

Introduction

By Reynolds Farley and John Haaga

The Framers of the Constitution faced challenging problems about how to allocate representation in Congress, how to levy taxes—this was long before the days of an income tax—and how to deal with slaves when counting the population. Recognizing that if census taking were left to the individual states, the results might be uneven, they mandated that Congress take a census within three years and then every ten years thereafter. As a result, this nation's continuous history of census taking, dating from 1790, is the longest worldwide.

The leaders of the fragile new nation believed that the United States was a dynamic, rapidly growing country destined to exploit the riches of North America, while they viewed European nations as stagnant or in decline. Thomas Jefferson, who as Secretary of State oversaw the first census, realized that the census could be an ideal tool not just to count people but also to chart the industriousness and entrepreneurial activities of Americans. He was the first to propose adding questions to the basic count. The findings, he believed, would both measure the nation's progress and convince Europeans of this country's stability, strength, and growth. The first additional questions concerned industrial activity. By 1830, census takers also sought information about the health of the population, deafness and blindness, and, one decade later, insanity. Prior to the Civil War, questions concerning literacy and school enrollment were added, reflecting the growing national dedication to developing a public school system.

For several decades after the Revolution, few migrants arrived from Europe, but this changed in the 1830s. By 1850, the census contained questions about citizenship and country of birth. Concerns about the rapid growth in the number of foreigners and the radical changes immigration might produce prompted the addition of numerous questions in the late nineteenth century, about mother tongue, parents' places of birth, and the frequency of childbearing. A growing awareness of public-health issues after the Civil War led to census questions about mortality within a household in the year before the enumeration. As the nation became pre-

dominantly urban, innovative questions sought to measure and describe the nation's housing stock and the occupations or activities of adults.

The Depression of the 1930s generated monumental changes in the nation's statistical system, since more information was needed to assess the relative effectiveness of federal economic policies. The economic crisis of the 1930s led to the inclusion of questions about weeks of employment, hours of work, duration of unemployment, specific occupations and industry of employment, income, educational attainment, and migration within the country. The 1940 census was the first modern enumeration and served as a model for all subsequent counts. It was the first time that statistical sampling was used, with some individuals answering more questions than others. More recent censuses replicate Census 1940, although many questions have been altered, a few have been deleted, and several have been added, including inquiries about transportation to work and, for the first time in 2000, the care of grandchildren, and a new approach to getting a better picture of the country's ethnic and racial mix.

Sampling has been used in the last seven censuses. In 2000, all households filled out a brief census questionnaire providing basic information about age, sex, race, household relationships, and tenure. One household in six answered a longer questionnaire, yielding detailed information about how this nation is changing and why.

Since 1900, the Census Bureau has issued special reports following the enumeration summarizing new findings or synthesizing fresh data with the old. Since 1930 the Russell Sage Foundation has supported the writing and publication of these volumes, a tradition that continued with Census 2000. In cooperation with the Population Reference Bureau, the Russell Sage Foundation sponsored fourteen short chapters designed to lucidly synthesize key findings from Census 2000, thus making them highly accessible to a broad audience of policymakers, journalists, college students, and interested citizens. Authors and topics were selected with the help of a distinguished review panel from among a much larger number of excellent proposals. The authors of the chap-

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ters met on several occasions during the work and were urged by the series editors to put census findings into the context of social, economic, and demographic trends. This volume brings the chapters together, providing a variety of perspectives on the state of the nation at the beginning of the new century.

Numerous federal surveys and economic data systems provide useful information on a monthly, quarterly, or annual basis, but they can only tell us what has happened at the regional or state level or, on the national level, provide broad-brushstroke data. Their sample sizes are not sufficient to allow comparisons of particular groups, be they recent immigrants from different countries, occupational groups, or persons with specific skills or physical handicaps. Surveys also have sample sizes too small to allow fine-grained geographic comparisons. To understand what happened in local areas and to groups of special interest, we need to analyze information provided by the 17.6 million householders who answered the long-form census questionnaire in April and May of 2000.

