Looking Forward to 2020 While Looking Back: A Brief History of the US Census

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As preparations for the 2020 census are under way in the United States, Frank Donnelly looks back at how the census evolved from a basic head count to a sophisticated operation. The reapportionment of seats in Congress, the distribution of $600 billion in annual federal aid, and a countless number of derivative data sets all depend on the accuracy of the decennial census.

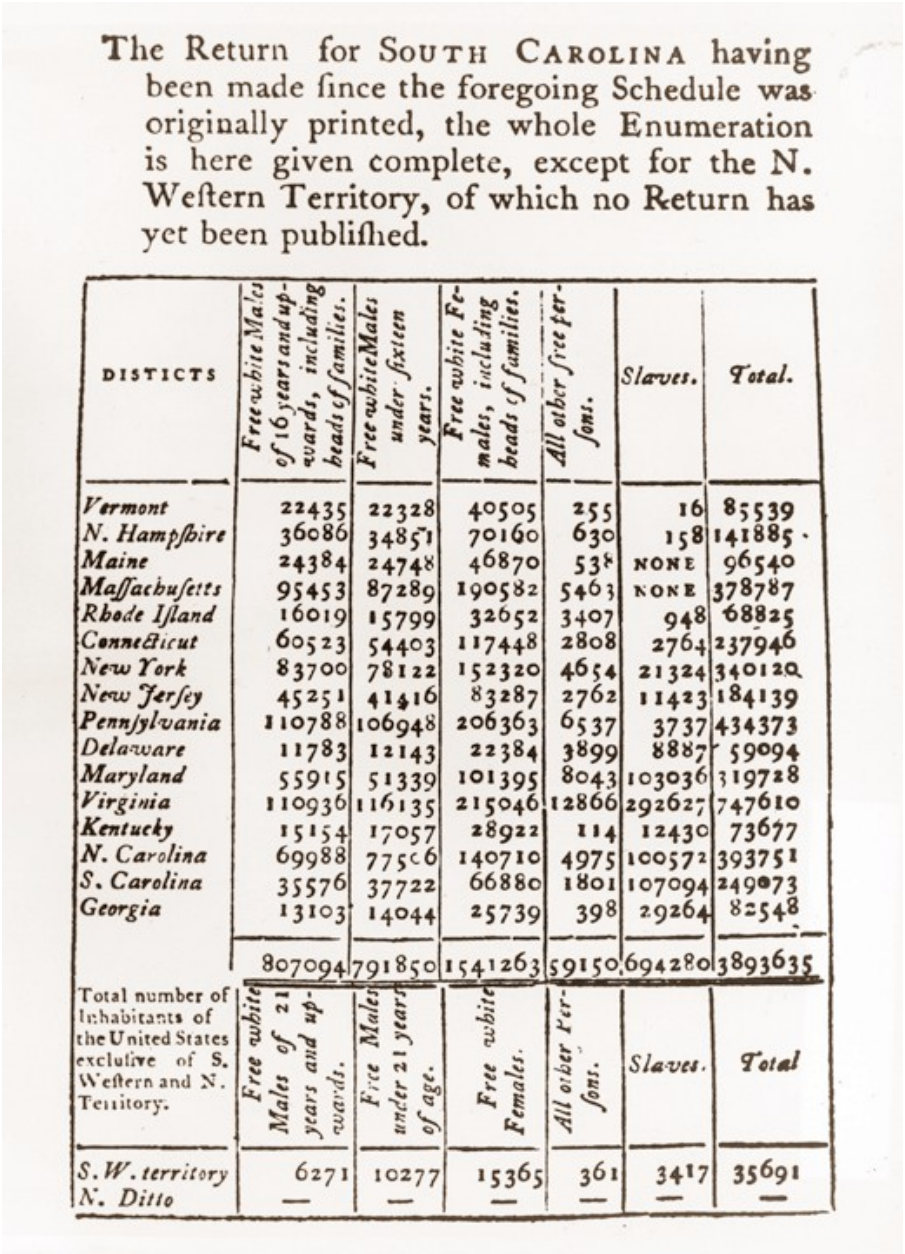
In 1790, the recently established United States became the first nation to conduct a population census designed specifically for legislative apportionment. In accordance with Article I, Section II of the Constitution, the census is taken every 10 years to reapportion seats in Congress based on the differential growth of population between the states. Census data are also used to determine how $600 billion in federal funds are distributed each year, much of it to state and local governments (Reamer 2017). This paper looks back at how the census evolved from a simple head count to a sophisticated operation that has responded to the changing needs and interests of American society.

