**RESEARCH NOTE**

**THE MOST COMMONLY PROPOSED ALTERNATIVE ELECTORAL COLLEGE RULES WILL NOT ELIMINATE OR EVEN SUBSTANTIALLY REDUCE DIVERGENCE BETWEEN EC PRESIDENTIAL OUTCOMES AND POPULAR VOTE OUTCOMES: EVIDENCE FROM 1868 TO 2016\***

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ABSTRACT

We offer a typology of possible reforms to the Electoral College in terms of changes to its two most important structural features: seat allocations that are not directly proportional to population and winner-take-all outcomes at the state level. This typology allows us to classify **eight** **OR IS IT TEN??** different ways to “reform” the present Electoral College **in a parsimonious fashion**. **Many of these have actually been proposed, and some debated in Congress, and they include all the alternatives most likely to be taken seriously except for the proposal for a state compact.** W**e evaluate these proposals solely in terms of one simple criterion: “Would they be expected to reduce the likelihood of reversals between EC and popular vote outcomes?”** We answer this question by looking at the data on actual presidential election outcomes **at the state level over the entire period 1868-2016, and at the congressional district level over the period 1956-2016.** We consider the implications for presidential outcomes of these **eight** **OR IS IT TEN??**different alternative mechanisms, in comparison to the actual outcome and the popular vote outcome. In addition we examine the implications of a proposal to increase the size of the U.S. House (Ladewig and Jasinski, 2008). Our results show that reversals from the popular vote happen under all proposed alternatives at nearly the same rate as under the current Electoral College rules, with some proposals actually making reversals more frequent. The major difference between the present EC rule and alternative rules is NOT in frequency of reversals, but it is in which particular years the reversals occur. As for the proposal to increase the size of the House, we show that any realistic increase in House size would have made no difference for the 2016 outcome.

*“The Electoral College is a disaster for democracy”*

*– Donald Trump, November 6, 2012*

*“The Electoral College is actually genius in that it brings all states, including the smaller ones,*

*into play.”*

*– President Elect Donald Trump, November 15, 2016*

The Electoral College we know today, however, is not the one envisioned by the founders**. The founders believed its function would be to nominate candidates from which the House of Representatives would select. Today, electors are pledged in advance to particular candidates and very very rarely diverge from their pledged support, and they never have done so in a way that has proved consequential (Longley and Pierce 1999: 23 Check page number). Moreover, outcomes are decided by the first stage of the process, the Electoral College itself, and never have decisions been made at the second runoff stage that involves a congressional vote. [[1]](#footnote-1) Nonetheless, despite these dramatic differences in how the Electoral College now operates, its two most basic features have remained in place:** seat allocations that are not fully proportional to population, **with allocations based on the combination of congressional seats and U.S. Senate seats in the state; and winner-take-all outcomes at the state level -- though now there are two states,** Maine and Nebraska**,** w**here the winner take-all feature operates at the level of congressional districts, with only the two “federal” seats allocated on the basis of the state-wide outcome.** [[2]](#footnote-2)

In *Federalist, no. 68*, Alexander Hamilton opined about the Electoral College, “I… hesitate not to affirm that if the manner of it be not perfect, it is at least excellent.” **Both then and now, all agree** that the Electoral College is not perfect**.** [[3]](#footnote-3) **The claim that it is “excellent” would be met with far more suspicion.** In the U.S., after each presidential election, especially those where popular and Electoral College vote diverged, **or a t**hird-party candidacy threatens to undermine the idea that a president should **represent a clear majority**, proposals to abolish/**replace** the Electoral College (EC) are common. Indeed, the EC rules are the provision of the U.S. Constitution that has most often had changes proposed to it (Hardaway 1994; **Longley and Peirce 1999: 133**). **The academic literature is also full of attacks on the Electoral College (see e.g.,** Bickel 1968, **IS BICKEL AN ATTACK?? Edwards 2011, Finkelman 2002, Dahl 2003, Bennett 2006), though it does have a few defenders. And yet, for the last JONATHAN FILL IN years, there have been no further changes to its structure, and attempts to eliminate the Electoral College have proved unavailing,**

There are many reasons why nothing has changed in so many decades. First, the winner of the previous election has little incentive to change the rules that elected him (see the Trump quotes above). Second, large states think that they benefit from the Electoral College because the winner-take-all rule makes their state more likely to be pivotal **(Banzhaf 1968)**, while small states think they benefit from the Electoral College because of the two seat Senate “bonus”.[[4]](#footnote-4) Third, public opinion is closely divided (with a strong partisan split).[[5]](#footnote-5) Fourth, as noted above, the academic and journalistic community has its skeptics about electoral college reform, with those in opposition to change noting, among other things, that proposed remedies have unknown qualities and are unlikely to cure problems such as a campaign focus on the larger states, and may bring new problems with them, e.g. party proliferation, and blackmail potential by minor parties now able to win pledged electors whose vote switches could determine a presidential election outcome (see e.g., Ross, 2012; Dewitt and Schwartz, 2016).[[6]](#footnote-6) Finally, after an election, attention quickly shifts to other more pressing issues and Electoral College reform goes off the political agenda.[[7]](#footnote-7)