Traditional enumeration methods proved to be highly effective in counting the population in 2000—but this was hardly a foregone conclusion for those who had followed the technical and political debates related to undercounts in previous censuses. Beginning in the 1950s the Census Bureau scientifically measured census undercount using sampling, reinterviews, and demographic methods. Their results showed not only substantial undercount but also a disturbing pattern of racial differences; blacks were twice as likely to be omitted as whites—8 percent were missed in 1950—leading to an inequitable distribution of political representation. Strategies were designed to improve the count, but those used for Census 1990 did not work well. Net undercount in that year, 1.8 percent—was higher than in 1980, 1.2 percent. Demographic changes—more single-person households, more cohabitation, fewer people speaking English, more mother-only families—suggested that Census 2000 might be even less accurate than Census 1990. The Clinton administration sought simultaneously to reduce the cost of the enumeration and improve quality by using sampling, first to follow up for nonresponse and then to adjust for net census undercount.

The results of Census 2000 would be highly charged with implications for the political life of the nation. Republicans won control of Congress in 1994, and they realized that their chances to remain the majority party in the twenty-first century would be strongly influenced by Census 2000. If that enumeration counted many voters who were more likely to vote Democrat than Republican, it could be used to draw districts favorable to the Democratic party, and Republican control would be at risk. Legislators of both parties feared the potential consequences of a flawed count, since it could affect both

reapportionment of congressional seats among states and the redrawing of legislative boundaries by the states using census estimates. Fearing that sampling and statistical adjustments for undercount might be done capriciously to aid Democrats and harm Republicans, Speaker of the House Newt Gingrich sued President Clinton about how the population would be counted. The Supreme Court expedited its hearing of this fundamental constitutional issue, and in January 1999—just fifteen months before the census was to begin—ruled 5 to 4 that sampling could not be used to obtain the count that would determine the allocation of congressional seats. Congress provided the necessary funds to recruit a small army of enumerators to visit the 34 percent of American households that had not responded to the mail inquiry for census information. Demographers feared that these efforts to complete the count might fail, since many householders are hard to locate, and others are reluctant to give out information about themselves to the government, are unfamiliar with the census, or speak no English.

Kenneth Prewitt, appointed by President Clinton as director of the Census Bureau, summarizes in this volume the bitter political controversy that surrounded Census 2000, but goes on to demonstrate that the quality of the count was exceptionally high. Statistical analyses show that Census 2000 was virtually complete in its count of whites, Asians, and Hispanics but missed about 1.8 percent of African Americans. Despite this racial gap in the accuracy of the results, Census 2000 was a great improvement over 1990, when almost 6 percent of blacks were missed. More so than any previous enumeration, Census 2000 fulfilled the hopes for representative government of those who drafted our Constitution.

Federal statistical reports in the 1990s had revealed favorable economic trends, especially following 1993. The census, with its long-form sample of one household in six, allows us to dig deeper and learn about local areas, specific groups, and detailed occupations or educational attainment categories. The economic analyses of Census 2000 data show that the 1990s were years of improvement for most such groups. Controlling for inflation, the typical adult in 2000 earned 15 percent more than the typical adult a decade earlier, meaning that he or she could purchase 15 percent more goods and services. This image of the 1990s as a decade of large SUVs, much larger new homes, spas, health clubs, and vacation centers had a basis in fact.

But as several authors show in this volume, a closer analysis reveals more uneven progress. Sheldon Danziger and Peter Gottschalk focus upon trends in economic inequality among Americans. Census 1990 found that 13 percent of the nation's total population and 18 percent of children under age 18 lived in households with incomes below the poverty line. The booming economy of the 1990s raised incomes and reduced

poverty, but the declines in the percentages of those living in poverty were modest. By 2000, this figure fell to 12 percent for the total population and 16 percent for children. Older Americans were a bit better off, as the poverty rate for those aged 65 and over fell from 13 to 10 percent.

