worked to find techniques that would eliminate the differential undercount.<sup>15</sup> These efforts took two broad tacks. On the one hand, the bureau made major new efforts to count 'hard to count' populations, instituting special procedures and spending dramatically more money on reaching difficult to enumerate groups. On the other hand, statisticians proposed statistical innovations to adjust the counts from traditional enumeration procedures using sample survey methods designed to count wildlife. Known as "capture/recapture" methods, these techniques did not rely on improved advertising, good intentions, and additional resources to eliminate the undercount. Advocates claimed they would work even if coverage improvements did not. The technical problems for both types of coverage improvement were considerable, and three National Academy of Sciences panels, and numerous private and government researchers worked on the issues during the period. By the late 1980s, statisticians in the statistical research division of the Census Bureau felt they had devised a set of procedures based upon an enlarged and specially designed post enumeration survey which would provide coverage estimates of sufficient quality to be used in apportionment if necessary. They presented their plan to the statistical community and to Congressional subcommittees in the spring of 1987, and generally received support for the plan. Officials in the Commerce Department, however, stopped the plans for the enlarged PES in October 1987. In late 1988 New York City sued for the reinstatement of the survey. In July 1989, Commerce officials entered into a stipulation agreement with the New York plaintiffs reestablishing the 1987 plan, though with a sample size one half the original 300,000 households. The Commerce Department agreed to consider the question of adjustment of the 1990 census de novo by July 1991, and to release official adjusted counts, if the PES procedures proved successful.

In July 1991, amid news cameras and national publicity, Secretary of Commerce Mosbacher announced that the official results would not be

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<sup>14</sup>Heer, quote at p. 11.

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<sup>15</sup> Anderson and Fienberg, Who Counts?

adjusted, despite the recommendation of his Census Director, Barbara Bryant, and the majority of the Undercount Steering Committee that adjustment would improve the accuracy of the 1990 results. New York City returned to court to challenge Mosbacher's decision. The case went to a 13 day trial in 1992. The lawfulness of Mosbacher's decision was upheld at the district court in 1993, reversed at the appellate court in 1994, and reaffirmed by the Supreme Court in March 1996.<sup>16</sup> It was in the context of the 1990 census methods and the controversies and continuing litigation about the legitimacy of adjustment in 1990 that the 2000 census plans were developed.

#### Towards Census 2000

The modern Census Bureau works on at least two censuses at once: the last one and the next one. Hence the procedures and policies for the upcoming census are in development as the publication and analysis of the last one are still ongoing. Thus one must look to the early 1990s for the beginning of the planning for the 2000 Census. 2000 census planning began during the Bush administration, under Barbara Everitt Bryant's tenure as Census Director and Robert Mosbacher's tenure as Commerce Secretary. At the July 15, 1991 announcement of the decision not to adjust the 1990 count, for example, key Commerce officials were already projecting the implications of the PES research and other 1990 research for the 2000 census. That day, Michael Darby, Undersecretary of Commerce for Economic Affairs, also announced that the Department and the bureau intended to continue the research program into adjustment and on "how we could incorporate" adjustment "into the inter-censal program." When he was asked how he would respond to "various minority groups" who could "feel even more disenfranchised when you do the census again in the year 2000," he responded that "We have major planning -- and the Secretary made very clear that part of that planning effort is trying to figure out how to do an adjustment correctly for the year 2000."<sup>17</sup>

In other words, years before the outcome of the New York litigation was clear, officials in the Bush

administration took the initial steps which shaped the plan for 2000. In the second half of 1991 and 1992, the bureau developed an internal administrative and planning schedule for innovations they wished to test for 2000, worked with the Democratic Congress to pass legislation to recruit from the larger statistical community the expertise needed to develop those innovations, and organized an extensive campaign to promote understanding and discussion of the decisions to be made for 2000. Relatedly, the House and the Senate passed a bill authorizing a new three-year independent study of alternatives for the decennial census of the year 2000, to be conducted by the Committee on National Statistics at the National Academy of Sciences. On October 24, President Bush signed the "Decennial Census Improvement Act of 1991," and Congress authorized funding for the study in the bureau budget.<sup>18</sup>

By the time the new National Academy panels began meeting, Census officials, professional stakeholders, and key congressmen had begun to shape a basic framework of issues for the 2000 count. In the context of the ongoing litigation, all parties were cautious about making dramatic public statements, promising too much, or proposing radical changes. Nevertheless, by mid-1992, there was general consensus in the Bureau leadership, Congress and the professional community that the 1990 count procedures could be improved significantly, particularly by additional use of sampling, that the escalating costs of the last three censuses needed to be brought under control, and that a good deal of technical work was needed to facilitate a final 2000 design.