**While there are many complaints about the Electoral College, such as the claim that virtually all presidential campaign activity is focused on a very limited number of battleground states in a way that affects turnout and interest in politics in a negative ways; and there are always renewed fears about wayward electors,[[8]](#footnote-8) we believe it fair to say that far and away the single most important criticism of the Electoral College is that it does not guarantee the election of the national popular vote winner.[[9]](#footnote-9) However, we also recognize that a popular vote election for the presidency also has its critics.** Op**ponents of change to the popular vote note the possibility of a bitterly divided and close election, not unlike those we have experienced much of the past few decades and reminiscent of the late 1800s.[[10]](#footnote-10) The Electoral College delivers decisive victories[[11]](#footnote-11), while a close direct vote might lead to a nationwide recount that might take months or even years to complete, leaving the country in a constitutional crisis.** Another issue is based on the expectation that a national popular vote would dramatically increase the incentives for candidate proliferation.

**While we recognize that there are many dimensions along which the Electoral College and proposed alternatives to it could be evaluated, both in normative and empirical terms, here** w**e evaluate ten key proposals, and the proposed change in size of the House of Representatives, solely in terms of one simple criterion: “Would they be expected to reduce the likelihood of reversals between EC and popular vote outcomes?”** **This criterion serves double duty as both a normative standard and a question to be answered empirically. We answer the empirical question** by looking at the data on actual presidential election outcomes **at the state level[[12]](#footnote-12) over the entire period 1868-2016, and at the congressional district level over the period 1956-2016, taking turnout levels and vote choice as given.[[13]](#footnote-13) We deliberately eschew seeking to address the normative issues, since this topic is well plowed ground in the previous EC literature. [[14]](#footnote-14)**

There are a number of **books and** articles comparing the present Electoral College rules to proposed alternatives, but none of which we are aware **that** both use a time series going back to 1868 **and** includes the 2016 election, and none that empirically evaluate as many alternatives to the present EC rules as are considered here (see e.g., Longley and Braun 1972, Hardaway 1994, Koza et al 2013, JC FIND MORE CITATIONS). Moreover, many studies only write about the Electoral College in normative, legal and theoretical terms, or discuss the prospects for change, and provide no attempt at **empirically estimating how a particular change in rule would have affected past voting outcomes. (Jonathan is this an accurate characterization of these three studies Wilmerding 1958, Bickel 1968, Glennon 1992).**

**The goal of this paper is to examine ten OR IS IT EIGHT? p**ossible reforms to the Electoral College in terms of the consequence of changes to its two most important structural features: seat allocations that are not directly proportional to population and winner-take-all outcomes at the state level. This typology allows us a parsimonious to ways to classify the **reforms that have been or are likely to be taken seriously,** including those **which have actually previously been debated in Congress. JONATHAN DO WE REALLY HAVE ALL OF THOSE IN OUR SET OF TEN—OR IS IT EIGHT** In addition we examine the implications of a proposal to increase the size of the U.S. House (Ladewig and Jasinski, 2008). **Quite to our surprise**, our empirical results show that, over the full time period, reversals from the popular vote happen under all proposed alternatives at nearly the same rate as under the current Electoral College rules, with some proposals actually making reversals more frequent. The major difference between the present EC rule and alternative rules is NOT in frequency of reversals, but it is in which particular years the reversals occur. As for the proposal to increase the size of the House, we show that any realistic increase in House size would have made no difference for the 2016 outcome.

We utilize only the Democratic and Republican two-party vote shares in looking at outcomes under different electoral college formulae We make the choice of two-party vote despite the fact that third-party candidacies sometimes represent a large proportion of the total vote, such as in 1968, when the leading popular vote getter, Richard Nixon, won just 43.42% of the total votes.**[[15]](#footnote-15)** The effects of third party candidacies on electoral outcomes is certainly worth further investigation **but is beyond the scope of the present essay. Moreover, we expect that most if not all of the problems identified with third party candidacies would be the same or greater under the alternative versions of the Electoral College we consider here.** Of course we recognize that candidates will adapt strategies to the rules in use, and that choice of rules may affect candidate entry decisions,**[[16]](#footnote-16)** but we still believe it a **worthwhile exercise to examine how the previous voting patterns would have affected outcomes in the 38 presidential elections we review. However, because of such estimation complexities**, we must interpret the results, such as shown in **Table** 2 later in the text, as *ceteris paribus* ones. [[17]](#footnote-17)