William P. O'Hare describes trends in the welfare of children. For the most part, his findings give grounds for optimism: there is evidence of rises in income for families with children, sharp increases in the educational attainment of parents, less poverty, higher rates of school enrollment, and lower mortality rates. Some challenges for policymakers remain, since 37 percent of children living in single-parent families were impoverished. This is a substantial improvement from 1990, when 46 percent of such children were poor, but children living with just one parent remain at high risk of deprivation.

Poverty rates for older people are much lower on average than for children, thanks mainly to a relatively generous Social Security system that currently provides more than half the family income for the majority of households headed by older people. The sustainability of this system of public pensions (and public health insurance for those age 65 and over) is questioned by those who foresee a "generational storm" brought on by the retirement of the outsized baby boom cohorts; the older baby boomers will start retiring before the end of the current decade. Finding efficient and fair ways to head off generational conflict requires understanding the likely economic and family circumstances of the baby boomers. Mary Elizabeth Hughes and Angela M. O'Rand show how diversity of experiences has produced cohorts about which it is dangerous to generalize.

Dowell Myers also uses cohorts as an analytical framework to examine economic progress, for example, to document the rising proportion of American households that own their own homes rather than rent. Despite concerns about the educational and linguistic diversity of newcomers, the immigrant cohorts that Myers defines by decade of arrival do seem to catch up to their native-born counterparts in several indicators of material and social progress. Sustained economic growth has led to reduced unemployment rates for all groups, provided opportunities for a large flow of immigrants (18 million, or 14 percent, of the nation's 130 million jobs in 2000 were filled by immigrants), increased per capita hours of employment, especially for the highly educated, and raised the labor force participation rate of women, although not that of men.

Census 2000 confirmed huge differentials in population growth by race, a topic differently described in chapters 12, 13, and 14, by Rogelio Saenz (for Hispanic Americans), by Michael A. Stoll (African Americans), and by Yu Xie and Kimberly A. Goyette (Asian Americans). Thanks to substantial immigration, during the 1990s the Hispanic population increased by at least 58

percent and the Asian population by 52 percent. By comparison, the groups whose growth was minimally influenced by migration from overseas grew slowly: the African American population increased by 16 percent, and the low-fertility non-Hispanic white population by just 3 percent. Census 2000 reported the Hispanic and black populations were nearly equal in size: 35.2 million of Spanish origin and 36.2 million African Americans. Subsequent data show that in the early years of the twenty-first century, the Hispanic population surpassed the black in size. A common theme emerging from these three chapters is that within-group differences in social, economic, and demographic conditions are wide and significant for policy. Since most data sources have insufficient samples to allow meaningful study of variation within these large racial and ethnic categories, these chapters nicely illustrate our contention that the census is indispensable.

No other data source can as effectively as the census reveal the composition of the immigration flow, a topic explored extensively by Mary M. Kritz and Douglas T. Gurak. Census data enable us to understand the diversity of immigrants: in their origins, in their educational attainments, and in the different gender composition of immigrant streams—some streams are predominantly male while others are gender-balanced. Many immigrants report great educational attainments while many others report few years of schooling. Among Asian immigrants, the highly educated greatly outnumber those with few years of education, whereas the majority of Mexican and Central American immigrants have little formal schooling.

Furthermore only the census documents the current Hispanification of the entire nation—the rapid spread of the Spanish-origin population from their traditional ports of entry to most all regions of the country. Who would have imagined, in 1960, that the Pennsylvania Dutch cities in the old Pretzel Belt would become centers for a Spanish-speaking population or that many smaller metropolises in the Carolinas and the Midwest would include thousands of Mexicans working at semi-skilled as well as skilled jobs?

