

Discussion

*Margo Anderson*¹

It is indeed an honor to be speaking today at the Washington Statistical Society. As an historian, I am profoundly aware of the rich legacy that the Society and the National Agricultural Statistical Service have bequeathed to the discipline of statistics. It is truly an honor to speak at the Morris Hansen Memorial Lecture and in response to Joe Waksberg's fine reminiscence and analysis of the "Hansen Era" at the U.S. Census Bureau. I would like to begin by drawing out some of the perhaps obvious implications of the talk you have just heard.

1. Joe describes, as have many others, the extraordinarily exciting world of statistical innovation in the Census Bureau from the 1940s through the early 1970s. People had a sense they were at the cutting edge of sampling methodologies, computerization, and the analysis and control of total survey error. A large, dedicated, collegial, self-confident, sometimes even brash, group of statisticians and survey researchers at the Bureau systematically tackled question after question and were rewarded by seeing new methods emerge, receive approval from their peers, the agencies of the federal government, and the general public, and find their way into textbooks. The Bureau truly can be said to have created much of what post-modernists would call the "canon" of best practices for modern survey research. And they knew they were doing it at the time.

2. Those times have changed. Joe marvels today at the ease with which decisions were made in the past. He is "aghast" in fact at how easily list sample techniques were substituted for area sample techniques in the CPS. He remembers "considerable interaction and interchange of ideas" among "various subject matter divisions;" the "loose" agendas and the high "decibel level" in meetings; "complete democracy" among the staff. He notes that relations between the Bureau and Congress "are much more structured nowadays," and that current staff would face "inhibitions about bringing up subjects" in a Congressional hearing "that had not been agreed upon in advance."

3. He concludes that "things are better" today – particularly because the technical capacities of computerization have eased many of the truly mind-boggling features of surveying several hundred million people, or making calculations of survey errors by hand. He remembers "baby-sitting" the computer, changing vacuum tubes, bleeding on UNIVAC while trying to change tapes.

His analysis contains a bit of nostalgia, many fond memories, and the sober conclusion that wherever we are now, the 1940–1970 period is indeed past. Let me reflect a bit on some of the lessons we may wish to draw from his experience and analysis and suggest some further lessons for today.

¹ University of Wisconsin, Milwaukee, WI 53201, U.S.A.

1. I was struck, and I think Joe would agree, with his sense of autonomy as a statistician in the Bureau. Officials had the confidence of Congress and the public and felt they could experiment, propose new methods, and within obvious limits, receive the resources to implement them. In this sense, his analysis is as interesting for what it does not say, as for what it does. He does not tell us about being second-guessed or undercut by statisticians in other agencies or universities, by local officials upset about their counts, by Congressmen who distrust the agency. He mentions issues of appropriations only briefly, and then as an example of what he calls ‘discretion.’ Officials did not correct a Congressman’s misimpression that the mail census would save money. And of course, there were no lawsuits, or threats of lawsuits, which would require attorneys to scrutinize every technical decision he made for its defensibility in any potential future litigation.

2. Nor do we hear too much about electoral politics affecting the day-to-day work of the Bureau. High-level officials – those requiring Senate confirmation – such as J.C. Capt or Ross Eckler – appear now and then, but they are distant officials I sense, who were “sympathetic to funding research,” and “supportive” of the work of the statistical research division. Joe comments, for example, “I had very little personal involvement with” Capt. By 1970 of course, Joe was much closer to the top of the policy-making hierarchy in the Bureau, but even then, Vince Barabba, in his story, is a fairly distant figure. When Joe ‘brashly’ tells a Congressional committee in the early 1970s that the revenue-sharing allocations would be based on projections of 1960 data because the 1970 data were not available, Barabba was in the room “and just as much interested in my suggestion (of a new survey) as the Congressional Committee,” but in Joe’s story, Barabba does not react in dismay at his subordinate’s suggestion.

3. The Bureau, in short, operated in a relatively stable political and economic environment in this period, with many demands on its statistics but few that it felt it could not provide. Innovation came from within the agency, not from demands for change from without. Let us back up a bit more and examine this environment and see how and why it has changed.

From the 1940s through the early 1970s, the federal government consolidated the reforms and institutions of the welfare state that had emerged in response to the twin crises of the Great Depression and World War II. There was a broad political consensus that the federal government should improve the lives of Americans by providing a ‘social-safety net’ to carry people through hard times or economic dislocations. Social Security pensions for the elderly, unemployment insurance, FHA² and VA³ mortgages for homeowners, slum clearance programs for cities, rural development, interstate highway construction, and federal aid to state and local government all were legislated initially in the 1930s through the 1950s, and elaborated upon year by year. During the 1950s and 1960s, additional measures, such as antipoverty programs, federal aid for college students, Medicare and Medicaid, and environmental protection laws built further upon the mechanisms and conceptions of the earlier legislation. Throughout, the Census Bureau provided much of the basic data for assessing the needs for the programs, for determining levels of appropriations which would be necessary for any particular measure, and for monitoring compliance with the new laws.