What was not clear in late 1991 and 1992, was the impact of political changes in the executive and legislative branches would ultimately have on the debates on the 2000 design. In 1991 and 1992, all parties had adjusted to the process of planning under divided political control of the national government. Looking backward, all could see that Congress had

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<sup>16</sup>New York v. United States Department of Commerce, 822 F. Supp. 906; 34 F. 3d 1114; Wisconsin v. City of New York, 517 U.S. 1.

<sup>17</sup> Transcript of Mosbacher press conference, July, 15, 1991, Plaintiffs Exhibit, no. 678, City of New York v. United States Department of Commerce.

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<sup>18</sup> Members of the two panels, the Panel on Census Requirements for the Year 2000 and Beyond, and the Panel to Evaluate Alternative Census Methods, were appointed over the following months and began meeting in June 1992. Former Office of Management and Budget official and economist Charles Schultze headed the Requirements panel. Norman Bradburn of the National Opinion Research Center, headed the Methodology panel. Anderson and Fienberg were members of Requirements panel.

dominated the legislative branch since the 1930s, with only brief exceptions. Republicans had been dominant in the executive branch for 28 of the last 40 years. Those patterns showed no sign of changing. What was already clear from the census litigation of 1990 and earlier decades was that the courts looked critically on decision making which could be seen as politically motivated. Whatever the ultimate decision on the prudence of not adjusting the 1990 count, the emerging litigation had already demonstrated that an abrupt decision to cancel a statistical innovation which had broad professional support, such as the 1987 Commerce Department cancellation of the PES, would not survive judicial scrutiny. Hence it was incumbent on all parties to work out a 2000 design that could garner broad political and technical support.

In late 1991 and early 1992, it also did not seem that the Democrats had much of a possibility of capturing the White House. President Bush's fortunes stood quite high in the polls in the aftermath of the successful prosecution of the Gulf War. The emerging field of Democratic challengers did not seem terribly strong. Yet in November 1992, Bill Clinton won the presidency amid a heady atmosphere of generational change. The 1960s generation of Clinton supporters entered the White House in an upbeat liberal mood, calling for diversity in government, national health insurance, and a variety of postponed liberal initiatives.

For the first two years of the Clinton administration, bureau officials labored on the plans for 2000 in relative obscurity, and continued to develop the proposals prepared under the Republicans in 1991 and 1992. Acting Director Harry Scarr did not seek headlines or the attention of Congress. Judge McLaughlin's 1993 decision to uphold the decision not to adjust provided the bureau with a measure of stability. By the end of 1994, Martha Farnsworth Riche became Census Director. The Panel on Census Requirements and the Panel to Evaluate Alternative Census Methods completed their reports and called for a 'redesigned census' which made use of statistical estimation. The 2000 census should be a 'one number census' which built 'integrated coverage measurement' into its procedures. The panels saw their proposals as mechanisms to improve accuracy while reducing the cost of the count. The bureau agreed and built many of the proposals in the volumes into the Spring 1995 tests.<sup>19</sup>

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<sup>19</sup> Duane Steffey and Norman Bradburn, eds., Counting People in the Information Age,

But the bureau would find that it was not master of its own fate. The larger policy proposals of the first Clinton administration were in domestic policy, including getting control of the deficit, strengthening enforcement of civil rights laws, reforming the welfare system, and building a national health insurance system. Despite Democratic control of both houses of Congress, Clinton's proposals did not fare well. By the summer of 1994, he faced major defeat as his plans for national health insurance collapsed, and Republicans mounted a major effort to wrest control of Congress from the Democrats. Newt Gingrich, onetime Congressional maverick and a campaigner as energetic as Clinton, developed a conservative agenda, the Contract with America, and molded together a coordinated group of challengers to the "big spending, liberal Democrats" in Congress. In November, the Republicans won both houses of Congress and conservative euphoria and energy became the dominant mood in Washington.

