

The keeping of all sorts of statistics began when early civilizations learned to count their populations. The Romans, who for a time held a census every 5½ years on average, revered numbers. This marble frieze of about 100 B.C. shows a gathering for a post-count Ceremony of the Census, which included the sacrifice of animals to the gods.

Statistics

"Lies, damn lies, and statistics." During the 19th century, when that denunciation was first uttered (whether by Benjamin Disraeli or Mark Twain is still disputed), the industrializing nations were just beginning to become addicted to statistics—figures on population, the economy, and other matters of concern to the state. As scholars note, even accurate numbers can obfuscate as well as illuminate. "I still think that a familiarity with the best that has been thought and said by men of letters," critic Joseph Wood Krutch wrote in 1963, "is more helpful than all the sociologists' statistics." Yet, of necessity, the worldwide drive to quantify people, money, and almost everything else continues. To help policy-makers and others, the U.S. government alone spends \$1.4 billion a year collecting statistics, and it publishes 6,000 books of them annually. Here, William Alonso and Paul Starr discuss the role that "official" statistics now play in daily life. William Petersen looks at how the *politics* of numbers has affected the U.S. census.

A NATION OF NUMBERS WATCHERS

by William Alonso and Paul Starr

To read a newspaper in the United States (as in any advanced society) is to be bombarded by statistics. On any given day, the numerical fare may include figures on the cost of living and the unemployment rate, "lagging" and "leading" economic indicators, out-of-wedlock birthrates, reading scores, and life expectancies, not to mention data on crime, divorce, and oil reserves.

Most of these statistics are "official," in the sense that they are produced by the government. In some countries, of course, official statistics are routinely disbelieved. But where the statistical collecting and reporting agencies enjoy a reputation for professionalism, their findings are commonly presented—and

accepted—as neutral observations, like a weatherman's report on temperature and atmospheric pressure.

This view is too simple, of course.

Official statistics do not merely hold a mirror to reality. They are the product of social, political, and economic interests that are often in conflict with one another. They are shaped by presuppositions and theories about the nature of society. They are sensitive to methodological decisions made by complex bureaucracies with limited resources. Moreover, official numbers, especially those that appear in series (e.g., monthly inflation figures, quarterly bulletins on economic growth), do not reflect instantaneously all these shaping factors: They echo the past subtly, just as a landscape reflects its underlying geology.

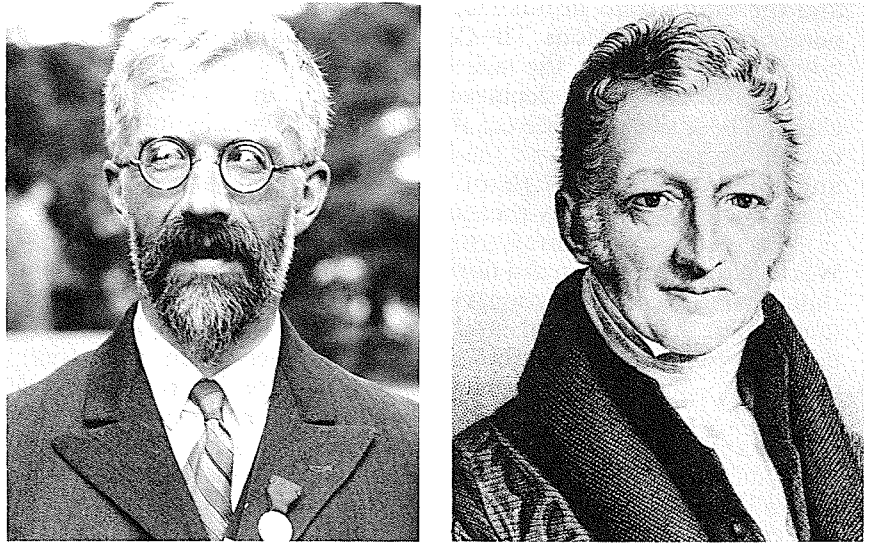
A Subtle Business

Official statistics have always been subject to competing influences, of course, but never before in America has so much *money* ridden on what the numbers say. In 1940, for example, only about nine percent of the federal budget was distributed as grants to states and localities. But by the early 1970s, that percentage had nearly doubled, and today such funds (totaling some \$100 billion) make up about one-fifth of state and local revenues. Where these billions get spent is largely determined by congressionally mandated formulas using statistics.

Numbers direct much more than just federal funding, as we all know. Standards for affirmative action in employment and school desegregation depend on official data on ethnic and racial composition. Several states now limit their budgets to a fixed share of projected state income, and a proposed "balanced-budget" amendment would do the same for the federal government—in effect, incorporating the fuzzy science of economic measurement and forecasting into the Constitution.

Official statistics directly affect the lives of millions of Americans. They determine the cost-of-living adjustments made to many wages and to Social Security payments, and they determine who is

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*Statistics' two faces: Methods developed by such theoreticians as Britain's Sir Ronald Fisher (1890–1962) helped science to flourish. What linked statistics to social policy was the work of men such as Sir Thomas Malthus. His 1798 *Essay on Population*, arguing that people could multiply beyond society's ability to feed them, led to Britain's first modern census.*

poor enough—or too rich—to qualify for food stamps and subsidized school lunches. They are used in regulating businesses, large and small, and they determine the rates at which hospitals are paid by Medicare. Higher rates, for example, apply to urban hospitals, but determining which areas count as urban and which as rural depends on statistical standards.

It is no wonder, then, that America has become a society of statistics watchers—from the congressman worried about redistricting by the state legislature under the “one-man, one-vote” court decisions of the 1960s, to the elderly couple on Social Security worried about rising costs; from the investment banker gauging changes in the money supply, to the farmer watching the figures on cost-price “parity” for his crops. Such numbers as the unemployment rate, the money supply, and various price indices have become thoroughly institutionalized: Even the hours of their release are etched on the Washington political and economic calendar, for they are certain to stir debate on the effects of government policy and to influence the financial markets.

But official statistics also affect society in subtler ways. By the categories employed, the questions asked (and not asked),

and the tabulations published, the statisticians change images, perceptions, aspirations. The Census Bureau's methods of classifying and measuring the size of population groups determine which citizens will be declared "Hispanics" or "Native Americans." These decisions direct the flow of various federally mandated "preferments," and they, in turn, spur various alliances and antagonisms throughout the population. Such numbers shape society while they measure it.

The absence of numbers may also be telling. For years after World War II, Lebanon did not hold an official census out of fear that a count of the torn country's Christians and Muslims might upset their fragile, negotiated sharing of power (which broke down anyway). Saudi Arabia's census has never been officially released, probably because of the Saudis' worry that publishing an exact count (showing their own population to be smaller than many suppose) could encourage enemies to invade or promote subversion. In Britain a few years ago, Scotland Yard created a furor when, for the first time, it broke down its statistics on crime according to race. Some Britons objected that mere publication of the data was inflammatory.

Statistics are lenses through which we form images of our society. During the early decades of the Republic, Americans saw the rapid growth in population and industry recorded by the Census Bureau as a confirmation, for all the world to see, of the success of the American experiment. Historian Frederick Jackson Turner announced his famous conclusion about the closing of the U.S. frontier on the basis of 1890 census data.