From a head count to a professional census: 1790 to 1920

Even though England had a weak tradition of census-taking, it instilled the value of statistics gathering in the American colonies for the purpose of governance and mercantile trade (Emigh, Riley and Ahmed 2016a, pp. 145–151). Tying taxation to political representation was an important goal of the founding fathers, and apportioning delegates to the House of Representatives among the states using a simple population count was a practical compromise to measuring more complex indicators like wealth or land value (Anderson 2015, pp. 9–14). The notorious three-fifths compromise counted each slave as a fraction of a person, in order to balance competing interests between northern and southern states.

In 1790, Congress assigned the US Marshals the task of fanning out across the country to conduct the first count and tabulate the results. The most salient questions focused on legal authority: whether someone was free or a slave. These legal categories eventually became intertwined with society's race-based notions (Emigh, Riley and Ahmed 2016a, pp. 162–169). The 1790 census counted the number of whites, other free persons, and slaves. In 1820, "free colored" replaced "other free persons," and by 1850 there were separate schedules for free persons and slaves that identified the race of each (US Census 2017a). The names of every free person in a household were recorded (prior to 1850, only the head householder's name was captured) and the number of questions expanded to include topics such as marital status, occupation, and literacy.

Figure 1. A summary of the results from the first census in 1790



The Return for SOUTH CAROLINA having been made since the foregoing Schedule was originally printed, the whole Enumeration is here given complete, except for the N. Weſtern Territory, of which no Return has yet been publiſhed.

DISTICTS	Free white Males of 16 years and upwards, including heads of families.	Free white Males under ſixteen years.	Free white Females, including heads of families.	All other free perſons.	Slaves.	Total.
Vermont	22435	22328	40505	255	16	85539
N. Hampſhire	36086	34851	70160	630	158	141885
Maine	24384	24748	46870	538	NONE	96540
Maſſachuſetts	95453	87289	190582	5463	NONE	378787
Rhode Iſland	16019	15799	32652	3407	948	68825
Connecticut	60523	54403	117448	2808	2764	237946
New York	83700	78122	152320	4654	21324	340120
New Jerſey	45251	41416	83287	2762	11423	184139
Pennſylvania	110788	106948	206363	6537	3737	434373
Delaware	11783	12143	22384	3899	8887	59094
Maryland	55915	51339	101395	8043	103036	319728
Virginia	110936	116135	215046	12866	292627	747610
Kentucky	15154	17057	28922	114	12430	73677
N. Carolina	69988	77506	140710	4975	100572	393751
S. Carolina	35576	37722	66880	1801	107094	249073
Georgia	13103	14044	25739	398	29264	82548
	807094	791850	1541263	59150	694280	3893635

Total number of Inhabitants of the United States exclusive of S. Weſtern and N. Territory.	Free white Males of 21 years and upwards.	Free Males under 21 years of age.	Free white Females.	All other Perſons.	Slaves.	Total
S. W. territory	6271	10277	15365	361	3417	35691
N. Ditto	—	—	—	—	—	—

Source: US Census Bureau (www.census.gov/history/www/sights_sounds/photos/1790_photos.php).

The 1850 edition marked the beginning of the professionalization of the census. Congress created a temporary Census Office that would be established prior to each census in order to direct operations and tabulate the results (Anderson 2015, pp. 41–58). Following a poorly executed census in 1870, Congress transferred responsibility for field operations from the Marshals to the Census Office, so that the professional statisticians had control over planning, implementing, and tabulating the census (*ibid.*, pp. 89–101). In 1902, Congress established the Census Bureau as a permanent office under the Department of Commerce and Labor that remained in operation year-round, and it became one of the chief statistical agencies within the burgeoning federal government (Anderson 2010).

During the late 19th century, the census was increasingly supported by a growing field of professional social scientists in academia and business who advocated for the application and expansion of census statistics. Many of these professionals were interested in social Darwinism and the pseudo-science of eugenics, which prescribed different characteristics and levels of superiority for different races. The emancipation of black slaves after the Civil War (1861–1865) and a rising tide of European and Asian immigrants coincided with the spread of these theories. Various Asian

ethnicities were added to the census race categories as their populations grew, Native Americans were counted in full for the first time, and more attention was given to dividing African Americans between black and mulatto, to measure mixed "blood" or race. In 1890, this concept was expanded to count quadroons and octoroons (one-quarter and one-eighth mixed race, respectively) (Humes and Hogan 2009). Such categories were not part of common parlance, and census takers struggled with the task of determining whether someone was an octoroon. These categories were dropped in 1900, and the experience demonstrated that census categories were only meaningful when they were deemed relevant by society, and not simply by census officials or a small group of experts (Emigh, Riley and Ahmed 2016b, p. 71).

Figure 2. An interview with a census taker, early 20th century

Source: The Library of Congress (www.loc.gov/item/2002695609).