² Federal Housing Administration

³ Veterans’ Administration

The period was also one of unprecedented prosperity, the beginning of what Henry Luce hoped would become “the American Century.” We know now that the postwar consensus shattered in the protests over the Vietnam War, the inability of the new Civil Rights laws to solve quickly the problems of racial discrimination, and the economic downturn engendered by the oil shocks of the early 1970s. We also know now that the disaffection with the capacities of the modern welfare state led to criticism from both the right and the left. Critics on the left argued that the federal government was wracked with corruption, and pointed to Watergate. Government was not doing enough to end poverty, increase economic opportunity, end urban decay and environmental degradation. At the same time, in the 1970s, on the right, a small but vocal movement challenged the basic assumptions of the welfare state, and charged that government itself was creating new problems of sluggish economic growth. By the 1980s, the ‘new right’ had captured the Presidency and Ronald Reagan moved to dismantle or financially cripple the institutions of the welfare state that the right felt had outlived their time.

In this increasingly fractured political environment, the Bureau found itself vulnerable to charges of failure from both the right and the left. On the left, of course, big-city mayors and representatives of minority groups pressed the Bureau to eliminate the differential undercount of the poor and nonwhite. On the right, conservative Congressmen charged that the census itself was an invasion of privacy. In the late 1960s, Jackson Betts promoted legislation to make the census voluntary, and demanded to know why the census needed to ask about bathroom facilities. By the 1980s, the agency was pressed to explain the need for the long form, challenged to explain its accelerating costs, and told its new sampling methods for the post-enumeration survey were inappropriate. Conservative anti-immigration organizations sued to prevent the Bureau from counting illegal aliens. Mayors of many of the large cities in the U.S. sued to force the Bureau to adjust the census for the known undercount of the poor and minority populations.

Relatedly, shifts in the political control of Congress and the Presidency have whipsawed the agency for the past generation. The Bureau is a relatively low prestige agency within the context of federal government, and as such has had to wait for the attention of leaders in the executive and the legislative branch for its political appointees. When power was split between the parties as it was before the 1990 Census, or since 1994, the effect on the Bureau can be considerable. Until 1994, the Democrats fundamentally controlled Congress since the 1930s. The Presidency has been much more volatile, but Republicans have controlled the Presidency for 20 of the past 28 years. From 1940 to 1968, on the other hand, Democrats controlled the Presidency for 20 of the 28 years.

In short, the political life of the nation, as well as the situation within the Bureau changed dramatically after 1970, and a new national consensus on the role of the federal government in the lives of ordinary people has yet to emerge. Thus the Bureau has a mandate to count accurately, but not invade privacy, or burden the respondent, or spend too much money. Respondents want the ‘right’ to define who they are, but we are not too clear on who has the responsibility to ‘account’ for the nonrespondents. As the old Chinese curse goes: “may you live in interesting times . . .”

Lest one fear that the current situation is beyond repair, I would like to conclude with a bit more background about the early period that Joe discussed, just before the Bureau really accelerated its innovation in the late 1940s. The period from the mid-1930s to

the end of World War II was, as we now know, prologue to statistical greatness. But it did not necessarily seem that way at the time, and the contemporary accounts of the participants – many of whom Joe has mentioned – were considerably more conflicted and anxious. Much of this history has been forgotten, but it may be useful to include it to encourage the younger statisticians still struggling with the intractable technical and political problems of survey innovation.

I would like to describe two situations, one which succeeded and one which did not.

- (1) The one which succeeded was the effort to create a statistical research division in the 1930s which made it possible for Joe and his colleagues to do the work they did from the 1940s on.
- (2) The one which did not was a proposal for an annual sample census, developed in June 1941.

First a bit of background. The Great Depression developed from the stock market crash of 1929, the long slide of the economy in the early 1930s, and the failure of the Hoover administration to stem the decline. Democrat Franklin Delano Roosevelt was elected in November 1932. In those days, presidents did not take office until the following March, so the country waited in anticipation for five months while the economy deteriorated further over the winter.