Today, our national self-perceptions are regularly confirmed or challenged by statistics on such fundamental matters as the condition of the nuclear family (allegedly still eroding), reading and literacy rates (ditto), the (slight) reversal of rural-to-urban migration, and our industrial productivity and military strength relative to other countries. Whether the meanings read into the data by politicians and pundits are reasonable or fanciful, the numbers provide a basis for popular and specialized discussion. Even when they misrepresent reality, they standardize our perceptions of it.

The process is thus recursive. Winston Churchill observed that first we shape our buildings, and then they shape us. The same may be said of statistics.

WHO'S WHAT: 1790-1980

by William Petersen

I

DEFINING 'AMERICANS'

Even two centuries ago, this was no easy task. Though largely of English stock, the people of the young country lacked the characteristics of a "nation." They had a varied ancestry and spoke different languages. Many had come to the New World to practice freely their own religions. In *Letters from an American Farmer* (1782), J. H. S. de Crèvecoeur, an immigrant to New York State from France, wryly observed that an American is "a European or the descendant of a European . . . whose grandfather was an Englishman, whose wife was Dutch, whose son married a French woman, and whose present four sons now have four wives of different nations."

Before long, even that sketch would understate the heterogeneity of the United States.

As America went on to absorb more immigrants from more places than any other country ever had, its demographics were constantly changing. By April 1, 1980, the date of the last decennial census, the population had increased by 56 times since Crèvecoeur's day, to over 226,500,000. Only 50 million were of English or part-English descent. "Minorities," a relatively new term in the social lexicon, were typically the fastest growing American groups. From 1970 to 1980, when the total population grew by only 11.4 percent, the lowest rate since the 1930s, the number of "Blacks" rose by 17 percent, to 26.5 million. "Hispanics" surged by 61 percent, to 14.6 million. There were also 3.5 million "Asian and Pacific Islanders."

The country's efforts to quantify its population go back to its origins. The early Americans, as the 19th-century historian George Bancroft put it, "seized as their particular inheritance the tradition of liberty." A novel concept: a nation unified by civil rights and personal freedom. The means of unification was the Constitution. In 1787, when the framers met in Philadelphia, the country that had been fashioned by the Articles of Confederation was near collapse, and Britain and Spain were ready to absorb the pieces. The delegates *had* to overcome their differences, and in effect, they did it by the numbers.

Under the Confederation, each of the 13 states had equal

power, but the delegates from the larger ones wanted to give equal representation to each citizen. The compromise was the bicameral Congress. In the Senate, where each state would be represented equally, the less populous ones would have a relative advantage; in the House, proportional representation would give this to the more populous states. Because the distribution of House seats would have to be adjusted to reflect population changes, the new Constitution's ARTICLE 1 called for a census every 10 years. Thus, the first link between America's politics and population counts was forged.

Numbers and Nationality

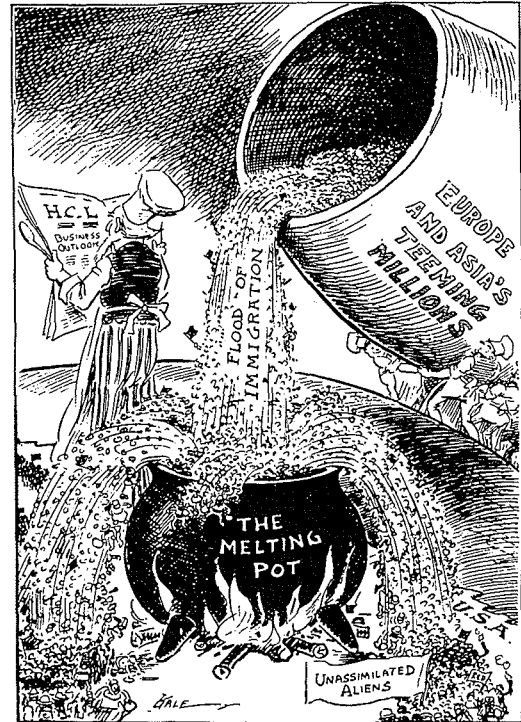
A second compromise in Philadelphia affected how the counting would be done. Though Northern delegates denounced slavery, they recognized that to demand its abolition would wreck the convention. Instead, they agreed that representation in the House would be based on the number of all free persons (except Indians "not taxed," or not living in the general population) plus three-fifths of "all other persons," meaning slaves. One hundred slaves would be equivalent to 60 free persons, black or white—a provision that actually augmented the slaveholding states' representation. Sanctioned by the Constitution itself, this arrangement would continue until the Emancipation.

In the first six censuses, from 1790 to 1840, the population was classified by age group, sex, and status as free or slave. In 1850 and 1860, however, Congress turned the census into a national inventory. In the latter year, data were gathered about health, mortality, literacy, pauperism, occupation, income, wealth, agriculture, manufactures, mining, fisheries, commerce, banking, insurance, transportation, schools, libraries, newspapers, crime, taxes, and religion. But there was no attempt to catalogue ethnic stocks. Because ethnicity had little place in the law, Congress saw no reason to include it in the census.

Scholars and politicians saw the population (apart from Indians and slaves) as unitary, or becoming so. While there was

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Population statistics had become very important in America when this caustic cartoon, "Spoiling the Broth," appeared in 1921. That year, Congress moved to lower immigration numbers using other numbers—quotas.



much 19th-century prejudice against Germans and (especially) Irish, and although some immigrant leaders strove to preserve native languages, the ideal was acculturation. Typically, Europe's minorities—say, Croats in Serbia or Basques in Spain—have tried to maintain their traditional ways. In America, most groups have tried to hasten their own assimilation.

This was especially true of the "new immigrants," who came in great numbers from the 1870s until the flow was interrupted by World War I. Their aspiration was symbolized by the 1908 play *The Melting Pot*, by Israel Zangwill, an English-born son of East European Jews. All European strains, he held, would blend into a nobler American compound; the play's hero, a Russian-Jewish immigrant, married the immigrant daughter of the tsarist official responsible for the pogrom in which his parents had died.

By the early 20th century, however, the country's scholars and politicians were debating whether the Old World's huddled masses should continue to be welcomed in large numbers. Francis Walker, director of the 1870 census and subsequently presi-

VIETNAM: WAR BY THE NUMBERS

Last December, discussing the Vietnam War, former Defense Secretary Robert S. McNamara said that he had always had a "constant skepticism of all figures."

However, during his Pentagon tenure (1961–68) under John F. Kennedy and Lyndon B. Johnson, the former Ford Motor Company president became a champion of statistics and "systems analysis" as key tools of cost-effective management, including management of the 500,000-man U.S. troop build-up in South Vietnam during 1965–67.

Indeed, lacking conventional gauges of progress (e.g., ground gained or lost) in Vietnam, both LBJ and McNamara pressed General William C. Westmoreland, the U.S. commander, and other subordinates for monthly statistical reports on everything from "enemy KIA [killed in action] per U.S. land operation" to "Vietcong-initiated incidents" to "U.S. battalion-days in the field." Aircraft sortie rates, tons of bombs dropped on North Vietnam, tons of "miracle rice" seed distributed to South Vietnamese farmers—all were grist for the Washington systems analysts. Most notorious became the high-level pressure on U.S. combat leaders for prompt tallies of enemy slain in battle—"body counts"—which were inevitably inflated, as in all wars.

By 1967, as General Earle G. Wheeler, Chairman of the Joint Chiefs of Staff, wrote Westmoreland, "An insatiable thirst for hard numbers [has developed] here in Washington." One big reason was that LBJ, up for re-election in 1968 and facing mounting domestic criticism of his war policy, wanted "numbers" to show Congress and the public that the costly effort in Vietnam was beginning to pay off.