Frank D. Bean, Jennifer Lee, Jeanne Batalova, and Mark Leach continue the "who would have imagined?" theme so often provoked by immigration studies. They examine how immigration is affecting not only the racial and ethnic composition of the American population but also in all likelihood the very conception of what long-used categories mean. The 2000 census was the first in which respondents could identify themselves as belonging to more than one race. The published results will likely contribute to the trend they document, since Americans will become increasingly accustomed to fairly complex descriptions of a reality that was long described, literally, in terms of black and white. Sonya M. Tafoya, Hans Johnson, and Laura E. Hill study the mul-

tiracial population, supplementing the national-level data with detailed information from California.

California is particularly interesting as a test case, since we knew from Census Bureau surveys in the 1990s that many native-born Americans were leaving California and that their places were being taken by even more immigrants from Mexico, Latin America, and Asia. Those surveys were less successful in telling us about rapid population growth throughout the Rocky Mountain states, attributable in part to that exodus from California. And they provided little information about another crucial demographic phenomenon affecting very different parts of the country—sustained population loss. Continuing a decades-long trend, population was lost in the 1990s in a broad swath of contiguous counties stretching from the Appalachian mountains in the east, through much of the interior South, into the upper Midwest and then across the Great Plains including northern Texas. Census 1890 led the historian Frederick Turner to declare the American frontier closed, since most counties had population densities exceeding one per square mile. Census 2000 reports that quite a few counties now fall below that density. Will these losing counties be able to sustain health services, schools, good policing, fire protection, and civic improvements if fewer and fewer people are spread thinly across vast areas? Many of the older suburbs bordering central cities in the Northeast and Midwest also reported substantial population losses. Will they successfully adjust to the changes forced upon them as their populations—and tax revenues—decline by a quarter, a third, or more in the course of a couple of decades? Whereas there is an extensive planning and policy literature describing how communities might best cope with rapid population growth and the prosperity it often brings, almost nothing has been written about how cities and counties should cope with equally rapid population declines.

The 2000 census also gave us surprising information about population growth in some older central cities—places whose population peaked right after World War II, just before the suburban boom. Thanks to immigration linked to economic growth, New York's population set a record in 2000, and Chicago grew for the first time since the 1940s. Eight of the nation's ten largest cities in 1990 grew in the subsequent decade, Detroit and Philadelphia being the two exceptions.

The racial and ethnic groups studied in this volume participated in these national and metropolitan migration streams in different degrees. Residential segregation of the races declined somewhat overall, but remained high in national averages. Only the detailed decennial census gives the precise information needed to study residential segregation at the level of neighborhoods. The chapters on Latinos, blacks, and Asians each document the levels and trends of residential segregation as it affects each group. The residential segregation of

blacks from whites declined in the 1990s, as it had for several previous decades, though it remained higher than most Americans realize. In southern and western metropolises, where most of the housing stock was built after the Open Housing Law prohibited racial discrimination in the housing market (1968), blacks and whites are only moderately segregated from each other. Segregation persists at much higher levels in the older metropolises of the Northeast and Midwest, but even in these places, black-white segregation decreased, by just a little in some metropolises but rapidly in others. Throughout the nation, the shift of African Americans from central cities to the suburbs that began in the 1980s accelerated in the 1990s.

Hispanic and Asian populations grew rapidly and their segregation from non-Hispanic whites increased modestly, but they remain much less segregated from non-Hispanic whites than are blacks. Meanwhile, Hispanics and Asians are just about as highly segregated from African Americans as whites are. In the melting pot of the nation's twenty-first-century metropolises, Asians and Hispanics are highly segregated from native-born African Americans.