The arrival of Republican Congressional majority signaled major changes in the political landscape for the 2000 census plans. During 1995, as the 2000 tests were underway, Census Director Riche began to promote the draft proposals for the "Re-engineered 2000 Census."<sup>20</sup> At the time, the emerging differences between the views of the Congressional Republicans and the bureau leadership were overshadowed by the larger struggles between Congress and the executive branch over the various elements of the Contract with America and cutting the federal budget. In fall of 1995, the confrontation reached a crisis point, as the two sides deadlocked over the passage of a fiscal 1996 budget. For four days in November 1995, and then for almost a month between mid December 1995 and mid January 1996, the federal government "shut down" because Congress and the President could not agree on a plan to balance the federal budget. Hundreds of thousands of federal workers were furloughed, and much of the routine business of the federal bureaucracy stopped. Republicans had hoped to demonstrate dramatically to the American people that the country could well afford

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(Washington, D.C.: National Academy Press, 1994); Barry Edmonston and Charles Schultze, eds., Modernizing the U.S. Census. (Washington, D.C.: National Academy Press, 1995).

<sup>20</sup> See for example, U.S. Bureau of the Census, DRAFT, "The Re-engineered 2000 Census," May 19, 1995.



to trim federal operations, and they hoped that the shutdown strategy would solidify support for their balanced budget proposals. The Democrats in Congress and the Clinton administration labeled the move irresponsible and 'blamed' the Republicans for any inconveniences the public endured. As it turned out, public opinion broadly supported the President's position. By winter 1996, the confrontations over the shutdown led to a plan for a balanced budget by 2002, including painful cuts in popular federal programs, but also in the resurgence of Clinton's political fortunes and dramatic slowing of the momentum of Gingrich's Contract.

It was in the context of these larger political changes and the Supreme Court review of the 1990 census lawsuit that the bureau made the formal announcement of the 2000 design. On February 28, 1996, the Census Bureau announced that the 2000 census plans included "statistical sampling" at two different levels. Director Martha Farnsworth Riche announced "twin goals of reducing costs and increasing accuracy" and the major innovations to meet them, including "simple, easy-to-read forms," an "open process that diverse groups and interests can understand and support," and "a much greater use of widely accepted scientific statistical methods." "[S]ampling," Riche continued, "is first and foremost among them."<sup>21</sup>

The Bureau's design for 2000 did not receive an enthusiastic response in Congress. The next day key Congressmen reacted to the new design in a hearing before the House of Representatives Government Reform and Oversight Committee.<sup>22</sup> Both Republican and Democratic representatives that day opposed the use of sampling, equating it with opinion polls used in their own political campaigns and describing it as "crude." Senator Herb Kohl (D-WI) commented that "There appears to be no scientific

method for determining who is included [in a sample] and who is not. We are asked to believe that this sample will be more accurate than the census, but we are given little reason to believe that." His fellow Representative, Tom Petri, (R-WI) echoed his views, comparing "a real headcount" with a "quick, easy, and cheap method of throwing up our hands and relying on scientific guesswork." Tom Sawyer (D-OH) challenged these views and was more generally supportive of Bureau plans. Barbara Bailar, Charles Schultze and James Trussell supported the plan as well. Nevertheless, the Bureau clearly did not have a mandate in Congress. And in perhaps the most dramatic written statement presented to the Committee, University of California statisticians Kenneth Wachter and David Freedman raised the specter of doing fundamental damage to the count if the 2000 plan proceeded. "We now know," they wrote, that if Secretary of Commerce 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. . . . The coding error epitomizes the problems of statistical adjustment in 1990. . . . In 1990, the complexity of their modeling systems made it hard for the Bureau to detect big mistakes and uncertainties, until long after critical decisions had been made. . . . 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.

It soon became clear that even the plan's supporters felt that there were still serious operational and statistical questions to be answered before the 2000 design would be complete. In a more congenial political climate, the Bureau could have used the second half of the decade to work the kinks out of the design, outside the harsh glare of the press and the carping of suspicious critics. But given the lingering effects of earlier controversies, and the highly partisan nature of Washington politics, the Bureau did not have that luxury.<sup>23</sup>

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<sup>21</sup> U.S. Bureau of the Census, *The Plan for Census 2000, Revised and Reissued*, February 28, 1996 (typescript).