Hence, senior U.S. officials were highly sensitive to the political impact of estimates of enemy manpower, for example, since such numbers were routinely made public to indicate "progress." Their anxieties flavored the 1967 internal feud (then vaguely echoed in the press) over a fresh estimate by Washington-based Central Intelligence Agency analysts of upwards of 250,000 Communist part-time



McNamara, 1966

dent (1881–97) of the Massachusetts Institute of Technology, expressed what became a widely held view. The immigrant, he had written in the 1890s, was once "the most enterprising, thrifty, alert, adventurous, and courageous of the community from which he came." But the latest newcomers—from eastern and southern Europe—were "the least thrifty and prosperous from every foul and stagnant pool of population in Europe, which no breath of intellectual or industrial life has stirred for ages."

irregulars, including women and children. The CIA people argued that leaving the part-timers out of a newly revised Order of Battle (an official intelligence listing of enemy units and their strength) would vastly understate Communist manpower in South Vietnam. Westmoreland and others in Saigon variously argued that (a) the irregulars, however troublesome, posed no offensive threat, (b) any firm tally of their numbers was impossible, (c) including them in the estimate of total enemy military manpower would be adding apples and oranges—highly misleading to the public. After a year's bitter debate, a bureaucratic compromise ensued. The irregulars were described (but not enumerated) in a footnote appended to the Order of Battle.

"This statistical controversy was simply an annoying irrelevancy," John L. Hart, the CIA chief in Saigon, later wrote; its outcome had no effect on the war's conduct.

But Westmoreland was depicted as leading a "conspiracy" to suppress vital truths in a 1982 CBS-TV documentary ("The Uncounted Enemy") rehashing the quarrel. Newspaper TV critics (at first) hailed the CBS show. The general, now retired, sued for libel, and the 17-year-old "statistical controversy" was replayed once again in a New York City courtroom last winter. After five months of conflicting testimony, both sides agreed to drop the matter last February; CBS and the general each claimed vindication.

Although the McNamarian thirst for numbers provoked much cynicism in Saigon, some data, taken with a grain of salt, proved valuable. A monthly Hamlet Evaluation Survey (HES), rashly exploited in 1967 for administration propaganda purposes, relied on questionnaires filled out by local U.S. advisers. It alerted senior U.S. officials in Saigon to security trends in each of South Vietnam's 240 districts and 44 provinces; coupled with other information, HES showed where the less obvious trouble spots were.

In the end, enlisting statistics to show "progress" was Lyndon Johnson's ill-fated substitute during 1965–67 for defining a coherent war strategy beyond that of simple perseverance. Despite their heavy casualties, the Communists' 1968 Tet Offensive shook political Washington. No Pentagon computer could measure the crucial intangibles of war, notably Hanoi's willingness to suffer enormous losses for years to achieve the "liberation" of South Vietnam.

In 1921, Congress passed a stopgap measure limiting European immigration to three percent of the number of foreign-born of each nationality in America at the time of the 1910 census. Under another temporary control imposed in 1924, the three percent was reduced to two percent, and the base population was changed to that of the 1890 census, when the proportions from southern and eastern Europe had been far smaller. The 1924 act also included a provision to set permanent quotas

based on the national origins of the total population, rather than those of just the foreign-born.

Assisted by two specialists paid by the American Council of Learned Societies, Census Bureau personnel undertook the task of calculating the number of U.S. inhabitants "whose origin by birth or ancestry is attributable to [each] geographical area" designated in the immigration statistics as a separate country. In fact, the many marriages across ethnic lines made it impossible to divide up the population by national origins. Instead, the analysts proposed to measure the contribution various national stocks had made to the total gene pool of white Americans.

Enter 'Cultural Pluralism'

To do this, they started from the schedules of the 1790 census, using family names to estimate the nation's ethnic composition. As the committee itself pointed out, there was great "uncertainty" in this procedure, since many names are common to two or more nationalities, and many immigrants from Continental Europe had changed their names to English equivalents. Nonetheless, the committee forged ahead and added to their 1790 base subsequent immigration figures, though these too were grossly imprecise. Immigrants from the old multi-ethnic empires that were broken up after World War I (such as Austria-Hungary) were classified on the basis not of their countries of birth, which were no longer considered relevant, but of their names. A "Pole" might have come from Poland, Germany, Czechoslovakia, or the Soviet Union.

Though no one in Congress believed that the committee had succeeded in accurately portraying America's ethnic composition, its work established the immigration pattern from 1929 until the law was changed in 1965. During this period, quotas set the European influx at about 150,000 a year, of whom more than 85 percent were to come from the British Isles, Scandinavia, Germany, the Low Countries, France, and Switzerland.

In a different way, official concern about assimilation also extended to blacks. From 1840 to 1910, censuses counted blacks and mulattos separately; the 1890 enumeration used four sub-categories: "blacks," "mulattos," "quadroons," and "octaroons." More than a generation's research about U.S. blacks was summarized by the Swedish economist and sociologist Gunnar Myrdal in his 1944 book, *An American Dilemma*, in which he argued that all but the most superficial differences between the races would disappear as white attitudes changed and the education and social conditions of blacks improved.



Statistics serving health: Three years before this 1954 photo showing Salt Lake City children lining up for polio shots, gamma globulin (a blood-borne antibody) was tested on a national population "sample." The numbers proved that a poliomyelitis vaccine would be effective.

Prejudice and discrimination did decline, especially after World War II, and in much of polite society there was strong pressure to blur all remaining group differences. During the late 1940s, for an American academic even to suggest a factor in elections such as "the Jewish vote" or "the Negro vote" would have put him beyond the pale. Ideally, Americans were expected to act as individuals in a population that with respect to public institutions was ethnically undifferentiated. As late as 1960, the American Civil Liberties Union tried, unsuccessfully, to have race questions deleted from the census.

Gradually, the goal of total assimilation changed. Following a pattern described in 1938 by Harvard historian Marcus Lee Hansen, third-generation Americans often revived old-country customs that their immigrant grandparents and second-generation parents had put behind them. As Hansen said, "What the son wishes to forget, the grandson wishes to remember."

The Melting Pot began to give way to "cultural pluralism." Social philosopher Horace M. Kallen, a founder of the New School for Social Research, had coined the term in 1924 to designate an antiassimilationist view he had been advocating since

1915. A democratic society, he argued, does not require a complete melting down of all ethnic groups. Alien attributes that had to be forsaken (especially loyalty to a foreign state) should be distinguished from those that could be retained in a pluralist society (such as language and religion).

The list of acceptable alien characteristics, however, eventually came to include even political ties to the old country. In *The Future of American Politics* (1956), political journalist Samuel Lubell held that both the "interventionists," who supported the Allies early in World War II, and the "isolationists," who wanted to stay out of Europe's troubles, were expressing vestigial loyalties to the countries of their ancestors. Because it was politically impossible to support Germany directly, descendants of German immigrants in the Middle West became isolationists; New England Yankees, on the other hand, voted to aid Britain when her need was dire, though they were far removed from their English antecedents. Though dubious, Lubell's thesis did much to establish a presumed link between ethnic blocs and votes on public policy as a routine focus of journalists' and academics' analyses. And those writings, in turn, eventually legitimized that link.

