Reforming the US Senate: Original Intent and Representational Inequality<br>Benjamin Forest<br>Departments of Geography and Political Science<br>Centre for the Study of Democratic Citizenship<br>McGill University<br>Benjamin.forest@mcgill.ca

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The unfairness of political representation in the US Senate is a common narrative in popular and social media. The essential complaint rests on the allocation of two senators to each state regardless of population, giving the same representation to Wyoming (560,000 residents) as to California ( 37 million). The degree of representational inequality in the Senate is far greater even than in the Electoral College, and unambiguously enhances the power of small states. The conventional response is that the Senate's role is to represent states, while population is represented in the House (where Wyoming has a single representative while California has 53). Nonetheless, the population inequalities between the smallest and largest states are now a magnitude of order larger than they were in the late $18^{\text {th }}$ century when the US Constitution was adopted.

Awarding two Senate seats to each state and allocating House seats by population - the so-called Great Compromise - helped secure political support for the new Constitution at the original Constitutional Convention in 1787 (Coby, 2018). ${ }^{1}$ This arrangement satisfied populous

[^0]states' desire for greater political power and assuaged small states' fear of domination. In the Federalist Papers, James Madison justified the equal allocation of Senate seats as a foundation of federal government because it treated states as "coequal societies" (Hamilton et al., 2009, p. 82). Yet as the eminent political theorist Robert Dahl (2003) notes, this was a profoundly antidemocratic measure.

While convention delegates agreed to decouple Senatorial representation from population, they did so based on the assumption that as state populations evolved over time, they would correspond to a state's physical size (i.e., physically larger states would have proportionally larger populations than smaller ones) - an assumption that subsequently proved inaccurate, particularly as the US expanded westward, and underwent industrialization and urbanization. To correct for this development, I propose a reform that would allocate three senators to the seven most populous states and one senator to each of the seven states that have one House representative. Such a reform would return the ratio of population to representation to that which the framers had originally intended.

My proposal takes seriously an "originalist" understanding of the Constitution. An originalist framework asserts that the text of the Constitution should be interpreted based on the understandings of its authors. I focus on the population disparities among states that the Constitutional framers would have anticipated, and a way to return to the balance between Senate representation and population embodied in the original Great Compromise. The roots of Originalism are in law and are associated with politically conservative positions that seek to reduce the power of the Federal government to regulate and undertake social welfare (Calabresi, 2007). To be clear, I am not advocating the policy goals associated with the doctrine of

Originalism. Rather, like Balkin (2011), I show how an originalist framework may lead to a variety of political possibilities.

## Trends in Representational Inequality

Although population inequality - measured as the ratio between the populations of the smallest state and the largest states - has been relatively stable for the past one hundred years, the imbalance grew considerably between 1790 and the early 20th century. See Figure 1. I assess the degree of over- or under-representation by population in the Senate by taking the ratio between the largest and smallest state populations. ${ }^{2}$ A ratio of 0.25 , for example, would mean that a small-state senator represents one-quarter of the population compared to a large-state senator. The political consequences of a single state's over- or under-representation are of less concern than the possibility of a coalition among a group of small (or large) states because shifting a single vote - even in the Senate - is unlikely to affect outcomes frequently. Generally speaking, effective political action requires building a coalition, either within political parties or among states with similar interests. Consequently, for each census year I calculate the ratio between the populations of the six smallest and six largest states. The six-to-six ratio represents the maximum possible large- or small-state coalition in 1790 among the thirteen original states. (At that time, South Carolina had the median state population.) It also provides a measure that

[^1]can be applied over the entire period between 1790 and 2010, and that is much less sensitive to the addition of a single state with a very small population.

In forging the Great Compromise, how large did delegates to the Constitutional Convention think states' populations would grow relative to each other? For a reasonable estimate, we can look at the geographic size of states in 1790. According to Zagarri (1987), US leaders in the late 18th century believed that physical size and (potential) population were closely related. She writes,

Delegates to the Convention, and Americans generally, made a critical assumption about the relationship between space and population. The delegates believed that the more territory a state possessed, the larger its population could grow (Zagarri, 1987, pp. 64-65).

Therefore, the ratios between the areas of the largest and smallest state(s) would approximate the scale of inter-state population inequalities anticipated by delegates to the Convention.

How did the degree of representational inequality - measured by the relative population ratios of large and small states - change between the late $18^{\text {th }}$ and early $21^{\text {st }}$ centuries? The lower solid line in Figure 1 shows the ratios between the six smallest and six largest states from 1790 through 2010, and the upper solid line on the graph shows the seven-state ratio from 1800. The dashed horizontal line shows the ratio of the six smallest to largest states by their 1790 areas.

