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The roots of conflict over US census counts in the late 20th century and prospects for the 21st century¹

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Although not originally intended as such, the US census has become a “Commons” in which private benefits are gained at the expense of public costs. The historical development of the census as a Commons first clearly emerged with the release of the 1970 census results, and since that time contentious litigation over census undercount error has become a standard part of the decennial census landscape. Political battles within the federal government have gone hand-in-hand with these litigation activities. They culminated with a Supreme Court decision on the legality of statistically adjusting census 2000 counts for estimated undercount error. As these battles raged, professional interest in providing methodological fixes for net census undercount error increased while public participation in the census generally declined. This paper examines the history behind these legal battles, the legislative acts, and judicial decisions that led to the 16th Amendment and the loss of the careful balance between public costs and private benefits crafted by the Founding Fathers in Article I of the Constitution. The paper identifies the role that historical actions played in making the census into a Commons, thereby setting the stage for modern day census litigation and other forms of conflict. We observe that as a Commons, the census is facing a potential collapse that cannot be prevented by methodological developments. We conclude by noting that a course of political action may be the best course for preventing such a collapse.

Keywords: Census, litigation, Commons, 16th amendment

1. The Source of Conflict: The Census as Commons

In Article I, Section 2, the US Constitution requires Congress to conduct an “actual Enumeration” of the population every ten years “in such Manner as they shall by Law direct.” Accordingly, each decade since 1790, the United States has taken a count of its population – the decennial census. Congress delegated the authority to conduct the decennial census to the Secretary of Commerce in the Census Act. The Secretary, through the Census Bureau, has attempted to answer two important questions: how many people live in the United States and where are these people located? Answers to these questions are important because they determine how many representatives each state is allocated in the federal House of Representatives and

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are used to distribute billions of dollars in federal and state aid to counties, cities, Native American reservations and neighborhoods throughout the United States. In 2000, as in all censuses in the latter half of the 20th century, the method it used to obtain these answers was to mail census forms to every household in the nation. The Census Bureau then followed up by sending enumerators personally to visit households that did not respond. In spite of the Census Bureau's efforts, the methods it has employed have always failed to count a portion of the population. In 1980, the Bureau determined the census had failed to count 2.8 million people nationally [1]. The national count was estimated to have fallen short by between 4.2 and 4.0 million people in 1990 [2]. For 2000, there are as yet inconclusive results on the extent of the undercount, with estimates ranging from an undercount of 3.3 million to an overcount of 1.8 million [3].

Some population groups like minorities, children, and renters have historically been undercounted – “omissions” – while others are known to have been overcounted – “erroneous enumerations” [1–3]. “Gross census error” is defined as the sum of omissions and erroneous enumerations; while net census error (also known as net undercount error) is the difference between omissions and erroneous enumerations [2]. Net undercount error has come to be commonly known as the census undercount.

The census undercount is not a new issue [4–7]. The Census Bureau has worked to rectify the undercount problem. To its credit, it initiated studies of census accuracy of its own accord and has attempted to use these studies to improve accuracy [3,5,8,9]. In 1990 and in 2000, for instance, the Census Bureau promoted awareness of the census and its importance, provided census forms in the Spanish language and offered a toll free number for those who had questions about the forms [9].

In 1991, Congress addressed the undercount problem by passing the Decennial Census Improvement Act, which directed the Secretary to contract with the National Academy of Sciences to study methods for obtaining the most accurate population count possible. Based on the Academy's report, the Census Bureau announced a plan for the 2000 census that would use statistical sampling to supplement the data obtained through traditional census methods. The Republican-controlled Congress, however, did not really want the undercount mitigated; just studied. Closely following the announcement of the Census Bureau's statistical sampling plan, Congress passed a bill to prohibit sampling or statistical adjustment in figuring population for purposes of the apportionment of representatives. President Clinton, a Democrat, vetoed the bill.

The crux of the partisan conflict was to be found in the “political advantage” area: Republicans, fearing a relative loss of seats in Congress, were largely against statistical sampling and adjustment because it would increase the number of those who tend to be represented by the Democratic party, the so-called “hard to enumerate”, like minorities, children and renters [10]. Not surprisingly, Democrats, hoping to gain seats in the House of Representatives, were largely in favor of statistical sampling and adjustment.

Undaunted by the veto, Congress passed another bill, which President Clinton signed, directing the Secretary to provide a “comprehensive and detailed plan outlining its proposed methodologies for conducting the 2000 decennial census and available methods to conduct an actual enumeration of the population . . . including an explanation of the statistical methodologies that may be used.” The statute permits any person aggrieved by the Secretary’s planned use of statistical sampling methods in the 2000 decennial census to bring a legal action heard by a three-judge district court. Appeals were to be made directly to the United States Supreme Court.

Within a year, the US House of Representatives sued the Secretary, seeking a declaration that the use of statistical sampling violated the Census Act and Article I of the Constitution. The three-judge district court held that the Census Act prohibited the use of statistical sampling to determine population for the apportionment of representatives and permanently enjoined the Secretary from using it for such purposes. The Secretary appealed to the Supreme Court, which in *Department of Commerce v. US House* upheld the district court’s ruling, finding that the Census Act prohibits the use of statistical sampling to determine the population for congressional apportionment. The Court, finding the use of statistical sampling for congressional apportionment violated the Census Act, did not reach the issue as to whether or not such methods violated Article I of the Constitution.