A New Political Purpose

The weaving of ethnic and racial strands into federal politics and law was accelerated by the resuscitated New Deal coalition that President Lyndon B. Johnson mobilized during the 1960s in order to put his Great Society into law. Federally mandated preferments in education and jobs soon became quotas, with or without that designation. Washington specified "goals" and "timetables" with respect to specified categories—blacks, Hispanics, American Indians, and women. The search for "roots" would hardly have become so prominent in popular culture without such regulations, which distributed material advantages to organized ethnic blocs.

The concept of equality was also revised. The moral equality proclaimed in the Declaration of Independence (but compromised by slavery) was given legal force in the constitutional amendments adopted after the Civil War. They abolished slavery, gave all citizens equal protection under the law, and safeguarded the right to vote from racial discrimination. Subsequent court decisions had the effect of blocking the establishment of a colorblind society. But beginning during the 1950s, Congress sought again to bar all race-based discrimination. When Senate opponents voiced fears that the 1964 Civil Rights Act's ban on job bias might lead to racial preferences,

Hubert H. Humphrey (D.-Minn.) said that if “any language” could be found in Title VII supporting quotas, he would “start eating [the bill’s] pages one after another.”

How could one know when equal opportunity had been achieved? By the numbers, said the judges and the Washington officials. Consider how statistical parity was sought in academic hiring and promotions. Colleges with federal contracts were required to measure the size and composition of the “available” pool of potential candidates, classified by race, ethnic group, and sex, for each job, from maintenance hands to professors—not really a feasible task. Administrators then had to compare the proportion of each minority group in each job category with that of those groups in the pool and hire more from the designated minorities in any categories where representation fell short. Recruiting a specialist in Old Norse or astrophysics who was also a minority or a woman was (to use a term common in



“Averaging” at work: In 1705, noting that the comet now named for him appears about every 76 years, the English astronomer and mathematician Edmond Halley (1656–1742) figured, correctly, that it would next approach the Earth and become visible in 1758. It is due again next year.

writings on education) a challenge.

School busing (to adjust the numbers of white and black pupils) and job quotas (to ensure the efficacy of affirmative action) spread. Once again, the colorblind norms that Congress intended to promote were turned upside down. Eventually, in many cases, nothing mattered so much about a person seeking access to jobs or education as race, ethnic origin, and sex. In the apt phrase of Antony Flew, philosophy professor at the University of Reading, England, the "contradictions of enforced equality" led to "a politics of Procrustes."

Organizing with one's racial or ethnic brethren became increasingly important. Class-action suits, common after the early 1960s, helped to establish a new status for groups. Laws written to remove barriers to individuals' advancement were interpreted in ways that redefined society, giving some groupings a legal identity they never had had before. Population numbers acquired new salience.

The political purpose of censuses and other numerical soundings was no longer to enable the native stock to check on whether immigrants were being assimilated on schedule. It was to aid spokesmen for certain minorities in making claims for preferences and benefits proportionate to the groups' numbers.

II

THE GROUPING OF AMERICA

The statistical bureaus of many countries have struggled with the problem of ethnic classification, and their answers have often been arbitrary, to put it no stronger.

Census manuals in Mexico, for instance, define an Indian as someone who speaks an Indian language and wears the sandals called huaraches. But after the same person learns to speak Spanish and to wear shoes, he would be designated a "mestizo," a person of mixed European and Indian ancestry.

Ethnic data have sometimes been manipulated to increase the apparent size of the dominant group. In the pre-1914 censuses of Germany, the Polish dialects Kashubian and Masurian were distinguished from Polish, but those reporting German dialects no less different from High German were incorporated into the "German" population. In Austria-Hungary, even Yiddish speakers were used to increase the "German" part of the population.

The arbitrariness of ethnic counts begins with the government's choice of the population to be tabulated. Generally, the U.S. Census Bureau has *subclassified* only ethnic groups long established in America. Those of British origin get their ancestry further defined as English, Scottish, Welsh, or Irish. But no distinctions have ever been made between those Japanese Americans whose families originated in the main Japanese islands and those from Okinawa, or between Chinese Americans with Cantonese roots and those who derived from Hong Kong, or via Hong Kong from northern China. Yet for the people concerned and for anyone trying to understand them, these latter differences are crucial.

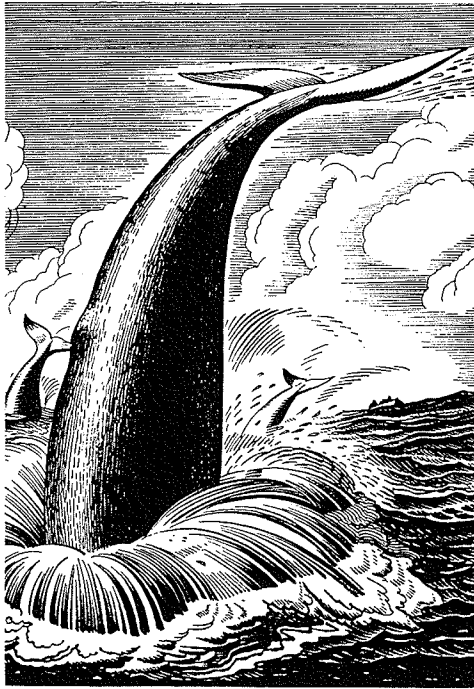
Why Counting Is Difficult

How Americans are tabulated has also often been arbitrary. An Italian who stepped off a boat at Ellis Island before World War I might have seen himself as a Sicilian or a Calabrian. Often it was only after they arrived that immigrants learned to identify with "their" nation. Officials had to make questions simple—What was your country of birth?—and this blurring of details often fostered assimilation. However, having discovered that they belonged to a nation, some developed a retrospective patriotism. The first Lithuanian newspaper was published in America; the Czechoslovak nation was launched at a meeting in Pittsburgh. The very name of Pakistan was coined by Muslim Indian students in London.

American data on the country of birth were rather useless in classifying immigrants from pre-1914 Germany, Austria-Hungary, or Russia. For example, between 1898 and 1904, when for the first time immigrants were classified by stock independent of their country of origin, the new arrivals listed as "German" included not only 151,118 from the German Empire but also 289,438 from such other countries as Austria-Hungary, Russia, and Switzerland.

Nothing better illustrates the traps in ethnic and racial classification than the Census Bureau's struggle to count the "Mexican Americans" of the Southwest. Until 1920, they were delineated in the same way as European nationalities, then so designated only for the first two generations. However, that seemed inappropriate, for Mexican Americans were apparently remaining a distinctive group, more like blacks than like Europeans. In 1930, therefore, the Census Bureau included them under the rubric "Other races," or nonwhites.

Though many Mexican Americans proudly designated



How are animal numbers figured? By statistical analysis. For elusive creatures such as whales, cetologists reckon population size and growth (or decline) on the basis of a species's "life history" that they create from birthrates and other data. Thus, the National Marine Fisheries Service puts the 1983 sperm whale total at 732,000—while conceding that an actual count, were one possible, might differ by 200 percent.

themselves "La Raza" (The Race), they resented the redefinition, and both the Mexican government and the U.S. Department of State protested. Whether or not the new classification was racist, as they charged, it proved to be flagrantly inadequate for a census enumeration. There was a huge undercount of native-born persons of Mexican descent, particularly among those of lighter complexion or in the middle class. In New Mexico, about half the population—some 200,000 people—spoke Spanish, but the census found only 61,960 "Mexicans" in the state.

