The US Constitution, in Article V, offers two mechanisms by which it may be amended. Congress, through a $\frac{2}{3}$ vote in each house, may propose amendments. Alternately, $\frac{2}{3}$ of the State Legislatures may – completely independent of Congress – request a Convention. The latter clearly was seen as an extreme measure by the founding fathers, a last resort should a significant overhaul of the Constitutional machinery prove necessary. The nation has adhered to this stricture, and there has been no such Convention in the history of the nation. Whether proposed by Congress or through a Convention, any amendments must be ratified by $\frac{3}{4}$ of the State Legislatures or by dedicated Conventions in $\frac{3}{4}$ of the States. It is left to Congress to decide which mechanism to employ. In the case of a Convention, that choice is Congress’s only role in the process.

The Constitution intentionally remains silent on the precise mechanisms by which States may elect their Legislatures, by which each of those Legislatures may decide to apply for a Convention, or by which State Conventions would operate. In keeping with the Constitution’s general deference to the States, those details are left to their discretion. They need only be managed in a manner which is equitable – or at least which does not violate the existing Constitution under its current interpretation. It is fair to assume that no mechanism requiring less than a simple majority vote would pass muster. However, it also is reasonable to assume that a simple majority would in fact be a Constitutionally acceptable choice. We therefore assume that a State so-inclined could effect an election, application, or ratification with a simple majority vote.

At first glance, it seems perfectly reasonable to require the acquiescence of $\frac{2}{3}$ of the States to call a Convention and of $\frac{3}{4}$ to ratify its proposals. We may be tempted to believe that this reflects approval by an analogous fraction of the population. This is incorrect. The States have widely varying populations, and the 34 States needed to effect a Convention – or even the 38 needed to ratify its proposals – represent a disproportionately small fraction of the overall population.

Depending how one defines the relevant “population”, a mere 10-22% is required to convene a Constitutional Convention and ratify any amendments proposed. This is, of course, an extreme scenario. But as will be explained, it is not as outlandish as one may hope. It is important to note that all the protections, rights, guarantees, and liberties which we deem obvious and take for granted derive from the Constitution. And all of these may be revoked, superceded, or altered through Amendments.

Where do we get the number in our provocative title? Unfortunately there is no slight of hand, just some simple calculations. For our purpose, we rely on 2010 Census Data, as stated in the report "United States Summary: 2010, Population and Housing Unit Counts", issued by the U.S. Department of Commerce in September 2012, and labelled as CPH-2-1 (in particular, Table 12: Population: 1790 to 2010). We also make use of spreadsheet data, distributed on the U.S. Census website, listing the fractions of registered voters and the fractional voter turnout by State.
The Constitution does not treat the District of Columbia as a State, so we assume that it has no say in a Convention. Likewise, the Constitution makes no mention of the status of US citizens living abroad. These possibly could vote in State elections (as they do in a Presidential election), but their treatment is unclear and we ignore them for our purposes.

Before continuing, we should address a possible objection: isn’t the ability of Congress itself to propose Amendments equally problematic? The answer is no. Because a \( \frac{2}{3} \) vote is required of both houses of Congress, the situation is different. The House of Representatives is approximately apportioned by population. Presumably, a \( \frac{2}{3} \) vote would in fact reflect the will of \( \frac{2}{3} \) of the population. However, once an Amendment is proposed by Congress, the ratification process is subject to the problem we describe.

There are five measures of population that concern us:

- Total Population: The overall population reported in the Census. This includes most legal and some illegal immigrants, but likely excludes a number of illegal immigrants.
- Citizenry: The total number of US citizens.
- Eligible Voting Population: The population of US Citizens who can vote in State elections.\(^2\)
- Registered Voting Population: The population that has registered to vote in one of the 50 States.
- Active Voting Population: Those who actually show up and vote.

The Total Population in 2010 was 308,745,538, according to the 2010 Census. This number includes citizens and non-citizens (though a fair number of illegal immigrants may not have been tallied). Unfortunately, finding any useful information on the number of actual US citizens is difficult. According to Census data, the total Voting Age Population in 2010 was around 229,690,000 (74.4% of the total). This is an overestimate, of course; some of that population is ineligible due to lack of citizenship. The US Census reports that in 2010, 59.8% of the Total Population (or 65.1%) of the Citizenry were Registered to vote. From this, we can back out that around 185M people were Registered to vote and that there were around 284M US Citizens in the Census count. We will use these numbers. Voter turnout was 45.5% of the Citizenry in 2010 and 61.8% in 2012 (a Presidential election year). We’ll use the latter as a more conservative estimate. We assume that the age demographics of the Citizenry and Total Population are roughly the same, and that the fraction of the two that are of voting age is identical. Thus we have the following assumptions\(^3\) for 2010:

- Total Population: 309M
- Citizenry: 284M
- Eligible Voters: 211M
- Registered Voters: 201M
- Active Voters: 174M

Of course, Eligible Voters can quickly become Registered Voters, and Registered Voters can quickly become Active Voters. We assume no obstacles to these transitions.

We next perform a similar analysis at the State Level. We assume uniform populations and Legislative representation within each State. For simplicity, we also assume that all States have a uniform fraction of eligible Voters (74.4%). For each State, the Census info includes the Total Population in 2010, the Voting Rate in 2012 (as a fraction of Total Population and Citizenry), and the Registration

\(^1\) Because many are military and typically vote conservatively, they would contribute to rather than counteract the effect we describe.

\(^2\) Technically, States can allow Permanent residents to vote as well; however, we do not account for this effect.