The Republicans and Democrats have not been the only interest groups battling over census methods and adjustments [5,11]. However, the focus of the other interest groups is less on apportionment and more on the distribution of federal and state aid; particularly federal block grants [11,12]. It is not a minor issue. The appropriated federal block grants for Native American housing in 2003 totaled \$649 million with an additional \$4,937 million for community development [13]. It is easy to see why more than 100 Indian tribes, complaining of undercount, challenged the 2000 census results and conducted their own head counts [14]. The tribes pointed out that the 2000 census counted 3,334 people at Warm Springs, Oregon, of which 3,018 were Indians. According to tribal registries however, 3,522 tribal members live on the reservation, suggesting that the 2000 census missed 504 Warm Springs tribal members, for an error undercount rate of 14 percent [14]. “We’re being shorted on funding,” they said. “The numbers [the Census Bureau] have are totally inaccurate. We’re doing our census to get the money we’re owed” [14]. This sentiment is not confined to residents of the Warm Springs Reservation [15–17].

Following Hardin’s [18] classic argument in “Tragedy of the Commons,” we place these conflicts in the context of the “census as a commons.” As was the case with herdsmen who attempted to increase their share of the livestock to gain individual benefits at the expense of the common pasture, the fundamental reason underlying the turmoil over census 2000 and its immediate predecessors (1970, 1980, and 1990) is the fact that the census is being similarly exploited. In Hardin’s terms, the census has become a commons of private benefits and public costs. Interest groups attempt to increase their share of the population to gain individual benefits at the expense of the common census. How did this situation happen?

2. The census was not Intended as a Commons

The census was not intended as a Commons. It was intended as an “Enclosure.” How the census came to enclose the private benefits and, thereby, balance them with private costs began in the American colonies during the latter part of the 18th century.

Prior to the French and Indian War in 1754, Great Britain regulated trade in their American colonies but pretty much stayed out of colonial affairs [19]. Things changed substantially, however, as the colonial settlers began to push west into the Ohio Valley. The French built fortified outposts to protect their profitable fur trade against the encroachment and the Indians attacked to push the settlers out of their hunting grounds [19–21]. From the colonists’ point of view, something had to be done.

England at the time was already engaged in war against France on the European continent [20]. In 1756, the English brought the battle to North America. The Indians, disliking the settlers’ disruption of their way of life, sided with the French. Thus, the French and Indian War began – and it lasted until 1763.

Along with the British victory over France in 1763 came substantially more British intrusion into colonial affairs. King George III and his prime minister, George Granville, were faced with the problem of how to pay the huge debt England had amassed to win the war. They felt the American colonies should help pay since they had been the war’s primary beneficiaries [19]. Accordingly, the British parliament levied a series of taxes on sugar, glass, lead and paint and finally passed the Stamp Act in 1765 [19,21]. The colonists objected and strongly, but it was not that they were opposed to paying their share of the cost of the war [21]. They resented being subjected to taxes without any say in the matter. When the British imposed a tax on tea in 1773 it was the last straw. “No taxation without representation” was the revolutionary cry [22]. If there was a public cost to pay, the colonists felt strongly they should have the benefit of representation. They signed the Declaration of Independence from Great Britain on July 4, 1776 [19].

To wage the war of independence against Great Britain, the colonists set up a loose federation governed by the Articles of Confederation. The federation was deliberately organized as a decentralized form of government wherein the independent states retained most of their sovereignty with the exception of foreign diplomacy and defense [19]. “Each state had one vote in the Continental Congress regardless of population” [23]. To ensure the states would not be subjected to the same abuse of power from their own federal legislature as they had endured under the British parliament, the Articles did not allow the Continental Congress to tax or impose tariffs. Therefore, in order to finance the Revolutionary War, the colonial wartime government depended on the individual states to voluntarily provide funding [24]. When this failed, the Continental Congress relied heavily on loans from France, Spain and Holland as well as wealthy Americans [23,24]. Finally, in desperation, it just printed money [23]. The result was runaway inflation. To make matters worse, when the war ended in 1782, the British pursued punitive trade policies

against the victorious colonies by dumping goods on the American market [24]. The Continental Congress was powerless. It had no power to raise revenue by internal taxation and it had no power to impose external measures like protective tariffs. The economy of the fledgling nation was in shambles. When one hundred farmers attacked a federal arsenal in Massachusetts to protest the foreclosures on their farms, the Continental Congress was too weak to respond [21]. It was clear the federation would not survive much longer under the present system. State representation in the Continental Congress without a corresponding contribution to the federal coffers simply was not working [19].

A Constitutional Convention was called in 1787 to address the problem. The framers were divided on the appropriate power and responsibilities of the central government [19]. They were particularly concerned with how to control the federal congress. The Federalists' view, with proponents like Alexander Hamilton, was that a much stronger central government was necessary [19]. They saw the current government under the Articles of Confederation as too weak and ineffective. The anti-Federalists felt that changes to the Articles would infringe on the rights of the individual states and their citizens [19].

The convention delegates also wrestled with the issue of how to balance the power between the small states like New Jersey and the large states like Virginia [19]. The smaller states wanted equal representation in the federal congress with the large states. On the other hand, the system where each state received one vote under the Articles was not fair to the more heavily populated states. States like Virginia, by virtue of their larger size, should have more say in the running of the federal government.