The historic purpose of the census was to produce enumerations for the geographic distribution of political representation, and so the economic, social, and demographic data have always been keyed to location: where people live. The fundamental social group that can be studied with long-form census data is the co-residential family, anchored by the person who answers the questionnaire and other household members related to her or him and sharing household expenses. Of course, families have always been more complicated social realities than this statistically convenient unit would suggest. They form, dissolve, and re-form; familial obligations and caregiving relationships link people who may live in separate households. Still, as several of our chapters demonstrate, the census is an excellent source of data on the results of long-term changes in the family and how they are experienced by adults and children, women and men, newcomers and native-born. The 1990s saw some notable changes in the tempo of change. On all indicators, the rate of change was much slower in the 1990s than in previous decades, a theme developed in several chapters, especially by Daniel L. Lichter and Zhenchao Qian. Increases in the proportion of children living in mother-only families were small, the rate at which unmarried women bore children declined, and the trend toward higher divorce rates either tapered off or was reversed. Linked to this—as described in “Women, Men and Work,” by Liana C. Sayer, Philip N. Cohen, and Lynne M. Casper, and “Gender Inequality at Work,” by David A. Cotter, Joan M. Hermsen, and Reeve Vanneman—was a slowdown in several long-standing trends affecting work and family and gender roles. The labor-force participation rates of adult women

may have reached a peak, and the rate of convergence of men's and women's occupational roles—and pay—appears to have slowed.

Census 2000, documented one unexpected but persistent trend toward family stability: adult children are not leaving their parental home at the rate of their predecessors, or, if they leave, more of them quickly return. Of all persons aged twenty to twenty-four in 2000, one-third lived with one or both of their parents and, among those aged twenty-five to twenty-nine, one in seven lived with their father, their mother, or both. At no point in the previous 150 years documented by the decennial censuses had such a high proportion of those in their twenties and thirties lived with their parents.

The secular trend toward greater investments in education continued in the 1990s. The percentage of the nation's young adults, those aged twenty-five to twenty-nine, with a secondary school diploma or a General Educational Development test degree is very high, though significant racial differences remain: 96 percent of native-born Asians, 91 percent of native-born whites, 81 percent of African Americans, and 77 percent of Latinos born in this country have a high school diploma or equivalent. Census data suggest that between 60 and 66.6 percent of high school graduates are now enrolling in postsecondary education, be it a regular university, a community college, or a specialized training program. The challenge of minimizing dropout rates formerly focused upon high school students. Now it is time to turn attention to those many individuals who begin a postsecondary program but fail to complete it.

Less heralded is the continuing feminization of collegiate and professional education in the United States. Forty-nine percent of Americans aged eighteen to twenty-four were women, but the census reported that 55 percent of those working on bachelor's degrees were women. Of those with a four-year degree and studying for an advanced or professional degree, 54 percent were women. A continuation of current trends implies that within two decades the majority of new doctors, lawyers, and MBAs may be women. Several chapters in this volume provide information about the increasing numerical domination of college enrollment by women and its possible consequences with regard to the occupational achievements of women.

Finally, in a subtle fashion, Census 2000 introduced the American public to a new concept of race, one that differs significantly from past perceptions. Throughout our history, from the Colonial and antebellum eras to the Civil War and Reconstruction, on into the twentieth century and the civil rights struggle, race has been the nation's most divisive domestic issue. In the twentieth century, racial tension underlay both bloody urban riots and pivotal Supreme Court decisions, both those that strongly upheld white dominance and others that were the epitome of equity. Despite this divisive history of

bitter disagreement, there was consensus that everyone in the United States could readily be classified into one of two racial groups because everyone was thought to have one primary racial identity. Since 1790, the federal statistical system gathered information on the basis of that assumption. But this assumption no longer can form a credible basis for American demographic statistics.

Increases in interracial marriages after the civil rights decade of the sixties led to a growing population of people with parents and grandparents from different races. A vibrant social movement sprang up in the 1990s demanding that the census include a new racial category: multiracial. The Census Bureau tested innovative questionnaires and the Office of Management and Budget received input from interested parties. Many traditional civil rights organizations feared that a multiracial category might minimize the size of their group; parents argued their children suffered psychological damage when they had to identify with either the race of their mother or the race of their father but not with both races.