In the 1940 census, officials tried language as an index. A sample of the population was asked to give its mother tongue, the language spoken as a child. The results contradicted the then usual assumption that foreign languages generally disappear by the third generation. Nearly 19 percent of whites reported a mother tongue other than English (most frequently German, Italian, Polish, Spanish, Yiddish, or French), and almost half were of the second or third generation. But of those who had at least one Mexican-born parent, only about seven percent named Spanish as their mother tongue. The Mexican-American population was not the anom-

alous group it had been thought to be.

In 1950, 1960, and 1970, the census used Spanish *surnames* to identify not just Mexican Americans but all "Hispanics," an umbrella grouping that first appeared in the 1950 count. A list of some 7,000 Spanish names supplied by the Immigration and Naturalization Service was supplemented with about 1,000 names provided by specialists in Romance languages. But this measure was no more successful than earlier indices.

When the roster of names was augmented by others from such subcultural regions of Spain as Galicia, Catalonia, and the Basque country, the number of Americans who in 1970 could be classified as of Iberian origin rose by 21 percent. Moreover, because the name of the head of the household was used to indicate ethnic origin, Hispanic women who had married non-Hispanics disappeared statistically (and non-Hispanic women who had married Hispanics gained a new ancestry).

The Categorical Imperative

Other Hispanics disappeared for other reasons. Martín, the 10th most common name in Spain, was left off the list because it frequently appears also among people of English, French, and German origin. Also omitted from the count were Hispanics with Anglicized names, as well as many from Chile, Argentina, and other places where non-Spanish names are common. Filipinos with Spanish names were classed as Asians.

A check of the 1970 count showed that, outside the Southwest, only 46 percent of those with a Spanish name described themselves as of Spanish origin, and only 61 percent of those who claimed Spanish origin had a Spanish name.

The lack of a suitable index for Mexican Americans suggested that they were not a homogeneous grouping, and this was certainly the case. Descendants of those living in territories annexed in 1848, after the Mexican-American War, demand that they be called "Hispanos" and insist that they are *not* Mexican Americans. The Mexican Americans, for their part, can be divided into three quite distinct subgroups, as noted by Fernando Peñalosa, a sociologist at California State University, Long Beach. Those who regard their ethnic heritage as of little importance, he observed in 1970, are likely to call themselves "Americans of Mexican ancestry." "Mexican Americans" are conscious of their ancestry but often ambivalent about it. Militant spokesmen for what they deem to be Mexican-American values insist on the term "Chicano."

As with other minorities, U.S. officials tended to see the mil-

BALLPARK FIGURES: CREATING THE PERFECT STAT

During the 1984 season, the Pittsburgh Pirates' pitching staff held opposing teams to only 3.11 earned runs per game, producing the lowest earned run average (ERA) in the major leagues that season. The 1984 San Diego Chargers dominated the National Football League in offense, with a rushing and passing total of 6,297 yards. But the Chargers did not make the play-offs. And the Pirates were *last* in their division.

So much for statistics? Hardly. Despite, or because of, the fact that the "stats" so ubiquitous in sports are so eminently debatable as measures of performance, demand for them is booming. Not only do the 1984 Super Bowl champion San Francisco 49ers have a "chief statistician," S. Dan Brodie; he has parlayed his trade into a business that prospers by helping 17 other professional football teams keep themselves, their fans, and the voracious sporting press supplied with numbers on how teams and players do at home versus on the road, on artificial turf versus on natural turf, and so on. A best seller last year was the fact-packed *Bill James Baseball Abstract*, by a Kansas zealot whose idea of fun is to determine, for example, that an American League pitcher now hurling 200 innings a season has only a 23 percent chance of playing that much five years hence. The Society for American Baseball Research (SABR) has 5,000 members, many of whom earn a living by poring over old records to publish papers on such subjects as "The Probability of Batting .400."

Especially in baseball, where batting averages have been calculated since the 1870s and "official" status was awarded to the runs-batted-in (RBI) average in 1920, the quest for new, improved measures of performance is unending. Among other proposed indices have been the on-base average, runs created, batter's-run average, total average, and isolated power (extra-base hits divided by

itants as representative of the whole subnation. During the 1960s, when courts in the Southwest decided that rights guaranteed by the Fourteenth Amendment and various federal statutes applied to this ethnic group, it was labeled "Chicano." By 1980, "Chicano" had won a place on census forms as an alternative to "Mexican American." Seldom has a symbol of militancy been co-opted so rapidly.

In its effort to identify Mexican Americans, the Census Bureau inadvertently hit upon the larger category of "Hispanics" for all persons of Spanish origin or Spanish heritage. This statistical construct has hardly any relation to the real world. Racially, the 14.6 million Hispanics counted in 1980 were highly varied: whites, blacks and others. The subgroups to which they assigned themselves on the census form differed greatly in me-

at-bats). Two "sabermetricians," as SABR statisticians call themselves—baseball historian John Thorn and American League statistician Pete Palmer—are championing Linear Weights.

As they explain in *The Hidden Game of Baseball* (1984), Linear Weights is a rating system that takes into account every event in which a player is involved. First, his record in offensive events (e.g., base hits, stolen bases, outs) is worked through a formula* that determines the total number of runs he has contributed above what the statistically average player would have scored. The runs value is then applied in another formula that deals with defensive and base-running skills. The result is the ultimate statistic: "overall player wins," the number of team wins a person has produced over and above the average performer.



Babe Ruth

George Herman ("Babe") Ruth (1895–1948), the best player ever by many other statistical measures, is also tops in Linear Weights. His overall wins total: 116.9.

While such computations may not be what draws the typical baseball fan to the park, Thorn and Palmer argue that numbers, in fact, lie at the heart of the national pastime. The game "may be loved without statistics," they say, "but it cannot be understood without them. Statistics are what make baseball a sport rather than a spectacle, what make its past worthy of our interest as well as its present."

$$*\text{Runs} = (.46)\text{1B} + (.80)\text{2B} + (1.02)\text{3B} + (1.40)\text{HR} + (.33)(\text{BB} + \text{HB}) + (.30)\text{SB} - (.60)\text{CS} - (.25)(\text{AB} - \text{H}) - .50(\text{OOB})$$

dian age, educational level, occupation, and almost every other social indicator. Their 1980 numbers and median family incomes:

Mexican American	8,740,000	\$13,823
Puerto Rican	2,014,000	10,175
Cuban	803,000	16,043
Other Spanish	3,051,000	14,560

Cubans, many of whom are relatively prosperous exiles, seem to resent being lumped with other Hispanics. From the other side, in 1980 Manuel Bustelo, head of the National Puerto Rican Forum, protested that the term "Hispanic" "has served to

convey a more positive picture of overall advancement, while concealing the fact that Puerto Rican communities on the mainland are worse off than in previous years."

Like the Hispanics themselves, businessmen are wary of the catchall label. Several years ago, when Anheuser-Busch, maker of Budweiser beer, pitched its "This Bud's for you" campaign at Spanish-origin consumers, it took care to record its jingle in four styles: a hot *salsa* for the Puerto Ricans in New York, a *charanga* style for the Cubans in Florida, and two *mariachi* arrangements, one for the Mexican Americans of Texas (who had come mostly from border regions) and the other for those of other Southwestern states (whose roots were more apt to be in the Mexico City area).