The delegates solved both problems by creating a bicameral congress [19]. By dividing the legislature into two houses, the power of the legislature would be used against itself. One house would check the excesses of the other and thus, the federal congress would be kept in check. The bicameral legislature also resolved the problem of how to determine each state's representation. Each state would have two Senators in the Senate regardless of size while the number of representatives each state would have in the House of Representatives would be based on the state's population [19].

The convention delegates were not yet finished defining congressional power, however. They needed a way to fund the federal government with the most immediate problem being how to repay the Revolutionary War debt. But there was opposition to granting too broad of a taxation power to the federal congress at the expense of state rights [24]. James Madison in the *The Federalist* addressed this concern, where he noted that most of the federal government's revenue would come from external sources like tariffs rather than internal sources like taxes and so the national taxing power would not supersede that of the states [25]. Alexander Hamilton agreed. "Except for tariffs", he argued, "as to all other taxes, the authority of the States remain(ed) undiminished" [25].

Ultimately, the convention delegates agreed to give Congress the power to tax and levy tariffs. Article I, Section 8 of the US Constitution provides:

“The Congress shall have Power to lay and collect Taxes, Duties, Imposts and Excises.”

However, there was still one important conflict to resolve; how to balance the power between the North and the South. The northern states wanted to classify slaves as property rather than part of a state’s population to prevent the slave states from having too much influence in the federal congress [19,21,23]. The southern states were worried the North may try to tax slavery out of existence altogether unless the South had strong representation in the House [23]. The delegate from New York, Gouverneur Morris, proposed a compromise. He suggested that taxation be in proportion to representation [23]. Thus, if the South counted slaves as population and, thereby, increased its representation in the House, at the same time, its share in the cost of running the federal government would likewise increase. To get both the North and South onboard, however, the delegates modified Morris’ proposal in two ways: slaves would only count as 3/5ths of a person, thereby lessening the number of Southern representatives in the House and, in return, only “direct” taxes would be in proportion to representation [23]. What Mr. Morris meant by “direct” taxes was not clear. Some of the states considered “direct” taxes to be those levied on land or personal property as opposed to “indirect” taxes levied on imports, exports or consumption [23]. If this was the case, slaves as property would be taxed pursuant to the 3/5ths clause, shielding somewhat the institution of slavery. At the same time, such a “direct” tax would be imposed on property other than slaves in the North. But states defined a “direct” tax differently. Other states included excise, poll or income taxes as “direct” taxes. In spite of the lack of a clear definition of a “direct” tax or perhaps precisely because there was not one, the compromise was accepted by both the northern and southern delegates.

Thus, the language in Article I, Section 2 was settled:

“Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union according to their respective Numbers.”

If population was to be the determining factor for the number of representatives a state was allocated in the House of Representatives as well as the state’s share of the cost in running the federal government, how was a state’s population to be determined? The delegates debated how to resolve this problem and settled on the idea of a census.

Thus, Article I, Section 2 of the Constitution provides for a decennial census:

“The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten years, in such Manner as they shall by Law direct.”

Article I, Section 2 was, therefore, carefully crafted to resolve several problems: how to keep federal power in balance with the power of the states as a whole; how to balance the power among the large and small states; and finally, how to balance the power between the nation’s different regions. Article I also balanced the

benefits and costs of larger populations with regards to each state's citizens; a larger congressional delegation also meant having to provide more federal tax dollars. In effect, this balance prevented the census from being a Commons. Instead, the census enclosed public benefits by protecting them from abuse by one interest over another. This was a conscious decision by the framers of the Constitution. As Madison [26] wrote in *The Federalist*:

... it is of great importance that the States should feel as little bias as possible, to swell or reduce the amount of their numbers. Were their share of representation alone to be governed by this rule, they would have an interest in exaggerating their inhabitants. Were the rule to decide their share of taxation alone, a contrary temptation would prevail. . . .By extending the rule to both objects, the States will have opposite interests, which will control and balance each other, and produce the requisite impartiality . . .

3. The roots of conflict: Emergence of the census as a Commons

As the 19th century dawned, the first sign of contentious litigation over Article I began. Not surprisingly, the United States Supreme Court in *Hylton v. US* was asked to define a "direct" tax. Congress had imposed a tax on carriages but had not apportioned it among the states, instead applying it according to the rule of uniformity found in Article I, Section 8 of the Constitution:

"The Congress shall have Power to lay and collect Taxes, Duties, Imposts and Excises . . . but all Duties, Imposts and Excises shall be uniform throughout the United States."

Hylton argued that a tax on carriages was a tax on personal property and, therefore, a "direct" tax which must be apportioned among the states. The Supreme Court disagreed finding the tax was on the "use" of the carriage rather than the carriage itself and therefore an "excise" tax which did not need to be apportioned. The Court, in effect, implied that no tax should be classified as "direct" which could not be conveniently apportioned. Thus, within seven years of the ratification of the US Constitution, the link between cost and representation suffered a direct hit. After *Hylton* only those direct taxes that could be conveniently apportioned by Congress had to be apportioned among the states. The walls of the Census Enclosure were breached.

Early in the 19th century, the United States became embroiled in another dispute between the English and the French. Napoleon, advancing across the European continent, attempted to conquer the British by starving them with a blockade of their sea trade [19]. The British retaliated by attacking US trade ships en route to France. Finally, President Madison declared war on Great Britain [23]. The War of 1812 disrupted America's trade with Europe and as a result, revenue collection from tariffs dropped by 50% [23]. To supplement the lost revenue, Congress passed a series of tax measures that were apportioned among the states [23].