For the first time, Census 2000 used a "check all that apply" question with regard to race. A person could check off just one race or as many as five: white; black or African American; American Indian or Alaska Native; Asian; Native Hawaiian or other Pacific Islander; and "some other race." Sonya Tafoya, Hans Johnson, and Laura Hill provide an authoritative summary of what happened when Americans were given the opportunity to identify with several races simultaneously. About one resident in forty marked two races, and about one-third of those people were multiracial because they marked "some other race" and then wrote a term designating a Spanish origin for their race such as Mexican or Dominican.

The census research reports in this volume will likely be the last in a century-long series. With backing from both political parties, the federal statistical system is being modernized and the system of data collection is being changed. Although there will be a head count in 2010 to determine how many congressional seats go to each state, the detailed decennial questionnaire to be answered by a large fraction of households has been eliminated, and this will obviate the need for the decennial research reports.

The merit of a decennial census with its detailed questions and huge sample size is its ability to tell us about small groups and the residents of local areas. But there is a tremendous offsetting disadvantage in this approach when it comes to the generation of useful data: the census is taken only once a decade, so we have to wait ten years to see what changes have occurred, and why.

Instead, the Census Bureau is now implementing the American Community Survey, a large representative

sample to be selected each year for interviews that is comparable to a rolling census. This ongoing survey will provide fresh information about the nation, states, and large cities and metropolises every year. The sample size is so large that we will be able to study small groups such as recent immigrants from Africa or women employed in the skilled crafts trades more frequently than once a decade. For smaller geographic areas or relatively small groups, data can be aggregated on a rolling basis for periods of three years or five years (see appendix to this introduction).

As we noted at the outset, Thomas Jefferson was the cabinet secretary responsible for the daunting task of conducting a census of the scattered inhabitants of a vast, newly independent country. He was also a social and natural scientist of great talent and wide interests, and his *Notes on the State of Virginia* covered everything from human population growth to the health of towns and the size of animal fossils. We like to think that he would have enjoyed the eclectic scientific conversation in the chapters that follow, and shared our admiration for his successors at the Census Bureau who followed through on the daunting task he set in train.

APPENDIX: THE AMERICAN COMMUNITY SURVEY

The chapters in this volume rely heavily on supplementary questions to the decennial census (called the “long form,” though it is hardly long for a household survey) sent to one-sixth of households in 2000. This design principle for the census—a few core questions answered by every household and a more extensive list answered by a sample—was introduced in 1940 and was used in all subsequent enumerations up to Census 2000.

After each of these censuses, the Russell Sage Foundation commissioned monographs and the Population Reference Bureau published nontechnical reports for wide audiences, in both cases drawing heavily on analyses of sample data. The present volume might be the last flowering of these parallel traditions, for the Census Bureau plans to discontinue use of the sample questionnaire for the 2010 decennial census. Instead, it will conduct only the basic short-form census in 2010, which will produce counts of the population by age, sex, race, and ethnicity (the latter two characteristics are needed to monitor compliance with voting rights legislation), and housing counts. The more detailed information on demographic, economic, and housing characteristics formerly produced by the Census sample questionnaire will be collected separately on a continuous basis under the American Community Survey (ACS).

The ACS is a continuous survey of approximately 3

million households per year, selected at random in every county, American Indian or Alaskan Native area, and Hawaiian homeland in the United States, and Puerto Rico. It uses an instrument very similar to the sample form used in the 2000 census. A test program for the ACS began in 1996, eventually including thirty-one test sites around the country. In 2000, 2001, and 2002, national-level tests collected data from about 750,000 households each year. Full implementation began in 2003.

The reason for this changeover that data users will most readily understand is the need for continuously updated information about the nation’s population. Proponents of the ACS often use a metaphor from photography: the traditional decennial census gives us a snapshot of the nation once every ten years, whereas the ACS will provide a continuous video (or perhaps a webcam) showing us how social, demographic, and economic characteristics change almost in real time. The ACS design calls for a smaller number of households in the sample in any one year than the census questionnaire had, but sample sizes for estimates pertaining to small areas or small subpopulations will be brought up to acceptable levels for statistical purposes by means of pooling data collected over a period of some years.

