



# POLIDATA Political Data Analysis

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PUBLISHER OF THE POLIDATA® DEMOGRAPHIC AND POLITICAL GUIDES AND ATLASES

## REMARKS

### REMARKS OF CLARK H. BENSEN\*

#### 2000 CENSUS ADVISORY COMMITTEE

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WASHINGTON, D.C.**

My position against adjustment through the use of sampling and estimation in the 2000 Census has been presented to this panel before. In sum, I am against the Clinton proposal to use sampling as an integrated element of the 2000 Census on several grounds: principle, process, practice, participation, and, of course, politics.

The topic I wish to bring to your attention is redistricting and use of block-level census data. It is likely that most of you have missed the marvelous opportunity to actively participate in that grand old tradition of politics called redistricting. It is a process which is very intense and brings together a panoply of political interests, talents and resources.

As a user of block-level data produced by the census, let me state that redistricting is not a random process. The census blocks chosen are deliberately selected to be assigned to one district or another based upon their characteristics and total population. As such, it is a fiction to estimate, as does the Riche Report, that the error rate for a Congressional District following the 2000 Census, with

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sampling and estimation, would be 0.6%. Since the district is affirmatively created by the non-random selection of the census block, the error rate is something which can not be known until the district has been drawn.

Let me also address the error rate at the block-level. Having been both a data analyst and project manager in my time, my heart goes out to both the junior staffer and the managers who oversaw the production of the erroneous calculations of error rate in the July Riche Report. However, it was one year ago this month, at the September 1996 meeting of this panel, in which I presented a study of the error rate based upon the 1995 Test Census numbers. The Bureau made no response to my analysis at the time. At the May 1997 meeting of this panel, in College Park, Maryland, this study was mentioned in a presentation before your panel by Congressional staffers. Two months later the Bureau produced, at the behest of Congress, the so-called Riche Report (Riche 1). The best response the Bureau could produce was that the error rate at the block level didn't matter. Regardless, the Bureau released a revised, and corrected, Riche Report (Riche 2) in August of 1997 which affected the results in the calculation of error rates for the Test Census in all three areas. The error rates rose dramatically, even using the "weighted average" approach in both Riche 1 and Riche 2. For an element of the census test process which the Bureau has, in the past, stressed, i.e., accuracy at the atomic level of the census block, it is quite surprising to me that an error of this magnitude fell through the cracks of the Bureau's, or perhaps I should say, the Commerce Department's bureaucracy.

As I have stated numerous times, it is the Bureau which has educated us on the concept of sampling error and its measurement through the use of standard error calculations to produce confidence levels. As redistricting practitioners well know, one needs to have high confidence in the low-level data used for redistricting to be able to properly assess the general makeup of the district as a whole. The use of sampling and estimation as an integrated adjustment will do nothing to alleviate the concerns of those responsible for drawing legislative districts at the block level.

It has been mentioned that there will be a one-number census. Well, the good news is that we will not have the official decision awaiting us, as we did in 1990, as to whether a new set of numbers will be released. However, since the census will use sampling and estimation, short of a wholesale sellout of professional standards, the standard error calculations will become available.

Every redistricter will then have the option of deciding which numbers, or range of numbers, to use. For example, let us review a block of an estimated 100 persons, and with a high percentage of minority persons, and one which



presumably had some persons added through sampling and estimation. One redistricter could choose to discount the total persons using the low end of the standard error calculations. Under this plan the block could count as 72 persons. Another redistricter could choose the other end of the standard error scale and count the block as 128 persons. Even if the 2000 Census reduces this enormous rate by  $3/4$ <sup>1</sup> the error range could still be as high as 7% and the example above could be 93 versus 107.

Redistricting must be carried out under the court-mandated edict of population equality. There is a zero-tolerance for population deviation among districts. Given the exactness with which districts were drawn following 1990, this means 0 persons, when possible, not even 0.6%. If your state is entitled to 4 districts and you have 2,400,000 persons, each district has better have 600,000 persons each, not 600,100 or 600,010, but 600,000.

Another problem confronting the Bureau for implementation of the Clinton initiative for sampling involves the *inadvertent manipulation* factor. Following the 1990 Census different estimates of the net differential undercount were released by the Bureau. A revision was required nearly a year after the first when an error in some of the formulae was discovered. There was a tight timeframe for the calculations and something was incorrectly applied.

Had an apportionment of the U.S. House been promulgated under either sets of these adjusted numbers, seats would have shifted between states. In fact, while under one set of numbers only Wisconsin would have lost to California, under the initial revisions, Pennsylvania would have lost to Arizona as well. My analysis of the latest projections for 2000 indicate that, using the 1990 PES factors, a seat would shift from Indiana to Mississippi due to adjustment. This might not seem like much, and there are other impacts, but then again, I don't live in Wisconsin, Pennsylvania or Indiana.

Unfortunately, we now have Riche 1 and Riche 2. Again, unfortunate examples of what we data analysts classify as the worst type of task to accomplish—just something “quick and dirty”. Usually these end up being, “never quick, and always dirty”.

The Bureau has been planning the 2000 Census for years and has been assuming that sampling and estimation would be an integral portion of the

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<sup>1</sup> The mail response rate in the 1995 Test Census was quite low and the degree to which sampling and estimation was implemented was much higher than it would be in a full implementation of the 2000 Census. Therefore, how much the error rate could be reduced is pure conjecture. We chose a 75% reduction for illustration.



census. Yet, it took ten months to produce a flawed analysis of data at the block level. If this is the best the Bureau can do now, years out, what will happen in 2000 when the data need to be processed and analyzed within a matter of months? Is the Bureau up to the task of trying to count as many persons as possible and evaluating all the data and methodological problems inherent in a sample of this size within this timeframe?

It might seem trite to say this is a Constitutional issue and thus more important than other issues of today but, an objectively taken "actual Enumeration", is the cornerstone of our representative democracy in the U.S. House and our state legislatures. Likewise, it might seem old-fashioned to say the traditional, though inadequate, method of actual counting is the better way.

However, it is the Constitution, in Article 1, sec. 2, which lays the foundation for the census itself and it is this element of the great compromise made by the Framers which allowed for the distribution of political power and paved the way for the adoption of a new form of government at the Constitutional Convention in 1787.

Thank you. I have attached some handouts on the technical aspects of apportionment and adjustment for your review.