The Census Enclosure experienced a near-breach about this same time, further weakening the link between representation and cost. In 1815, Secretary of the Treasury, Alexander Dallas, considered a tax on income to raise more money for the war [23]. Dallas considered that such a tax would be an “indirect tax” and, therefore, would not require apportionment. The House of Representatives referred a resolution in this regard to the House Ways and Means Committee to inquire into the “expediency of laying a ‘duty’ on all salaried public service officers and on the professional income of lawyers, solicitors and counselors, and on the legal proceedings of courts of justice.” In December 1814, the House Ways and Means Committee ordered the report to “lie on the table,” but not because the tax might, in fact, be a “direct” tax which would require apportionment. The tax was referred to a “duty” and the House determined such an “indirect” tax would violate the constitutional requirement of uniformity. Thus, the inconvenience of apportioning a “direct” tax could be avoided by simply defining the tax as “indirect” right from the start [23].

Following the War of 1812, Congress relied solely on tariffs as its source of revenue until the 1860s [27]. Tariffs did not have to be apportioned and thus were much easier for the federal government to collect. However, tariffs resulted in an unfair burden to the southern region of the United States and soon became the battleground for sectional and partisan differences. The Tariff of 1828 revealed just how serious the differences were.

The War of 1812 cut off American trade with Europe and in doing so forced the United States to increase its own manufacturing capabilities. When the war ended, the fledgling manufacturing industry in the North pressed Congress for high protective tariffs on imports [19]. One was the Tariff of 1828. Called the “Tariff of Abominations” by the South, it benefited the North by increasing the price on imported manufactured goods by 50 percent [27]. This kept the demand for the cheaper domestic product high in the North. The rural South, on the other hand, had to import most manufactured goods and so paid the higher tariff prices [27]. The Congressional coffers were being funded by Southern consumers while the Northern manufacturers reaped profits.

Congress was able to pass the Tariff of 1828 over Southern objections because the South was losing Congressional seats. In 1810, Southern states comprised 47 percent of the population, but by 1820 they comprised only 45 percent [27]. As a result, congressional reapportionment based on the 1820 Census resulted in seats going to the North and West, where support for the protective tariff was strong [27].

With the passage of the Tariff of 1828, the South realized it might be unable to stop Congress from enacting tax measures that could literally tax slavery out of existence. John Calhoun argued in his *Carolina Exposition and Protest* that the Southern states had the right to nullify federal laws they believed were unconstitutional [27]. It was not a totally novel idea. James Madison and Thomas Jefferson had presented the same argument in *The Virginia and Kentucky Resolves of 1798* [27]. They had argued that the states had the right to judge the constitutionality of federal laws and to declare

acts of Congress void – null if the laws did not serve to benefit all interests [27]. South Carolina, leading the Southern protest, held a special Nullification Convention. The state declared the Tariff of Abominations unconstitutional and prohibited the collection of customs duties within the state [19].

President Andrew Jackson, whose majority constituency was in the South, was between a rock and a hard place. He negotiated the Compromise Tariff of 1833 which reduced protective tariffs and temporarily appeased South Carolina [27]. However, he also added a “Force Bill,” which provided that the president could use arms to collect tariffs as needed [19,27]. Funding the federal government through tariffs was proving as challenging as apportioning taxes among the states.

In spite of their inherent unfairness, tariffs continued to be the main source of federal revenues until 1861. The conflict between the North and the South worsened and finally turned into the American Civil War. To obtain the revenue to fund the war, Congress passed a tax measure of twenty million dollars, to be levied wholly on real estate and apportioned among the states. It was a complete failure [28]. Most of the states did not even bother to collect the tax from their citizens; instead they printed money or borrowed to cover their apportioned amount [28]. Not surprisingly, Congress, trying to raise revenue other than primarily through inequitable tariffs, realized apportioned taxes were not only *inconvenient* to apportion, they were difficult to collect. Apportioning taxes on the basis of population was perhaps best to be avoided. The Census Enclosure, built to maintain a sustainable relationship between representation and cost, was fast failing.

The Civil War was costing a great deal of money and more was needed. Tariffs and apportioned taxes were not the answer. Congress decided to try a third method of revenue collection – unapportioned income taxes. The Thirty-eighth Congress, under President Lincoln, enacted the nation’s first income tax law in 1862 [28]. It was a progressive tax. Like today’s income tax, it was not apportioned among the states. The 1862 statute also established the Office of Commissioner of Internal Revenue, with the power to assess and collect taxes and enforce the tax law through prosecution and property seizure. By 1866, revenue collection on the unapportioned income tax had reached \$310 million, the highest in the nation’s 90-year history [29]. The income tax measure of 1862 was followed by several more, none of which was apportioned among the states. The link between representation and cost was severed and the balance of power devised by the Founding Fathers in Article I, Section 2 of the Constitution was upset. The Census Enclosure was down. Congress, unfettered by the inconvenience of apportioning taxes or the political aggravation of inequitable tariffs experimented so as to make tax collection even easier. A flat tax was levied of 2.5% for the years 1870 and 1871 [30]. The flat tax, however, like tariffs, gave an advantage to one interest group over another: the share that the wealthy paid for the cost of the federal government decreased while the share of the poor increased.