Outside experts successfully lobbied for the collection of data on workers' occupations and skill levels, but census officials struggled to count and tabulate this data given the lack of standardization for the categories (*ibid.*, pp. 59–67). Questions on place of birth, nativity, and citizenship were added to measure the growing immigrant population. These statistics were used to justify and pass stricter immigration laws, culminating in the 1924 Immigrant Control Act. This act implemented tight quotas to insure that immigration from Asia and Eastern and Southern Europe was curtailed (*ibid.*, pp. 59–67). Immigration to the United States declined sharply and remained at a low ebb during the mid-20th century (Klein 2012, pp. 145–157).

When the 1920 census demonstrated that the over 50% of Americans now lived in industrial urban areas dominated by immigrants, rural white Americans and their representatives in Congress led a backlash. For the first and only time in history, Congress refused to reapportion itself in direct violation of the Constitution. Following a decade of debate and gridlock, Congress passed a bill in 1929 that set the reapportionment process on autopilot, eliminating the need for an Act of Congress to set it in motion. From 1930 onward, the process launched automatically as soon as the Bureau presented the initial census results to the president. The bill also gave the census director greater authority to manage the census (Anderson 2015, pp. 133–155).

Standardization and expansion: 1930 to 2000

With the onset of the Great Depression in 1929, officials and politicians discovered that the occupation and employment data in the census was too limited for understanding the economy and conflicted with statistics produced by other agencies, like the Bureau of Labor Statistics. Under the Roosevelt administration, the statistical agencies reorganized and standardized the collection of economic statistics, creating a standard definition of what constitutes the labor force, and building schemas for classifying occupations and industries (*ibid.*, pp. 157–174). The 1940 census incorporated these changes and included detailed questions on the economy, personal income, and the state of the nation's housing stock. Small statistical areas called census tracts were introduced for cities with more than 50,000 people, allowing researchers to study population differences within the nation's expanding urban areas.

Figure 3. Census workers coding responses with occupational categories for the 1940 census

Source: National Archives and Records Administration (https://catalog.archives.gov/id/6200848).

The Census Bureau became a pioneer in statistical sampling methods, which policymakers saw as an efficient way for collecting timely data on an ongoing basis (*ibid.*, pp. 176–179). In 1937, an experimental unemployment census was conducted successfully using sampling methods. The Bureau began monitoring employment on a monthly basis using sample surveys; this program expanded and continues to this day as the Current Population Survey. Given these successful tests, the 1940 census included a small number of sample questions for one out of every 20 people.

The mid-20th-century expansion of the federal government that began with the New Deal programs placed new demands on the census, as the government increasingly relied on data for allocating aid and benefits and for making policy decisions. To keep up with demand, the use of sample surveying increased in 1950 and 1960, with basic data collected from 100% of the population on a short form and asking additional questions of a sample of households on a long form. Computer processing for tabulating census results was introduced during the 1950s, replacing the card-punching technology of the industrial era (US Census 2017a). In 1952, the rule that all individual responses to the census would be confidential for 72 years became part of federal law (US Census 2009). This was driven by the rise of computers and concerns over individual privacy, and by the experience of Japanese Americans during World War II whose census records had been turned over to the departments of war and justice (Anderson 2015, pp. 188–199).

In 1930, the census simplified the race question by implementing the so-called "one-drop" rule. If a person had a parent that was non-white, then they were classified as non-white (Humes and Hogan 2009). Attempts to determine the mixture of a person's race were abandoned. The race categories that were used consistently from 1930 to 1960 included: white, Negro, American Indian, Chinese, Japanese, and Filipino (US Census 2017a). Following the social movements of the 1960s, the Census Bureau's treatment of race evolved from being prescriptive to promoting self-identification. From the 1970 census forward, the Bureau conducted extensive outreach with various racial and ethnic groups, asking them how they wished to be identified. This change in perspective reflected the growing desire of minority groups to positively identify with their background and heritage (Emigh, Riley and Ahmed 2016b, pp. 155–157), and coincided with the expansion of self-enumeration. In 1970, most households received and returned their forms by mail; Americans were now submitting the census form and identifying themselves, rather than being interviewed and classified by a census enumerator.

Civil-rights legislation and the Great Society programs required census data for the disbursement of grants in aid to states and local communities, to insure that civil liberties were being respected, and to redraw gerrymandered legislative districts that courts were overturning during the 1960s. The Immigration Act of 1965 lifted the restrictive quotas of 1924, and a new immigration boom began. All racial and ethnic groups wanted to insure that they were included in the census count, and that the categories accurately represented them.