Estimates based on ACS data for geographic units with populations of 65,000 were released beginning in 2004. Estimates for places with populations of 20,000 to 65,000, based on three years of ACS data from 2003, 2004, and 2005, will be released in 2006. For places with populations smaller than 20,000, estimates based on five years of pooled data will begin to appear in 2008. The pooling of data is required both to produce estimates of acceptable precision and to protect the confidentiality of respondents.

For example, the 2003 ACS data can be used to produce estimates for the population of Macomb County, Michigan (population over 805,000 in 2003). Based on one year of data, the Census Bureau estimates that the number of county residents over age 5 who speak a language other than English at home was 101,645. To show the variability in any estimate based on a sample rather than a complete count, the Bureau also publishes lower- and upper-bound estimates, corresponding to a statistical 90-percent confidence interval: between 89,357 and 113,933 Macomb County residents speak a language other than English at home. For the city of Warren in Macomb County (which had 138,247 residents according to the 2000 census), estimates centered on 2004 will be the first available, based on data collected during the three years from 2003 to 2005. The city of New Baltimore, Michigan, also in Macomb County, which had a population of 7,405 in the 2000 census, will require 5 years of ACS data collection to produce a sample size acceptable for any estimate; under current plans, these will be published in 2008.

The value of continuous measurement is best understood when we consider indicators that have recently passed inflection points, points in time when long-standing trends slow or reverse. A good example is the proportion of children living in single-parent households. As William O'Hare points out (this volume, chap. 7, fig. 2), we know from Current Population Survey (CPS) data that at the national level, the percentage of children living in single-parent homes peaked in the mid-1990s and has declined since then. But this percentage was still higher in the 2000 census than in the 1990 census—the downward trajectory had not taken it back to the 1990 level. The CPS sample sizes are insufficient for small areas and small groups to produce reasonable year-to-year estimates of this important indicator. With ACS continuous measurement, we will not need to wait until 2010 long-form data are published in 2012 or so to find out whether small subpopulations such as that of Tompkins County, New York, or Chinese Americans nationally, are part of this general trend: We will have updated estimates throughout the decade to tell us whether their paths diverge.

Less apparent to users, but vitally important to those responsible for producing accurate data, is the managerial efficiency gained by the switch to continuous operations. To gear up once every ten years to implement a census, then virtually to dismantle the field operation, only to repeat the cycle after a hiatus, is a massive undertaking, as Kenneth Prewitt shows clearly in his chapter. Hiring, training, and supervising hundreds of thousands of temporary interviewers, address finders, and data processing clerks for each operation, only to let them go again after a few months is a needlessly costly way to gather information about the population. The continuous nature of the ACS makes it possible for the Census Bureau to hire people for all these jobs and give them training that will pay off for a longer term. It also allows highly trained workers to treat ACS work as part of a career rather than a temporary job, so that they invest in the development of their skills and perhaps advance to supervisory or managerial positions, having gained a solid grounding in the frontline work of the organization.

The ACS uses both computer-assisted telephone interviewing and computer-assisted personal interviewing to follow up the initial mailing of questionnaires to sample households. The ability of trained interviewers to concentrate on nonresponding households should lower “nonresponse error,” such as items or whole questionnaires left blank, or inaccurate answers given because questions were misunderstood. Census Bureau analysts and outside researchers evaluated data quality by comparing data from the Census 2000 sample with data from a version of the ACS administered nationwide, and the ACS-type data generally showed higher quality. For example, the ACS-type data had lower rates of imputed

data (for skipped items or skipped persons) than the Census data¹ and much higher rates of intelligible responses to problematic items such as the question on ancestry.²

In the past, the Census Bureau always had a fairly short window of time in which to get the questionnaires and methods tested and refined for the decennial census. If an error or anomaly was not detected until after the data had been collected and analyzed, it was too late to make any changes and demographers had to wait for another ten years. Questionnaire items appearing late in the census preparations were particularly subject to this uncertainty. For example, the first question on Hispanic ethnicity was added to the 1970 questionnaire at the last minute, with little time taken for testing whether respondents shared an understanding of what was meant by the term “Hispanic.” Similarly, the decision to include the question about grandparents caring for grandchildren, this time motivated by congressional interest, was taken late in the planning for the 2000 census. The ACS can readily be used to pretest innovative questions. The ACS schedule is also more forgiving—an item that seems not to work as intended can be replaced without a decade of delay. The ACS questions on disability, for example, have recently been modified to fit better the needs of analysts and planners.