In 1872 the Census Enclosure was rebuilt. Americans had accepted the income taxes because of the exigencies of the Civil War. However, once the crisis was passed, they expected the income tax to end [30]. Accordingly, Congress allowed

the Civil War income taxes to expire and replaced them once again with protective tariffs [29,30]. These protective tariffs encouraged the rapid growth of Northern industrialization. Business discovered the economies of scale with the realization that increasing the number of units decreased the cost per unit [19]. Manufacturers were able to sell their products cheaper as production costs decreased. Cheaper products resulted in more products being sold. The method was particularly hard on labor, however. It required employees to work on assembly lines like machines performing a single task over and over 12 to 14 hours per day [31]. Unrestrained by government regulation, Northern industry plunged on in pursuit of more and more profit. The big business moguls used their immense profits to buy out the competition in order to control all aspects of production. Monopolies were created like that of John D. Rockefeller who by 1877 controlled 95 percent of the US oil refineries [32]. The re-enclosure of the Census Commons created, in effect a "Commercial Commons" in which large businesses fed on small businesses and both fed on cheap labor. Eventually, 10 percent of the population controlled 90 percent of the nation's wealth [32]. Andrew Carnegie, the developer of the modern steel industry, justified the unequal distribution of wealth in his article, "The Gospel of Wealth," arguing that as in nature, in business unrestricted competition allowed only the "fittest" to survive for the benefit of all [19,31]. Not surprisingly, he opposed government regulation of industry.

The manufacturers not only used workers like machines, they further cut labor costs with low wages. They hired newly-arrived immigrants, women and children and paid as little as possible. Slums and tenements arose to house the growing poor, often in the shadow of luxury skyscrapers [19]. The cities divided into residential sections segregated by ethnic group, social class and race [32]. In the meantime, the rapid growth of industry was requiring lots of capital. Businessmen borrowed huge sums of money and when the businesses failed, the banks went down with them causing the Panic of 1873 and another in 1893 [21]. The poor suffered even more as money tightened and unemployment increased. Public resentment with the Commercial Commons boiled over as the disparity between the wealthy elite and the poor masses grew. In 1886, labor took to the streets in the bloody Haymarket Square Riot in Chicago [21].

The federal government finally took steps to enclose the Commercial Commons by controlling the unrestrained monopolies and the consolidation of business power into the hands of a few. The Sherman Anti Trust Act (Sherman Act) was passed by Congress in 1890 [21]. It was soon challenged by those who wanted to maintain the Commercial Commons. They had the support of the pro-business Supreme Court. In 1895, the Supreme Court ruled that the Sherman Act did not apply to the E.C. Knight Company; a company which controlled 98 percent of the sugar refining plants in the United States [21]. Later in the same year, however, the Court set the precedent for using the Sherman Act against labor on the basis that strikes constituted an illegal "restraint of trade" [21]. Clearly, the regional differences which had fueled the Civil War were fading in the face of ever increasing class conflicts. The poor were

shouldering an unequal proportion of the public cost without receiving a proportional share of the benefits.

Meanwhile, a constitutional challenge to the unapportioned income tax measures passed during the Civil War finally reached the Supreme Court in 1880 [30]. The case, *Springer v. US* had wound its way through the courts since 1866. The federal government had seized Springer's property for non-payment of income taxes. Springer argued that the tax on his income, gains and profits was an unconstitutional "direct" tax in violation of Article I because it had not been apportioned among the states. However, the pro-business Supreme Court upheld the income tax acts as constitutional. Justice Swayne in *Springer* reviewed the constitutional debates looking for the Founding Fathers' purpose in apportioning "direct" taxes among the states as well as a definition of a "direct" tax. As for what the Founding Fathers actually meant by a "direct" tax, the Court could find nothing helpful in the convention debates. The Court concluded there was no definitive meaning of the term "direct" tax, and based its holding on how Congress had applied different kinds of taxes historically [32]. The only taxes that had previously been apportioned among the states were those levied against real estate or personal property; while taxes applied to income, profits and gains had never been apportioned among the states. The Court ruled that the tax levied against Springer's gains, profits and income was, therefore, an "indirect" tax – a duty or excise, and, so it was not necessary it be apportioned. With this decision, income taxes could now be lawfully levied against citizens directly by the Congress. The states' power over their citizens was compromised. The careful balance of power among the states and the regions was also damaged. There was no longer any relationship between the number of representatives a state had in the federal congress and the amount a state paid into the federal coffers. The Census Enclosure was again breached.

Armed with the Supreme Court's decision in *Springer*, Congress enacted another unapportioned income tax in 1894 as part of the Wilson-Gorman Tariff; a two percent tax on income over \$4,000. The measure was a tax on high incomes designed to relieve the victims of the Panic of 1893 by shifting some of the burden to the wealthy [32]. The Panic of 1893 was one of the worst economic depressions the country had endured. After decades of industrial growth, the uncontrolled speculation and business borrowing had caused a financial collapse: 642 banks failed and 16,000 businesses closed [21]. Nearly 20 percent of the work force was unemployed [32]. However, the income tax measure was only moderately successful in redistributing wealth. The high protective tariff portion of the law discouraged overseas trade which would have eased some of the effects of the depression [32]. Congress had taxed the income of the wealthy on the one hand; but given it back to them, on the other, with the tariff.