<sup>22</sup> Statement of the Honorable Herb Kohl, House Committee on Government Reform and Oversight, *Plans for the 2000 Census*, February 29, 1996; Statement of Rep. Tom Petri to the Committee on Government Reform and Oversight, February 28, 1996; Kenneth Wachter and David Freedman, *Testimony on Plans for Census 2000*, House Committee on Government Reform and Oversight, 29 February 1996.

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<sup>23</sup> See, for example the report of the Committee on Government Reform and Oversight,

## Congressional Intervention

In 1996 Bill Clinton won reelection. Republicans maintained control of both houses of Congress, though the Republican majority in the House had shrunk to 11 seats (from 17). Hence when Congress returned in early 1997, the political landscape for the census had not changed dramatically. The banner to hold the line against sampling was taken up anew in 1997, and bills to that effect were introduced in both the House and the Senate. Again there was a barrage of Congressional discussion and media coverage of the issue.<sup>24</sup> And again, the emerging positions did little to provide definitive guidance to convince Congress either to defer to the professional expertise within the Census Bureau, or to make an ironclad case to the public that sampling was to be banned.

House Republicans found their vehicle to press their objections to sampling further in the Spring of 1997, as floods ravaged the upper Midwest and Congress was focused on curtailing U.S. peacekeeping efforts in Bosnia-Herzegovina. They attached the antisampling language to a piece of legislation for flood relief and peacekeeping. As with the confrontations over the budget, Republicans embarked upon a high stakes game of political brinkmanship, and believed that the president would not risk political capital vetoing a popular piece of legislation in the name of arcane issues of census policy. Again they misread Clinton's resolve. He vetoed the bill, forcing continuing discussions on the 2000 census design. The compromise plan which accompanied the revised legislation on flood relief and overseas peacekeeping, deleted the census language. The bureau was permitted to continue to plan for sampling in 2000, but required a full report on the design and the pros and cons of sampling.

In the summer of 1997, the Census Bureau produced a detailed planning document for Congress entitled: "Report to Congress -- The Plan for Census 2000" with a detailed description of planned

methodologies. The report was hailed by technical experts for its candor in discussing errors in methods, and provided the first public description of error rates at relatively low levels of geography in the 1990 census. The 8% reported rate at the block level was a few percent less than the gross error (the sum of the overcount and undercount) that was widely discussed by Ericksen and Kadane, and others, and in essence, confirms that overcounts and undercounts do not cancel each other out at the block level. Unfortunately, within weeks of the publication of the original report, the bureau was forced to admit that there were mistakes in the calculation of select error rates, and they had to revise and reissue the table in August. Critics of the 2000 design immediately pounced on the mistakes as evidence of the incompetence at best, and malfeasance at worst. Like the 1991 'computer mistake' that Wachter and Freedman see as undermining any trust in the quality in the 1990 PES, this mistake in a highly publicized report left the agency more beleaguered than before.

Our conclusions are several. First, the possibility of controversy surrounding the census and apportionment is inherent in the instrument as a tool for allocating political power and economic resources in the nation.<sup>25</sup> Second, the history indicates that the plan proposed in 1996 had its roots in the Republican Census Bureau of the early 1990s and bipartisan planning for the 2000 count. Programs put in place during Barbara Bryant's tenure as Census Director continued well after she left. The partisan labeling of the 2000 Census Plan as the Clinton plan in fact have drawn attention away from the knotty technical problems of censustaking in the United States, which must be addressed to reduce the undercount or for that matter, the more recently defined gross census error. Third, as Congress continues to point out, the political implications of using one or another counting technique are important. It is useful for Congress to focus on the details of census taking in this regard; we expect more attention to these issues in the years ahead. Changing census methodologies will move seats in Congress between states, not two dozen seats, but one or two. Finally we suggest that everyone involved in this controversy consider the danger of undermining the census as a mechanism to apportion political power among the constituent elements of the society. What would one put in its place?

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U.S. House of Representatives, "Sampling and Statistical Adjustment in the Decennial Census: Fundamental Flaws," 104th Congress, 2nd Session. (Washington, D.C.: GPO, 1996).

<sup>24</sup> See for example, the testimony before the Senate Committee on Governmental Affairs, on "Census 2000", Senate Hearing 105-233, March 11 and April 16, 1997, 105th Congress, 1st session, (Washington, D.C.: GPO, 1997).

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<sup>25</sup> Margo Anderson, The American Census (New Haven: Yale University Press, 1988).