\(^3\) Bear in mind that the Registered Voters and Active Voters listed below are under a 2012 (President Year) scenario for the 2010 Population.
Rate (as a fraction of Total Population and Citizenry) in 2012. This data is consistent with our use of 2010 and 2012 data overall. We use the rates to deduce the Citizenry of each State as well as certain other information.

We can rank the States in a number of ways, depending on our assumptions. If the State Legislatures spontaneously decide to call a Convention, then the Actual Voting population is the relevant statistic because their will is represented by the sitting State Legislatures. The same would hold true for ratification if Congress chose to defer to the State Legislatures rather than order State Conventions as prescribed in the Constitution. As long as things wrapped up before the next State election cycle, the Active Voters would be the relevant population. If things took longer and people took an interest, then it is quite possible that many unregistered voters would register and vote (and that a greater fraction of already registered voters would turn out). This may not alter the outcome, but for our purposes it would impute influence to a greater fraction of voters. If State Conventions were involved, these same considerations would come into play. It makes sense to rank and calculate using each of 3 numbers: Eligible voters, Registered voters, and Active voters.

Of course, the smallest States may not act in concert. Most are conservative, but some are not. We assign each State to one of two categories based on its political leaning. Because the smaller States tend to be conservative, it is only a conservative push that could achieve a Constitutional Convention using the mechanism we describe. For each of the three voter definitions, we calculate the population needed to trigger a Constitutional Convention and that needed to ratify it. We do so under two scenarios: (1) assuming perfect concert between the smallest States by population and (2) assuming concert amongst only the smallest conservative-leaning States. In the latter case, we require agreement amongst the 34 or 38 smallest conservative States. We count as conservative those States which have a split legislature (a house of one party and senate of the other, for example). We do not know the mechanism by which such State Legislatures may effect their decisions, and we must allow them a reasonable likelihood of voting for a Convention or its resolutions. To determine the political leanings of State Legislatures, we use 2015 data as reported by the MultiState Associated website (https://www.multistate.com/state-resources/governors-legislatures).

Table 1 lists our results. The column is the relevant population used for sorting and tallying. Those columns designated “Conserv” involve the lowest 34 or 38 States by population which would or could join a conservative vote. Because we assume only the simple majority rule within each State Legislature, our numbers represent 1/2 the actual voter numbers and percentages. The results correspond to the minimum numbers and fractions of voters who could effect a Convention or ratify its results.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Total Eligible</th>
<th>Total Registered</th>
<th>Total Active</th>
<th>Conserv Eligible</th>
<th>Conserv Registered</th>
<th>Conserv Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant Population</td>
<td>211</td>
<td>201</td>
<td>174</td>
<td>211</td>
<td>201</td>
<td>174</td>
</tr>
<tr>
<td>34 State (5/8) Population</td>
<td>34.7</td>
<td>33.8</td>
<td>29.4</td>
<td>48.8</td>
<td>46.1</td>
<td>41.9</td>
</tr>
<tr>
<td>38 State (3/8) Population</td>
<td>43.9</td>
<td>42.9</td>
<td>37.5</td>
<td>70.0</td>
<td>67.9</td>
<td>59.2</td>
</tr>
<tr>
<td>State Fraction of Relevant</td>
<td>16.5%</td>
<td>16.8%</td>
<td>16.9%</td>
<td>23.1%</td>
<td>22.9%</td>
<td>24.0%</td>
</tr>
<tr>
<td>State Fraction of Relevant</td>
<td>20.8%</td>
<td>21.3%</td>
<td>21.5%</td>
<td>33.2%</td>
<td>33.8%</td>
<td>33.9%</td>
</tr>
<tr>
<td>State Fraction of Total Pop</td>
<td>11.2%</td>
<td>11.0%</td>
<td>9.5%</td>
<td>15.8%</td>
<td>14.9%</td>
<td>13.6%</td>
</tr>
<tr>
<td>State Fraction of Total Pop</td>
<td>14.2%</td>
<td>13.9%</td>
<td>12.1%</td>
<td>22.7%</td>
<td>22.0%</td>
<td>19.2%</td>
</tr>
<tr>
<td>State Fraction of Citizens</td>
<td>12.2%</td>
<td>11.9%</td>
<td>10.4%</td>
<td>17.2%</td>
<td>16.2%</td>
<td>14.8%</td>
</tr>
<tr>
<td>State Fraction of Citizens</td>
<td>15.5%</td>
<td>15.1%</td>
<td>13.2%</td>
<td>24.7%</td>
<td>23.9%</td>
<td>20.9%</td>
</tr>
</tbody>
</table>

As a side note, through their representation in the Senate, the smaller States also can thwart any attempt by the larger ones to propose an Amendment in Congress.

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We see a few interesting things from this. The most extreme scenario is one in which the bottom 38 States (as defined by whichever voting population we deem relevant) decide to act in concert and effect a Constitutional Convention. In that case, as little as 9.5% of the total US population could prompt a Constitutional Convention and as little as 12% could ratify its results. A fairer estimate would be to consider the fraction of the relevant voting population; presumably non-voting and voting populations in an area share similar views. In that case, the numbers don’t actually depend much on our choice of voting population. Less that 17% of the voting population is needed to prompt a Convention and a little under 22% is needed to ratify its results. Of course, this is a particular 17 or 22% – one which is unlikely to act in concert.

Taking into account the actual political leanings of States, and using the assumptions described above, things look a bit better. It would take a little under 24% of the voting population to prompt a Constitutional Convention and a little under 34% to ratify its results. This too refers to a specific population, however that this population would act in concert is highly plausible. Regardless of how one cuts it, these numbers are a far cry from $\frac{2}{3}$ and $\frac{3}{4}$ of the population.

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4 More precisely, it is a variety of subsets of certain populations – but the meaning is the same; only the bottom 34 or 38 States by population matter.