A challenge to the constitutionality of the unapportioned income tax law of 1894 reached the Supreme Court in 1895, *Pollock v. Farmers' Loan & Trust Company* [30] Charles Pollock on behalf of all stockholders of the Farmers' Loan & Trust Company of New York, sued to stop the company from paying the two percent tax on its nets

profits pursuant to the income tax measure of 1894. This suit was brought before a different Supreme Court than the one that had ruled 13 years earlier in *Springer*. Several of the nine justices, including the Chief Justice, had been replaced with new appointments.

In a 5 to 4 decision, the Court reversed its holding in *Springer* [30]. The Court held that levying a tax on the income and profits of the company's real and personal property, imposed a tax upon the property itself and, therefore, the tax was a 'direct' tax and unconstitutional for lack of apportionment among the states. The ruling was stunning. Congress must now apportion income taxes on property to the states. The relationship between cost and representation was reestablished. A state's population determined by the census would balance the competing interests. The Census Enclosure was again rebuilt. Meanwhile, Congress, facing again the problems the unapportioned income tax hoped to resolve, went back to the drawing board.

In spite of the reversal by the Court in *Pollock*, the Supreme Court of the 1890s remained largely pro-business. It was less concerned with preserving the relationship between cost and representation, then with preserving the wealthy ruling elite [21]. Understandably, some interest groups were unhappy with the Supreme Court's decision. If tariffs were to be the primary method of collecting federal revenue, then the bulk of the cost of the federal government would be paid by ordinary Americans at the point of consumption; not the wealthy [31]. Pulitzer's *New York World* characterized the *Pollock* ruling as "another victory of greed over need" [31]. Farmers felt it was yet another example of the alliance of government and business against the farmer. The farmers, in particular, were aware that if Congress apportioned direct taxes, they would be no better off. The concentration of wealth was in New York and the New England states. As the *Hylton* Court had observed way back in 1796, apportioning taxes on property resulted in an unfair burden on the less populated and poorer states. For example, if Congress wanted to raise \$100,000 by levying a tax on real estate, under the *Pollock* decision, a tax on real estate was a direct tax and must be apportioned among the states. Thus, if the census in Mississippi indicated a population of 1,000 people; the State of Mississippi would be responsible for 1% of the tax; or \$1,000 (1,000 Mississippi citizens/\$100,000). However, if only 500 Mississippian farmers owned real estate; then each farmer would pay \$2.00 in tax (\$1000/500). At the other extreme, suppose the census indicates that the wealthier state of New York had a population of 5,000. New York State is, therefore, responsible for 5% of the tax or \$5,000 (5,000 New York citizens/\$100,000 tax). If there were 4,000 New York citizens who owned real estate, then they each would pay only \$1.25 in tax. As this hypothetical example illustrates, the citizens of wealthier states would likely fare better if income taxes on property were apportioned among the states.

By the 1880s, the plight of farmers was growing serious. Mechanization had caused an increase in agricultural production and the increase in supply had caused a drop in prices. Farmers in the Midwest and the South, locked into long-term debt with fixed payments, were in financial straits. Because there was no relief after the *Pollock* decision, the farmers proposed their own solution. To make their payments easier,

they wanted to increase the money supply by increasing the coinage of silver [21]. Since silver was mined in the West, the western miners supported the farmers. The labor movement shared common goals with the farmers. By 1892, the Populist Movement, as it became known, had spread into forty-three states with some two million members and was called “the most massive organizing drive by any citizen institution of nineteenth century America” [21].

In addition to calling for the more liberal coinage of silver, the Populist Movement supported a graduated income tax. Populists became increasingly more successful in local and state elections, so that by 1896, they were ready to make a bid for the White House [21,31]. Their candidate, William Jennings Bryon, ran against Republican William McKinley. But Bryan lost the election and as the economy improved, the Populist Movement faded. What did not fade, however, was the idea of social reform through the government. The idea was adopted by the Progressives, who ushered in an era which followed and lasted until 1920. They absorbed some of the Populist platform [19,31].

The Progressives, unlike the Populists, were characterized as much more urban and educated [19]. As a result, they started with more economic and political strength than the Populists. It was predominantly a middle class movement, and so did not exacerbate class differences as much as the Populist Movement. Many were from the North, which also deemphasized regional conflicts. In short, the Progressive Movement not only had more political and economic strength, it had more popular appeal.

The Progressives gathered momentum through organizations like the National Woman Suffrage Association, the American Bar Association and the National Municipal league [31]. The educated intellectuals united into interest groups to spur government reform to alleviate the abuses by powerful industrialists and the misery of the poor. President Theodore Roosevelt, one of the most well-know Progressives, earned the nickname “the Trustbuster” by using the Sherman Act against the big monopolies like Standard Oil [31]. The two presidents that followed him, Taft and Wilson, continued to push through more government regulation, establishing the Federal Trade Commission, the Federal Reserve, and a constitutional amendment for the direct election of senators [19]. Many states passed their first minimum wage and hour laws.