From the point of view of the Census Bureau, the term "Hispanics," like "Negroes and Other Races," is convenient for tabulation. It also pleases those Hispanic politicians who hope to enhance their power as representatives of a larger sector of the population. And to the average "Anglo," the grouping provides an appealingly simple view of a complex ethnic subpopulation. All who speak no matter what variant of Spanish, or whose forebears came from whatever Spanish-speaking land, can be lumped together despite their differences—differences that are, however, significant to the minorities involved as well as to anyone who truly wants to understand them.

III

HOW PEOPLE SEE THEMSELVES

People can be assigned to a race or nationality or any other type of grouping on the basis of either (a) some specific attribute, as judged by an observer or (b) self-identification. In 1960, when the Census Bureau began to substitute mailed questionnaires for enumeration by interviews, it also began to depend on self-identification, a reliance that is now complete.

Although the distinction between the two methods of delineating minorities is of crucial importance, it is often overlooked, and the resulting confusion has been compounded by the lack of appropriate terms. "Ethnic" is an adjective. Used as a noun (as in "white ethnics"), it is still journalese or slang. In the absence of a satisfactory term, makeshifts such as "minority" and "ethnic group" have been used to designate subnations of a population.

A distinction exists between a "group," which, properly de-

defined, has some degree of cohesion, and a “subpopulation,” “category,” “grouping,” “aggregate,” “bracket,” or “sector”—all terms denoting only some shared attribute, usually one that has been emphasized by officialdom. Only when members of a category acquire self-conscious unity do they become a group.

Usually, a transition from category to group is pioneered by a small band of intellectuals or civic leaders. They may propagandize for generations before being accepted by those they have appointed themselves to represent. Ethnic spokesmen have acquired influence through wealth (e.g., German Jews during the late 19th century), professional standing (black clergymen), and general political power (the Irish in Eastern cities). Only occasionally have leaders emerged through elections in an organization that most members accept as representative (e.g., the Japanese American Citizens League during its heyday, roughly from the 1940s to the 1960s).

Self-proclaimed conductors always insist that the whole orchestra is following their beat, even when the cacophony of divergent sections is clearly audible. Yet, it is mainly from what the conductors say that the public—and Washington politi-



Gross national product (GNP), a country's total output of goods and services, is a widely used statistic; the World Bank, for instance, employs it in determining eligibility for loans. Brazil, despite the First World look of cities such as São Paulo (left), has a GNP per capita low enough (\$1,890) to rank as a loan-worthy “developing” nation.

cians—decide whether a category has become a group, what its aspirations are, and how seriously its demands should be taken. During the 1960s, for example, the mass media and most social scientists paid more attention to such minuscule but dramatic phenomena as the Black Panthers than to the thousands of black churches. But most of the people for whom both the churches and the radicals allegedly spoke backed the churches' social program—not separatism, for instance, but a fair treatment of blacks within the American system.

Occasionally, the Census Bureau has helped to quicken the development of group support by granting the self-appointed leaders more recognition than their supposed constituents have given them. During the 1970s, the bureau set up committees to voice the concerns of blacks, Hispanics, and Asian and Pacific Americans. Most members of the panels were activists interested in manipulating the census so that it would validate their views. Thus, many recommendations of the Advisory Committee on the Spanish-Origin Population for the Census of 1980 would have raised the Hispanic total. The committee urged (successfully) that the census question on *ethnicity* appear on the 1980 questionnaire before that on *race*; if asked about race first, some Mexican Americans might have designated themselves as "Indian," and some Puerto Ricans might have checked "Black."

Changing Labels

Self-identification, seemingly a reliable indicator of group membership, can take odd turns. As a group's self-consciousness develops and its members become more aware of the implications of their stated identity, they may revise their own labels. Decades ago, several small groups of people in the South who had black, Indian, and white forebears protested their classification as "Negroes." They became "Indians." In Hawaii, the terms "Portuguese" and "Spanish" were long used to denote people of mixed race and low status. As they moved into the middle class, they persuaded local officials to reclassify them. In 1940, they became "Caucasians."

Black Americans have changed their labels several times. For decades after the Civil War, the polite group name was "colored," which avoided connotations of blackness and African origin, both regarded as demeaning. During the 1940s, "colored" began to be supplanted by "negro" (Spanish for black), then "Negro." The civil-rights movement of the 1960s brought new terms. While Roy Wilkins, executive director (1965–77) of the National Association for the Advancement of Colored People

(NAACP), held to "Negro," younger or more radical spokesmen insisted on being "blacks" (or "Blacks"), which had been taboo. Others adopted another once-shunned label, "Afro-Americans."

If a person calls himself a Negro and refuses to be identified as a black or Afro-American (or vice versa), what is a statistical agency to do that is trying to count everyone in the category? The Census Bureau's answer in 1980 was to allow people to check off "Black or Negro." But all the subgroups involved probably represent different social characteristics and political attitudes.

IV

THE CASE OF INDIANS

No other minority included in U.S. censuses has been counted as erratically as American Indians.

Federal policy on Indians has gone through many changes, from their removal to reservations during the mid-19th century, to a renewed effort (1950-70) to integrate them into society, to the present compromise between the two. Policy has partly determined how many Indians there are.

Their number in 1800 has been estimated at 600,000. Largely because of disease, the total fell during the 19th century. By 1890, when all Indians were included in the census for the first time, just 248,253 were counted. So steep was the decline that a new ritual spread among the Plains Indians, a Ghost Dance that would bring dead tribesmen back to life.

The 1900 count was a mere 237,196. But then, in 1910, the total rose to 276,927. The reason: A special effort was made to include all who could be regarded as Indian. It was believed that a thorough census would never again be possible because tribal life was disappearing and Indian stock was thinning. Indeed, only 56.5 percent of those counted in 1910 were said to be full bloods.

Over the following years, the indicated population has fluctuated sharply. According to a review of the 1950 tally, the enumeration of approximately 345,000 Indians unaccountably omitted about 75,000 who would normally report themselves as such on public documents. Of these, about 30,000 mixed bloods were counted as whites. Also by-passed were 25,000 who did not customarily report themselves as Indians but were entitled to benefits as members of federally recognized tribes.

The woefully inaccurate record continued. According to the



*The "statistization" of sex began when Alfred C. Kinsey published *Sexual Behavior in the Human Male* in 1948 and a companion study of women in 1953. For a nation enamored of numbers, as arresting as Kinsey's findings (e.g., that males' sexual capability peaks at about age 17) was the fact that he got so many people to talk about their sex lives: 18,500.*

1970 census, the Indian population grew from 1960 by 38 percent, to 793,000. That was 67,000 more than the increase indicated by reported births and deaths—a discrepancy too big to be explained by errors in registration, a 1960 undercount, and immigration. Apparently, most of the 67,000 were people who called themselves white in 1960 and Indian in 1970.

The 1980 enumeration showed an even greater surge. The 1,423,043 Indians, Eskimos, and Aleuts counted represented an astounding 72 percent increase since 1970. Native Americans, long lamented as headed for extinction, became the country's fastest growing population.

Some of the increase represented real growth and a more careful count. But the reason for much of the population explosion was that greater racial self-consciousness and rising federal benefits attracted many persons at the margin. As quoted in the *New York Times*, a (presumably genuine) Mohawk remarked that federal programs were creating many "instant Indians."

In real life, Indians are hardly a group at all. Roughly half live in cities, not on reservations. The 291 federally recognized tribes, from the largely unassimilated Pueblos of Arizona and

New Mexico to the Mohawk steelworkers of New York, merge into a composite only in relation to the laws or administrative procedures regarding all Indians. Old enmities persist; tribes take one another to court over competing claims almost as often as they do the federal government.