Asian communities had lobbied against one catch-all category for Asians, so individuals were able to specify an ethnic origin just as they had in the past. Hispanics continued to be identified as white in 1970, and were counted as being of Spanish origin based on their surnames and language preference. The Hispanic and Latino community argued that this undercounted their population, and a question on Hispanic origin was hastily added to the 1970 sample long form. (*ibid.*, pp. 158–166). In 1977, the Office of Management and Budget (OMB) passed Directive 15, which standardized the collection of race data across the government to four categories: white, black, Asian or Pacific Islander, and American Indian or Alaskan Native. It also included a separate ethnic category for Hispanics and Latinos that allowed people to identify their Hispanic origin and their race category. These categories all appeared on the short and long forms in 1980 and 1990. The OMB directive was modified in 1997 to split Asians and Hawaiian or Pacific Islanders into separate categories, and to allow people to identify themselves as multiracial by selecting more than one category. These changes appeared in the 2000 census (RSCFDRE 1997).

The undercount of minorities and people in urban areas emerged as a controversial issue during the late 20th century. In 1970, the estimated undercount was 5.3 million people, which was 2.5% of the population. Whites were undercounted by 1.9% while blacks were undercounted by 7.7% (Anderson 2015, pp. 228–231). The Census Bureau faced legal challenges from several big cities and minority groups after undercounts in the 1980 and 1990 censuses. Many American cities experienced population decline during the late 20th century, and many felt that the undercounts were overstating population decreases that would cost cities political representation and federal aid. Some experts argued that the count should be adjusted using statistical techniques, while others believed that statistical sampling of the population would be more accurate than doing an actual count. Ultimately, in the late 1990s, the Supreme Court decided that both techniques would violate either the Constitution or federal law (*ibid.*, pp. 239–247). The law said that the population must be enumerated, and that the count must be an actual count. The Census Bureau did take measures to improve the count, and as a result the 2000 census was generally regarded as a success.

Back to basics: 2010 to the present

From 1970 to 2000, the census consisted of a short form for the 100% count and a long form sent to one in six households. While there were modifications to questions from decade to decade, the census was relatively consistent during this period. The 2010 census was a major departure, however, as it consisted of just a 100% short form with only 10 questions, with no counterpart long form.

As more people throughout society relied on census data for conducting research and making decisions, 10 years became a long time to wait for new data and it was becoming increasingly challenging to create a sufficiently large and capable workforce to gather extensive data on a 10-year cycle. Conservatives in Congress were critical of the increasing cost of conducting the census, and were increasingly vocal that the questions were an invasion of privacy and were not required by the Constitution.

The American Community Survey (ACS) was conceived as a solution to provide timely data, cut costs, and relegate the decennial census to its original functions. The ACS is a rolling sample survey of 3.5 million addresses that annually provides one-year data and five-year averages. It was launched in 2005 and includes most of the questions that were previously asked on the decennial long form. While some of the benefits of the ACS have been realized, there have been downsides (Spielman, Folch and Nagle 2014). The ACS is more complex to work with since the statistics are estimates with margins of error rather than counts. Data for small geographies and population groups can be unreliable, and direct comparisons with the historical long-form data are problematic.

The Census Bureau has submitted preliminary questions and categories for the 2020 census to Congress (US Census 2017b), and 2020 will be cast in the same mold as 2010; it will be a short and simple 100% count of the population that provides data for reapportionment and serves as a baseline for other statistical programs. The ACS will continue in its role as the primary monitor of the nation's social and economic indicators.

The Census Bureau had proposed several revisions to the racial categories for 2020 that included making the Hispanic category a race instead of a separate ethnicity, and adding a new racial category for people to identify as Middle Eastern or North African. The Trump Administration's OMB did not support these proposals and the categories for 2010 will be used again (Wang 2018a). Meanwhile, the Justice Department is lobbying the Bureau to add a question on citizenship, for the purpose of determining voter eligibility. There is strong resistance to this proposal as many believe it will deter non-citizens from filling out the form, thus jeopardizing the accuracy of the count and all of the data sets that depend on it (Baumgaertner 2018; Wang 2018b). The Census Bureau must submit the final 2020 questions to Congress by March 31, 2018.

For 220 years, the census has provided population data that is essential for the functions of the US government: apportioning political representation, directing policy, and distributing federal funds to America's communities. As an institution, the census has weathered many political storms while evolving to respond to desires for more data of better accuracy and to reflect the changing demands and interests of American society.

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Further reading

The Census Bureau's History website provides scans of each of the census questionnaires, as well as an index of questions and topics that were included in each census: www.census.gov/history.

The National Historical Geographical Information System (NHGIS) is hosted at the Minnesota Population Center at the University of Minnesota and serves as an archive for historical summary census data and geographic boundary files. Users can register to freely access machine-readable census data back to 1790: www.nhgis.org.

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