When the Dingley tariff in 1897 raised protectionism to new heights, the Progressives took up the Populists’ cry for an unapportioned progressive income tax [19, 32]. Tariffs, like apportioned property taxes, did nothing to redistribute the nation’s wealth. The poor were still receiving little in the way of benefits from the costs they were shouldering. The Democrats took up their cause. Between 1874 and 1893, they introduced nearly 70 income tax bills in Congress; blocked repeatedly by the Republicans [30]. In April 1909, they tried one more time, expecting it be opposed by the Republicans as usual. However, in spite of the threat of the Supreme Court striking the bill down as unconstitutional as they had done in *Pollock*, western Republicans joined in support [33]. Certain that it would be either defeated in Congress or fail

to be ratified by the requisite 3/4ths of the state legislatures, Republican President Taft and Senate Finance Committee Chairman Nelson Aldrich (R-R.I), announced their intention to support an income tax, but only if it was an amendment to the Constitution [33]. Taft and Aldrich, however, were wrong in their assessment that the bill would go nowhere. The political rhetoric “soak the rich” with a progressive income tax rallied the people [34]. The 16th Amendment was not only passed by Congress, but state after state ratified it. By 1913 it was adopted.

Short in wording but long in effect, the 16th Amendment simply states:

The Congress shall have the power to lay and collect taxes on income, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration.

With the adoption of the 16th Amendment, the stage was set for benefits to be private and costs to be public. With the institution of an unapportioned federal income tax there was no longer a private cost to the residents of a state having a larger share of the US population: The census became a Commons.

The impact of the 16th Amendment was not immediate on the census. It served as a necessary, but not sufficient, condition for the Census Commons to be fully realized. The remaining conditions were put largely into place beginning with the 1960s when the reapportionment revolution occurred [35] and the distribution of substantial amounts of federal funds became linked to census data [5,11,36,37]. This meant that “populations” were linked to increased private benefits without the balance of accompanying private costs. Not surprisingly, interest groups began to form around these populations and the process of linking federal funds to census data accelerated [2,5,11,37]. This development was not anticipated by the Progressives who had championed passage of the 16th Amendment and tended to see only the wealthy and the poor as special interest groups of note.

These new constellations of interest groups would be much broader and very different than those recognized and understood by the Progressives. They would include interest groups defined not only by socio-economic class and political parties, but by gender, race, ethnicity, and age – and combinations thereof [37]. To this list one could add interest groups forming around disability status, veteran status, educational attainment, immigrant status, and even citizenship, among many others [4,5,36,37]. As recognition of these benefits has spread, the Census Commons has become more and more exploited. Evidence of this increasing exploitation can be found in a wide range of publications [3–5,7,11,34,38–45]. Thus, just as each herdsman attempted to increase his share of the pasture commons, so has each interest group attempted to increase its share of the Census Commons.

Let us briefly review the development of the Census Commons, beginning with the controversial Census of 1920, the first to be taken since passage of the 16th Amendment. The 1920 census revealed that states with rapidly growing urban populations would gain congressional seats while those without such areas would lose seats [4]. It also revealed that some of the rapid urban growth was due to immigration.

These findings generated a great deal of consternation over the changing landscape of America and the shift of federal political power from rural to urban states. Although legal challenges were filed, the Supreme Court refused to hear them and the Congress was not re-apportioned until 1929 [4].

The findings of the 1920 census, coupled with the lack of a well planned question on employment in the 1930 census, led to a change in ideas and methods for the 1940 census. Among other methodological improvements, 1940 saw the introduction of sampling into the decennial census and the first analytic evaluation of census results.

The 1950 Census, the last to be done completely door-to-door, confirmed work done in the evaluation of the 1940 census that indicated an undercount of males, the urban poor, and minorities [4]. With the advent of the “mail-out-mail-back” enumeration process, the 1960 Census was also the first in which special attempts were made to reduce the differential undercount problem first empirically identified in 1940 and confirmed in 1950 [4]. Significantly by the early 1960s, census data were being used in a number of new federal programs using formulas involving population as a basis for distributing federal funds to states and local governments [4,11,40].

The 1960s also marked the start of the “reapportionment revolution” [35]. In the 40 years since the Supreme Court had refused to rule on the cases involving the 1920 census, federal courts had followed this lead by refusing to rule on apportionment cases – until 1962. In a landmark case, the Supreme Court ruled in 1962 (*Baker v. Carr*) that the Tennessee legislature had to be re-apportioned [4].

Fueled by the proliferation of federal programs distributing benefits using decennial census data and the knowledge that federal courts were now willing to consider apportionment cases, several lawsuits were filed against the Census Bureau following the 1970 census. Importantly, these suits relied upon knowledge of differential undercounts from 1940 to 1960 and although they were dismissed, the Census as a Commons was now becoming evident. It came as no surprise that with the arrival of 1980 census data there came a flood of lawsuits [2,4]. This was followed by more in 1990 [2,46] and yet more again in 2000 [2,47]. These lawsuits overwhelmingly are based on grounds that the census had undercounted some population [2,4,37].

A successful action to have more people counted is not just an action that affects the census. It has a ripple effect throughout the decade leading to the next census because the census is the starting point for a set of annual estimates done by the Bureau that in themselves also distribute resources. For the 1980 census, Prevost and McKibben [40] found that annual population estimates done by the Census Bureau affected the distribution of \$40 billion in federal grants each year subsequent to the 1980 census. Murray [12] found that \$58.7 billion in federal funds distributed to state and local government in 1989 were made according to formulas that involved census population counts. Murray [12] also points out that adjusting the 1990 census for undercount would add an average of \$56 per person annually through the 1990s for the 40 percent of communities that would have gained population in the 1990 census through adjustment. That is, if a community saw its 1990 population increase by 100 through an undercount count adjustment, it would have gained

\$56,000 ($\$56 \times 100 \times 10$) over the following decade. Presumably, the communities losing 100 people cumulatively in a 1990 census adjustment would have lost \$56,000 collectively over the following decade. Post-2000 determinations of the volume of federal funding linked to census numbers can be found in *The Consolidated Federal Funds Report for Fiscal Year 2002* [44].