Someone with a partial affiliation to a tribe must think carefully when asked, Are you an Indian? As an Indian, he can share in his tribe's assets, including special federal benefits in education, employment, and medical care. As a white, he may avoid discrimination. Sociologists generally stress the unpleasant consequences of living at the margin of two cultures, but an Indian can gain by alternately playing two roles. Tribal chiefs are aware that both their own prestige and the dollar flow from Washington rise with membership. True, if too high a percentage of a tribe is predominantly white or lives away from tribal land, Congress may abolish its reservation; but this is generally not a threat. Most chiefs try to persuade all potential members to join, and anyone with some tie to a tribe is likely to do so.

Strangely, the Census Bureau has joined in the same campaign, also citing the federal benefits that can accrue if Indians are counted as such. In cities with many Indians, bureau officials solicited Indian help in improving the 1980 count. Earlier, they were told, undercounts of minorities had cost cities (and thus their poorer inhabitants) federal funds allocated according to the cities' population numbers.

Since 1960, Indians have not been classified because they are so regarded in their community, because they are members of a recognized tribe, or because they have a certain ratio of Indian forebears. They become Indians by their own declaration, in part reacting to official assertions that it is in their financial interest to do so. A less satisfactory way of counting members of any group would be difficult to devise.

V

NEXT: THE NEW IMMIGRANTS' SONS?

Ideally, a census should take place in a political vacuum, for partisan passions about any of the numbers affect its results. But if that ideal was ever approximated, it is no longer.

With the rise of the welfare state, many local and private functions were shifted to Washington, as was the focus of inter-

est groups of every type seeking preferred status. Ethnic groups had long organized themselves in political clubs at the municipal level; their members wanted licenses, franchises, contracts, and other benefits, and success in getting them depended in part on the pressure they could exert on City Hall. Until several decades ago, however, the expectation was that ethnic groups would not act as political blocs on the national scene. The norm that each American voted as an individual in national elections was followed, at least in part. It is a supreme paradox that in the United States (as elsewhere) greater state control over the economy and over society has led not to the growing popular indifference to ethnicity that every socialist since Karl Marx anticipated but to the opposite, as now reflected in the U.S. census.

'Instant Poles'

By 1990, census operations will almost surely be even more politicized. The groups now given preferment under affirmative action are not the only ones that have suffered from discrimination in the past and from some of its effects at present, and the descendants of the "new immigrants" are telling government officials that they are aware of that fact.

A symptomatic exchange took place in 1982 hearings before the Illinois Department of Human Rights. Up for consideration was a measure (subsequently enacted) to extend the protection of the state's law on job discrimination and affirmative action, enjoyed by blacks, women, and other minorities, to groups that had been denied rights and privileges because of their national origins.

As explained by the bill's sponsor, State Representative Robert Terzich, the law should cover "umbrella groups and multiple-ethnic communities," such as Southeast Asians, Eastern Europeans, and persons from the Baltic states. How could one prove that a group is suffering from discrimination? Chicago Alderman Roman Pucinski, a former U.S. Representative who heads the local Polish-American Congress, suggested a statistical test: Look at the numbers, as had been done with the beneficiaries of the current law. A survey that he cited showed that only a tiny fraction of the executives of the 500 top firms in the Chicago area were of Slavic origin. By the logic of affirmative action, he pointed out, this was proof that the firms discriminated against Slavic Americans and that remedial action was required from the government.

If group-based legal preferences were actually to spread as such spokesmen demand, the Census Bureau presumably would



"A statistician? How very essential! One is, after all, a statistic all of one's life, isn't one?"

be called on to furnish the data on which to base new entitlements. One can readily suppose that America's tribes of "instant Indians" would then be augmented by much larger numbers of "instant Poles" and "instant Italians." The federal bureau in charge of measuring the size of the groups and thus, indirectly, of specifying how much federal preferment each would receive would find itself in the middle of a political free-for-all. Moreover, census officials would find it all but impossible to defend themselves against attacks on their ethnic data. When self-identification was adopted, the bureau lost control over the ethnic statistics for which it is responsible.

Self-identification is, by nature, open to abuse. An extreme case occurred in 1979: Robert Earl Lee, an engineer with the Montgomery County (Maryland) Environmental Protection Department, changed his name to Roberto Eduardo Leon and, claiming a Spanish-origin grandfather, had himself reclassified from white to Hispanic. Under affirmative action, he acquired a new preference in promotion. Leon's boss was amused ("It's nice to have a Hispanic on our staff"), but county officials soon

removed his minority status and ruled that henceforth a committee would examine changes in ethnic self-designation.

If pressure by neglected groups for recognition continues rising, it will become more apparent that no racial or ethnic groups can be bounded exactly. Typically, these consist of core groups, the members of which so identify themselves consistently; a margin, whose members may declare themselves in or out depending on circumstance; and a periphery, with little association unless it is specially stimulated.

Such a pattern describes virtually all groupings, even blacks. At one time many contrived to "pass" as whites, and more recently, there was speculation that some had moved in the opposite direction. The longtime (1931–55) NAACP leader Walter White had blue eyes and a light skin; as he averred in his 1948 autobiography, *A Man Called White*, in spite of his color and his name, he was black.

The point is, many Americans are not sure what they are. In surveys in which a range of people were asked their ethnic origins in successive years, one out of three gave a different response from one time to the next. According to Tom W. Smith, a specialist on ethnicity at the National Opinion Research Center, survey organizations and the Census Bureau have all found that half or less of the white population is both able and willing to answer a question on national origin. "Of all the kinds of basic background variables about a person," Smith noted, this "is the most difficult of all to measure." Some 10 to 15 percent of adult whites can give no ethnic identity, for they do not know their heritage. Of the 35 to 40 percent that cite two or more ethnic strains, 11 to 12 percent cannot choose a principal strain.

In other words, in accordance with national policy, the Census Bureau has been assigned a statistical mission impossible: to set precise boundaries to what 200 years ago Crèvecoeur already saw as America's ever-changing checkerboard of ethnic groups—and to do so, moreover, under the greatest pressure conceivable from everyone potentially affected.

The Politics of Numbers is one of a special series of 18 books to be published in 1985 and 1986 by the Russell Sage Foundation, the leading U.S. foundation devoted primarily to research in the social sciences. The series is sponsored by the National Committee for Research on the 1980 Census, chaired by Charles F. Westoff, Princeton University. The Committee is sponsored jointly by the Social Science Research Council, the Russell Sage Foundation, and the Alfred P. Sloan Foundation, in collaboration with the U.S. Bureau of the Census.

BACKGROUND BOOKS

STATISTICS

- Publishers issued 53,380 new books and revised editions in America in 1983, versus 15,012 in 1960.
- The country has 13,084 golf courses, 1,220,000 coin-operated video games, and 19,000 movie theaters (average ticket: \$3.15).
- Of every 1,000 married couples, 14 are inter-racial, up from seven in 1970.
- Women passed men in college enrollment in 1979. By 1983, they comprised 51.2 percent of the nation's 12,320,000 students.
- Among the 50 biggest U.S. cities, Tulsa, Oklahoma, has the highest per capita money income (\$11,059); El Paso, Texas, the lowest (\$6,550).
- Motor vehicle deaths (within a year of the accident) went from a peak of 56,300 in 1972 to 44,600 in 1983.