# **II. Proposals for Electoral College Reform**

The Electoral College is often thought of as having two undesirable design features. The first of these is the allocation of Electoral College seats in each state on a winner-take-all basis rather than either allocating candidate votes proportionally on a state by state basis in some fashion, or nationally. The second design feature is the way in which Electoral College votes are allocated to each state, with objections to the two-state federal bonus as generating malapportionment, and thus overweighting or underweighting certain states. Many critics of the Electoral College would be satisfied only if both features were eliminated and the Electoral College was replaced with direct popular election of the President; others are prepared to see modifications made in one or both features.

While most of the current attention on Electoral College reform has been centered on the state compact to bind electors to vote for the national popular vote winner,[[18]](#footnote-18) many other more limited proposals for changing the EC have been proposed.[[19]](#footnote-19)  These include replacing the present EC either with an election based on winning the national vote (though usually with a runoff rule if the plurality victory margin is not that large), and replacing it with a scheme that makes the EC allocation to the candidates in each state more proportional to each candidate’s share of the statewide vote.  Because there have been so many different alternatives proposed we want a simple and parsimonious means to classify proposed reforms. We do so by focusing on the two key structural feature of the present Electoral College identified above: seat allocations that are not directly proportional to population and winner-take-all outcomes at the state level. **However, we do not include in our set the proposal to bind the states to report a slate of electors consistent with the popular vote outcome, even though that proposal has recently attracted a lot of attention, since that is simply the popular vote outcome by another mechanism. We also do not include proposals that require voters to rank order candidates,** because a lack of data on the preference ordering of candidates among the electorate makes it impossible for us to **reliably estimate the implications of their use in past elections.**

**While this simple classification lend itself naturally to a 2 x 2 format, there are variants within each element that we wish to take into account, such as keeping the winner take all feature, but applying it at the level of congressional districts. Similarly, when we consider ways to make Electoral College results more proportional, we need to distinguish** between allocations based on House seat share and allocations based strictly on population. [[20]](#footnote-20) **JONATHAN IS THIS CORRECT?** **Additionally, we offer two types of proportional representation, one that allows for fractional shares of electoral college seats, the other awarding only whole seats. The whole number proportionality rule used is that used for apportionment of the House of Representative, namely the method of equal proportions**.[[21]](#footnote-21) **Only whole electors are allocated, which allows for the continued physical meeting of electors in December at their representative state legislatures. [[22]](#footnote-22)**

What we end up with are ten variants. **JONATHAN IS THIS CORRECT?** Using this simple classification scheme allows us to capture almost all the reforms that have been or are likely to be taken seriously, including those which have actually previou**sly been debated in Congress. JONATHAN DO WE REALLY HAVE ALL OF THOSE IN OUR SET OF TEN-or is it eight?**

**Table 1 identifies each of our ten variants in terms of the structural features identified above. I THINK THIS FORMAT IS A LOT CLEARER THAN OLD TABLE 1. We provide in an appendix a more technical description of each of these options in mathematical notation.**

**<<Table 1 about here>>**

**Table 1. Eight OR IS IT TEN? OR IS IT eight ? Variants of Electoral College Reform JONATHAN I WAS HAVING TROUBLE IDENTIFYING all THE VARIANTS YOU ACTUALLY STUDY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Short name** | **Apportionment rule** | **Winner-take all vs. Proportionality** | **Proposed by** | **Number**  **o of reversals** |
| 0. present EC | same | same | founding fathers |  |
| 1. EC without bonus | no two seat bonus | WTA at state level without two seat bonus for statewide winner | JONATHAN FILL IN |  |
| 2. CD based WTA | same | WTA at district level | Republicans such as JFI |  |
| 3. CD based WTA without bonus | no two seat bonus | WTA at district level, without two seat bonus for statewide winner | JONATHAN FILL IN |  |
| 4 JONATHAN FILL IN | same | whole number proportionality at the state level | JONATHAN FILL IN |  |
| 5 JONATHAN FILL IN | same | factional share proportionality at the state level | JONATHAN FILL IN |  |
| 6 JONATHAN FILL IN | no two seat bonus | whole number proportionality at the state level | JONATHAN FILL IN |  |
| 7. JONATHAN FILL IN | no two seat bonus | factional share proportionality at the state level | JONATHAN FILL IN |  |
| 8 JONATHAN FILL IN |  |  | JONATHAN FILL IN |  |
| 9. JONATHAN FILL IN |  |  | JONATHAN FILL IN |  |
| 10. JONATHAN FILL IN |  |  | JONATHAN FILL IN |  |
| 11. popular vote | no apportionment | popular vote (plurality) winner | JONATHAN FILL IN |  |