Clearly, even if the perception exceeds the reality, the stakes are significant for interest groups in a census. These perceived and real stakes have substantial political implications for methodological choices, which, in turn, are subject not only to cost and time constraints, but also disagreements among methodologists [2,8,11,48–51]. It is no wonder that as late as 2003 the Census Bureau still had not made a decision about adjusting the 2000 census results for non-redistricting/reapportionment purposes [2,9].

4. Prospects for the 21st Century

Perhaps it is not a surprise that the focus by academics, stakeholders, the Census Bureau, and the Congress is largely on methodological developments as the solution to census conflicts – increasing census accuracy through advertising to increase participation, for example, or by using statistical adjustments to reduce differential net undercounts [2,8,15,39,43,50–53]. In spite of methodological developments such as the de-coupling of the long form from the decennial census [54–57], however, nothing has occurred that would suggest to us that methodological developments will reduce litigation and other forms of conflict over census results. In fact, there is evidence to suggest that conflicts over census counts will only intensify, as the realization of net undercount differentials extend beyond the current stakeholders (e.g., political, social, and economic interest groups) to include others – residents of small areas of geography, for example [15,58,59]. As conflicts intensify, it is likely that public confidence in the Census will be further eroded and with erosion of public confidence comes higher levels of non-response [60], which, in turn, bring about higher levels non-response and increase the need for the wider use of existing statistical procedures and adjustments to compensate for those not responding, as well as calls for even more procedures and adjustments [7,8,50,59]. These additional procedures will require more funding, forcing the Census Bureau to make choices about methods that cannot provide optimal results for all populations. This will lead to more litigation and other forms of conflict as the special interest groups struggle to get their populations into the Census Commons. Once glimpsed, the outcome of this downward spiral is not re-assuring for the future of the census. Figure 1 provides a heuristic illustration of the feedback cycle that characterizes the Census Commons.

As an example of the possible end result of the Census Commons feedback cycle for the United States, consider the case of the Netherlands, where public cooperation has been deemed to be so low that a legally mandated census scheduled to have taken place in 1981 was indefinitely postponed. With the last conventional census

Fig. 1. The Census Commons Feedback Cycle.

having been taken in 1971, the government and other users of census data (e.g., planners, market researchers, bureaucrats, and academics) were desperate for current data. So, as a substitute, the government authorized Statistics Netherlands to use a combination of survey results and administrative data to come up with a “census” for 2001 [61]. While better than data from 1971, the Netherlands’ “Census of 2001” has its limitations [61]. However, even this limited form of data collection would be more difficult to achieve in the United States, where administrative records are, by law, custom, and usage, not as comprehensive as those in the Netherlands – the United States does not have a continuous population register, for example [62]. Add to this the likely litigation and methodological disagreements before, during and after such a process, and it becomes clear that the Dutch approach is not likely to provide a solution for the United States.

To avoid the “Tragedy of the Census Commons,” is it too radical to repeat here Swanson’s [63] suggestion to consider a campaign to fence in the census? If, for example, residents of Arizona gain congressional clout after Census 2010 because the state has as a higher share of the national population then should they also “pay” something in return? Would it be it too radical to suggest repealing the 16th Amendment and reverting to the original language in Article I? Is it possible to apportion income taxes to the states according to population and let the states determine how to collect it? Why should any legislation or regulation that provides census-based private benefits not be balanced with census-based private costs?

While thought-provoking, the points just made are just that – thought-provoking. It is unlikely that any attempt to fully re-enclose the Census Common would actually get anywhere. For Congress (and the courts), such an attempt would mean having to deal with the issue of “direct” and “indirect” taxes. As for the Executive Branch, a major source of stable revenue would be at risk if adjustments were made to the income tax laws such that the Census Commons was fully enclosed. Add to this the likely litigation and it seems clear that a full re-enclosure of the Census Commons is not politically feasible.

It also is the case that full re-enclosure is neither desirable nor needed. After all, there were good reasons for passing the 16th Amendment; moreover, there may be other ways to limit the Commons nature of the census without trying to repeal the 16th Amendment and returning to the original language of Article I. One possible path to a limited, but promising, form of enclosure has been proposed by Teitelbaum and Winter – a permanent and non-political oversight panel similar in structure and function to either the Federal Reserve Board or the Congressional Budget Office [64]. Would such an approach be sufficient? It certainly has worked in terms of these

two agencies, both of which deal with national resources that no longer serve as “commons” because of their oversight.

Teitelbaum and Winter [64] may be more explicit than others, but they are not alone in recognizing that the solution to census litigation and conflict is more likely to be political than methodological in nature [4,26,53,65,66]. We believe that however difficult the task, such a political process is needed and that the suggestion by Teitelbaum and Winter is worth pursuing. If the census remains a Commons, its prospects in the 21st century promise even more of what was witnessed in the late 20th: A national resource more deeply eroded by different undercount estimates, piled higher with contested methodologies designed to increase accuracy, and increasingly stressed by competing special interest groups championing the methods that serve to increase their population’s share of the Census Commons.

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