In the spring, when Roosevelt took office, he pressed for the 100 days' program of legislation, the first massive emergency effort to turn the tide of economic depression. The Census Bureau, a profoundly Republican agency at the time, came in initially for budget cuts, and then quite quickly for massive attention as the Democrats realized just how much they needed good statistics. The Committee on Government Statistics and Information Services was created (COGSIS), and American Statistical Association President Stuart A. Rice was appointed Assistant Director of the Bureau. William Lane Austin was Director. Rice spent the next few months figuring out what to do with the agency and the more he learned the more appalled he became. He discovered an aging group of employees, almost no one with professional training in statistics, and hundreds of clerks. The agency was well known for its publications, but was rapidly falling behind the emerging trends in statistics. By 1934 Rice was writing a series of blunt memos to the Director about the state of the agency, and what he felt was necessary. I would like to read from a particularly vivid one dated September 1934. The full five-page letter is in the Rice papers in the Truman Presidential Library.

In a "Confidential Memorandum for the Director" Rice reviewed the state of statistical expertise in the Bureau. He recalled the reputation of the agency as "the greatest fact-gathering agency in the world." He regarded his current position in the Bureau as "one of the major opportunities of my life" where he could "assist in perpetuating that tradition." And he noted that the Depression had brought urgency to the Bureau's work. "Certainly," Rice wrote, "there has never been a time when dependable data upon social and economic life were so important, and upon so wide a front, as at the present."

He almost despaired, however, at his ability to influence the agency's development. "In reviewing my experience . . . during the past year, I must confess to something like shock in the continuous discovery of our backwardness and unpreparedness" in terms of scientific expertise. The Bureau knew nothing of modern probability methods: "The

concept of probable error” he wrote, “has never, I think, been brought into the Bureau’s work. It could almost be said that the Bureau has never admitted the possibility of error in its results.” “Like the incompetent children of great men,” he concluded, “we are living off our past.”

Rice went on to review the training of high level staff, and to call for recruitment and training of scientifically skilled officials. “We must undoubtedly get new blood into the Bureau,” he wrote, “young men (and guardedly, women) who have the capacity either to supply our requirements for technical service now or to develop such capacities.” And he called upon the agency to “find ways of discovering such latent ability as may now exist in our personnel and give it time to develop.”

This memo and others around the same time contain the first statements of proposals to reform the agency. Rice proposed the creation of the statistical research division and the careful expansion of a cadre of statistically trained employees. These were the young hires, still mostly men as he noted, of the late 1930s. Morris Hansen was one. Joe was as well. Rice himself moved from the Census Bureau to the Bureau of the Budget (now the Office of Management and Budget) and developed the forms clearance procedures that allowed him to oversee the development of the statistical work of the federal government as a whole. Rice saw his work from 1933–35 come to fruition a decade or more later. His papers contain many examples of doubts that his approach would succeed.

My second example is a proposal for an annual sample census which did not happen. But it is interesting nonetheless to show just how long the Bureau has worked to develop intercensal data. (I might add that proposals for quinquennial censuses go back to the 1870s and were actually instituted in conjunction with the states in many cases.) But the advent of probability sampling methods in the 1930s, proven in the unemployment census of 1937 and the Monthly Report on the Labor Force, prompted the Bureau to propose an annual sample census one year after the 1940 Census. In other words, almost immediately after the statisticians knew it would work, they proposed a national intercensal sample survey. The initial proposal, drafted in May 1941, was a 5% sample or 6.7 million people. The sample was to contain 67,000 small areas; these would then be counted completely. The areas would be chosen so that each county in the country and each city of 5,000 would be included. The Bureau estimated that they would require a field staff of “3,000 permanent part-time” enumerators, plus additional enumerators, 250 district supervisors and 20–30 permanent full-time regional supervisors. The Bureau estimated the cost of the survey at \$2.450 million, or 1.8 cents a person. In 1996 dollars, the survey would cost about \$26.08 million, or about \$260.8 million over a decade.

The proposal was sent to the ASA-AEA Census Advisory Committee, the Bureau of the Budget, and to other interested parties. It was debated seriously through 1941. I have not tracked down exactly what stopped it, but have always assumed the outbreak of World War II drew national attention and the Bureau’s attention elsewhere. By the middle-of-the-war years, the Monthly Report on the Labor Force had been transferred to the Bureau, and it was renamed the CPS and served some of the functions envisioned for the annual sample census.

I believe this example is indicative of paths not taken, and it reminds us that the history of statistical innovation can be a circuitous one. If the Bureau succeeds in mounting a continuous measurement program in the late 1990s, it will revive an idea initially proposed

over a half century before. We can only wonder what our statistical system would look like now had World War II not intervened and the annual sample census had been created in 1941.

Perhaps that will be the way our grandchildren remember the debates about adjustment, sampling and undercount of the 1990s.

Received July 1997