These are some of the items in the latest **Statistical Abstract of the United States** (U.S. Bureau of the Census, 1985, paper). It is a 991-page compendium of data from scores of public and private sources that is billed as "the standard summary of statistics on the social, political, and economic organization" of America. As seen in the *Abstract*, the nation has no shortage of statisticians—whose specialty, as defined by W. Allen Wallis and Harry V. Roberts in **The Nature of Statistics** (Free Press, 1962, cloth; 1965, paper), provides "a body of methods for making wise decisions in the face of uncertainty."

Keeping tallies of people, events, and things is a mark of advanced societies. Hyman Alterman writes in **Counting People: The Census in History** (Harcourt, 1969) that "the civilizations of the pre-Christian era that have left records of enumerations of their people . . . developed a system of mathematics and number notation of a high order."

The societies that began population counts (the Babylonians kept records as early as 3800 B.C.) did so to see how many taxpayers and potential warriors they had. But such knowledge could be a source of peril as well as of strength. The Old Testament tells of King David's 1017 B.C. order to Joab: "Go now through all the tribes of Israel . . . and number ye the people." Joab worried that Satan had tricked the king into the census, figuring that a count would anger the Lord. Sure enough, after the tally (it found 1,300,000 "valiant men that drew the sword"), Israel suffered a plague that killed 70,000.

Even now, censuses arouse fear, notes Alterman. When some newly independent Third World nations attempted a first census, the counters "were either killed or driven off."

The term census—derived from the Latin *censere*, to assess—came from the Romans, the first people to hold regular population counts. As Dan Halacy notes in **Census: 190 Years of Counting America** (Elsevier/Nelson Books, 1980), the Roman censor not only registered all citizens but also collected taxes and served as "a guardian of public morals."

For centuries after Rome's fall, few counts were taken, partly because of a lingering religious aversion to them. But as the Dark Ages waned, trade grew, and so did a need for reliable numbers. In 1085, William the Conqueror sent agents through England to interview one in every 100 people—an early effort at statistical "sampling"—to gather data for the so-called Domesday Book. In Florence in 1338, data on bread sales were used to reckon the city's population: 90,000. By 1515, enough numbers were available to allow the Ital-

ian Niccolò Machiavelli to publish *Portraits of France and Germany*, an analysis of their resources.

The census's modern age was launched during the 17th century by John Graunt, a Londoner who employed parish birth and death records to estimate population size—useful, he said, for “good, certain and easie Government.” When Graunt showed that London was more populous than Paris, Alterman writes, his feat “aroused envy in the latter city and stirred a great deal of discussion there about the need for more reliable estimates of population.”

Other milestones followed. In 1679, the English mathematician Sir William Petty published *Political Arithmetick*, “the art of reasoning by figures upon things relating to government.” Seventy years later in Germany, Gottfried Achenwall wrote a detailed description of the major European nations—and coined the term *Statistik*. Britain conducted its first modern census in 1801, when France also held its first true census. Greece followed in 1836; Switzerland, in 1860; Italy, in 1861.

By then, America's decennial census was already the oldest periodic national head count. The U.S. lust for numbers was admired by European statisticians, as related in **The Census Bureau: A Numerator and Denominator for Measuring Change** (U.S. Bureau of the Census, 1975, paper). During the 19th century, France's Moreau de Jonnes hailed the Americans' use of statistics to shape “their civil and political rights, and the destinies of the Nation.”

By Jonnes's time, statistics had helped to change popular perceptions everywhere. For example, when in 1830 the Belgian mathematician and social scientist Adolphe Quetelet introduced the concept of

“the average man,” people were shocked that humans could be reduced to numbers. The very word average was crass: It came from *avaria*, Old Italian for damage to cargo at sea. (Much of statistical method was developed by insurers calculating marine casualty probabilities.)

In **Social Indicators and Public Policy** (Elsevier, 1975), Judith Innes de Neufville examines how government came to “institutionalize” statistics—and, in turn, to be governed by them. Example: unemployment figures. After Washington found during the depression that it had no measure of national unemployment, Labor Department specialists undertook monthly surveys of joblessness, and before long, the results were shaping policy: In the Employment Act of 1946, Congress made it a duty of government to try to maintain “full employment” as measured by the official figures.

The interweaving of government and statistics has continued unabated. In pushing Great Society legislation through Congress, Lyndon Johnson set up a team in the Department of Health, Education and Welfare to “develop the necessary social statistics and indicators” as “yardsticks” to “measure the distance we have come and plan for the new way ahead.”

The world owes much to statistical method. Among its less-publicized achievements, statistical theory helped Gregor Mendel found the modern science of genetics a century ago, showed World War II naval planners how convoys could reduce ship losses to German submarines, and has permitted actuaries to calculate insurance premiums. Yet, history has provided those who scorn the collectors and interpreters of numbers with much ammunition. In **How to Lie**

with **Statistics** (Norton, 1954, cloth & paper), Darrell Huff cites the 1950 U.S. census, which counted more people in the 65-to-70 age group than had been found in the 55-to-60 bracket in 1940. The reason: Lots of Americans had raised their age to become eligible for Social Security.

Statistical projections are particularly fraught with peril. During World War II, for example, a U.S. Census Bureau booklet entitled *Uncle Sam: How He Grew* cited the reckoning of "authorities" that "by about 1980 our population growth will have stopped altogether, at a peak of around 153 million." Among other effects, the forecast helped to persuade Montgomery Ward's management to trim expansion—unlike Sears, which continued to grow.

Nonetheless, the flow of fearless or fearsome projections continues. Witness the **Global Two Thousand Report to the President**, edited by Gerald O. Barney, 3 vols. (Pergamon, 1980–82, cloth; Penguin, abr., 1982, paper only). The work of a presidential commission, it concluded that "if present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically" and that life "will be more precarious" for "most" people.

New ways of quantifying the present also are always in demand, which accounts for the "misery index." Simply a combination of the seasonally adjusted unemployment rate and the inflation rate (as measured by the U.S. consumer price index), this concoction won notice during the 1976 presidential race; candidate Jimmy Carter made much of the Ford administration "misery" rate, which was

near 12 percent by election time. (The index hit 19.2 before Carter left office in January 1981.)

Judging national well-being by any single measure is a tricky undertaking. Have the good times gone? Perhaps, to judge by the Census Bureau's numbers on median family income: After surging by 38 percent during the 1950s and 34 percent during the 1960s, family income rose by only 0.4 percent during the 1970s. But in **The Good News Is the Bad News Is Wrong** (Simon & Schuster, 1984), Ben J. Wattenberg argues that many "Super Numbers" point to continued improvement. Some SNs:

- The 400 percent increase over just two decades in the number of young blacks (1.1 million) in college.
- The rising proportion of married couples under 35 who own their homes (up from 38 percent in 1950 to 62 percent in 1980).
- The 33 percent decline of sulfur dioxide in the air from 1975 to 1982.

Such figures, says Wattenberg, show trends that "are clearly positive—some of them sensationally so."

Positive or otherwise—and no matter how vital to the operation of a complex modern society—all aggregate numbers should not be swallowed whole. As the British statistician Sir Josiah Charles Stamp (1880–1941) warned:

"The government are very keen on amassing statistics. They collect them, raise them to the nth power, take the cube root and prepare wonderful diagrams. But you must never forget that every one of these figures comes in the first instance from the village watchman, who just puts down what he damn pleases."

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