Nothing is perfect, and there are some drawbacks to the change. One is the loss of simplicity inherent in using rolling averages of different periodicity to produce estimates. The clarity of a statement like “This is the picture as of April 1, 2000, everywhere in the nation” is lost when one compares, for example, a 2004 estimate based on three years of data for the large city of Detroit with an estimate based on three years of data for the small but contiguous city of Hamtramck. The different periodicity matters most when one or both of the geographic regions or small populations is changing rapidly—but that is also exactly the circumstance in which having to rely on a snapshot from some years ago is unsatisfying.

This drawback may cure itself over time. People will get used to moving-average estimates from the census, just as they will get used to multiple-choice racial data. The ACS is not the only rolling survey. Unemployment estimates from the Current Population Survey, for example, can be produced every month for states and large metropolitan areas, but for relatively small occupations or groups of workers they must be aggregated over different time periods. Another example: The National Health and Nutrition Examination Survey used to be fielded every decade or so, but it is now collected continuously. National obesity trends can be tracked on a quarterly basis, but valid estimates for rarer conditions require pooling of data from longer time periods.

Calculating standard errors for estimates based on smoothed time series can be difficult. But those suffi-

ciently numerate to worry about standard errors are also likely to be able to use the approximate standard errors provided on the Census Bureau website.

Another concern, one that time and familiarity may not cure so easily, is with the geographic hierarchy that the ACS design uses. When estimates for places of all sizes were released more or less at once, aggregating up to “user-defined geographies” was relatively straightforward. For example, the Appalachian region as defined by the Appalachian Regional Commission currently includes 410 counties in thirteen states and eight Virginia cities (which are not included in counties in Virginia). Census 2000 estimates based on long-form data for these data all appeared around the same time. Anyone with spreadsheet software could produce a weighted average estimate for the whole region and subregions, precisely centered on April 1, 2000, even though no estimates for Appalachia appeared in Census Bureau publications.

In the new ACS era, though, an analyst wanting an estimate for, say, the proportion of college graduates in the adult population in northern Appalachia, would have to average an estimate based on one year of data for Allegheny County, Pennsylvania (a populous county that includes Pittsburgh); estimates based on three years of data centered on the same date for most Appalachian counties, and estimates based on five years of data centered on that date for the smallest counties. This problem may require long footnotes in future reports—though once again, the problem is most acute in the situation of rapid change and wide variation, precisely the situation in which extrapolating trends from the last decennial census is also least satisfactory. Trading some simplicity for greater frequency is likely to look like a good deal to most data users.

In 1937, Guy Irving Burch, the founding president of the Population Reference Bureau, published a discursive examination of the demographic history and prospects of the United States.³ Many of his topics were remarkably similar to those discussed in this

volume—an aging population, rural outmigration, even the apparent diminution of the native-born population of California to which we alluded earlier. In many ways he was premature—he foresaw neither the baby boom, which was so well chronicled by Mary Elizabeth Hughes and Angela O’Rand in this volume, nor the great postwar wave of immigration, analyzed by several of our authors. He titled his articles “Headed for the Last Census?” a provocative allusion to depopulation and decline that he detected in so many features of American demography. Nearly seventy years later we can amend his rhetorical question. We may have seen the last *bifurcated* census. The new model of a basic decennial census supplemented by rich continuous information from the American Community Survey looks, on balance, like an improvement.

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