The graph shows two expected patterns. First, the degree of population inequality now is far higher than in the late $18^{\text {th }}$ and early $19^{\text {th }}$ centuries. Second, the degree of population inequality among the largest and smallest states grew steadily after 1840 (i.e., the ratio became smaller). Other trends are more surprising. The degree of inequality remained relatively stable during the $20^{\text {th }}$ century. Finally, the $7: 7$ (and $6: 6$ ) population ratios are considerably smaller (more unequal) than the analogous area ratio from 1790.

## Senate Reform: The 7-7 Solution

Changes in the six-to-six (and seven-to-seven) ratios over the last 230 years suggest a strong case for reform. The degree of inequality now is far greater than it was in 1790 by either population or area measures. If we accept those measures as sufficient justification for reform, how could we bring the degree of representational inequality back to the late $18^{\text {th }}$ century range? Assigning one Senator to the smallest states and three to the largest states is one simple way to do so. Mathematically, this is equivalent to multiplying the population ratio between the smallest and largest states by three.

The effect of re-allocating Senate seats in this fashion produces a startling result, shown in Figure 2. The graph shows the original area ratios and ratio for the modified seat allocations for the 7:7 ratio. For 2010, the value is almost precisely the same as the $17906: 6$ area ratio. (The values of the $6: 6$ population ratios are very similar but not shown.) Arguably, re-allocating Senate seats among the seven smallest and seven largest states would return the representational ratio of the Senate to the value envisioned by convention delegates.

Moreover, the choice to re-allocate seven seats is not an arbitrary way to achieve the original area ratio. In the reapportionment following the 2010 census, seven states were assigned one seat in the House of Representatives. This suggests a relatively simple rule: States with a single House seat also receive a single Senate seat, with the surplus seats being redistributed to an equal number of the largest states. This would mean that future allocations would respond to population changes to regulate the inequality of Senate representation.

A brief analysis (not shown here) suggests that in a shift of seven seats, the Democratic Party would likely gain 1 or 2 Senators. Future population change, however, would not necessarily favour Democrats. Currently, there is only one Republican senator from the four
smallest states after Montana (Rhode Island, New Hampshire, Maine, and Hawaii), and the second and third largest states after Ohio (Georgia and North Carolina) have all Republican senators. Depending on how population growth affects future House apportionment, the proposed reform could increase the number of Senate seats in large Republican-leaning states at the expense of small Democratic-leaning ones.

## Concluding Thoughts

Madison's defence of the Great Compromise articulated a particular version of federalism, but as with the post-Civil War Fourteenth Amendment, the relationship between states and the federal government can be altered through Constitutional change. Indeed, the adoption of direct election for Senators with the Seventeenth Amendment in 1913 shows that the Senate's role can evolve as Americans' views of representation, democracy, and federalism change. A century later, it is again time to reconsider Senatorial representation through a Constitutional amendment.

My seven-seven solution would retain a state-centric Senate while returning the relative disparity between political power and population to the original level envisioned by the delegates to the Constitutional Convention. Small states facing the loss of a Senate seat would oppose such an amendment, but they would be balanced by the same number of large states that would gain one. The recent shift of the Senate to a majoritarian rather than a deliberative orientation -dropping super-majority requirements for judicial nominees, for example - further suggests that it is time to bring the body into closer correspondence with population.

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Figure 1: Population and Area Ratios, 1790-2010


Figure 2: Representation Ratios with Re-Allocated Senate Seats

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[^0]:    ${ }^{1}$ The so-called "Three-Fifths Compromise" was the second major bargain reached at the convention (Pope \& Treier, 2011). An enslaved person was counted as three-fifths of a free person for purposes of apportionment and taxation, which reduced the effective population of slave-holding states. Insofar as populous states like Virginia had significant numbers of slaves and a small state like Delaware did not, this reduces the apparent population disparity between small and large states. I use total population to calculate population disparity to maintain consistency across the entire period. The disparities based on either the total or the $3 / 5^{\text {th }}$-adjusted population of the $18^{\text {th }}$ century are much smaller than those of the $21^{\text {st }}$.

[^1]:    ${ }^{2}$ State boundaries change over time. I aggregate the population and area of New York and Vermont for 1790 (Vermont formally became a separate state in 1791); Massachusetts and Maine through 1810 (Maine became a separate state in 1820); and Virginia and West Virginia through 1860 (West Virginia became a separate state in 1862). I took population data and US state boundary shapefiles from the US Census Bureau starting with the first national census in 1790. I took boundary changes from the Atlas of Historical County Boundaries (Newberry Library, 2010).