**Table 2 shows actual popular vote and EC vote shares and also simulated seat share under each of our ten Electoral College variants. Cells that are bolded show reversal years.**

**<<Table 2 about here>>**

**Table 2. Concordance of Popular Vote with Winner in Ten Variants of the Electoral College**

**JONATHAN THERE IS A REAL PROBLEM in that the PRESENT TABLE 2 ONLY HAS Seven VARIANTS IN IT!! How many variants are there??! Please list in the same order as what will be shown in table 1.**

There are number of interesting results shown in **<<Table** 2. First, malapportionment effects, and especially the effects of the two-state bonus, are not that large. For example, in 2016, Donald Trump would have been elected even had there been no two-seat bonus. **In fact, he would have won in all the different unit-rule configurations, only losing when a proportional rule such as the direct vote WHAT IS THIS VARIANT? I COULDN’T RECOGNIZE IT FROM THE LABEL is instituted.**

Indeed, as can be derived from the differences between Column **2** and Column **3** of **Table** 2, **in** only **three** elections in American history has the two-seat bonus feature of the Electoral College been decisive in reversing an election result. The first time this happened was in **1876, benefiting the Democratic candidate,[[23]](#footnote-23) then again in** 1916 when it **also** benefited the Democratic candidate, and **finally** again in 2000 when it benefited the Republican candidate. However, we would also observe that the over last seven elections the two-seat bonus has consistently favored the Republican candidate, even **when** it has not had an impact on election outcome. On the other hand, glancing through  **Table** 2’s first two columns reveals several instances where a *reversal* almost happened. In **most of JONATHAN IS THIS CORRECT?** these instances, the Democratic candidate came out on top, e.g., 1960.

Second, while proportionality variants of EC allocations clearly can dramatically change the magnitude of seats outcomes relative to votes outcomes, it is only in the period from 1880 to 1900 that we see repeated evidence of changes in the presidential winner based on choice of a proportional as opposed to a winner-take-all rule, though of course, we also see this in 2000 and 2016.

**Third, we note that the “reform” that would have the most dramatic effect on recent elections is a winner take all rule based on district outcomes.** **JONATHAN IS THIS CORRECT?** In **recent elections where a Democratic Party candidate won the election, such a rule would** reverse the Electoral College **and Popular Vote** winner. That such reversals provide net benefits to the Republican party can be explained by the degree to which Democratic voting strength is inefficiently concentrated in urban districts, and **the degree to which there is greater Republican unified control of state legislatures and governorship than is true for Democrats, giving Republicans a much greater opportunity to engage in successful partisan gerrymandering of congressional district lines.[[24]](#footnote-24)** In 1960, 1976, and 2012[[25]](#footnote-25), for example, the outcomes would have been reversed (all three times benefiting the Republican candidate) if we allocated based on the results *within* Congressional Districts plus the plurality state winner getting two bonus seats. In 1976, however, not giving the two-seat bonus to the state plurality winner reverses yet again back to the actual winner, Jimmy Carter (i.e., benefits the Democratic candidate).

Third, if we want to understand reversals we must look to when popular vote elections are close. **As mathematician Sam Merrill has argued, reversals are essentially a coin-flip as the popular vote approaches 50% (Merrill 1978).**

## **An EC based on an expanded House**

Now we turn to the last structural variation on the present Electoral College rules that we consider. Ladewig and Jasinski (2008), drawing on ideas in Taagepera (1972), have proposed that the House size should be decennially adjusted to equal the cube root of U.S. population.[[26]](#footnote-26) The cube root of the US population in 2010 was . Using this House size, a congressional seat's average size would be just 458,262 people. [[27]](#footnote-27) As it turns out, this would have insured that, had Congressional size been increased in 2010 according to this formula, even the smallest state would have received at least one congressional seat *based solely on the state population*. How would Electoral College malapportionment and outcome effects change if we increased the size of the House to make the allocation rule in that body more nearly proportional to the population of the state by using the cube root of population to determine House size?

One way in which House size could matter is when a reversal actually happened, so the popular vote winner has lost the election. Under this circumstance, as the House size grows to approximate the population size, eventually the popular vote winner will also win the Electoral College.Recalculating the 2016 election for a House size of (but now excluding the two bonus seats for each senator) yields Donald Trump 380 out of the 676 electors **(56.2%).** Again, as with the current Electoral College and the version that simply omitted the bonus Senate based electors, Trump would still have won the White House **even** if the House size were 676. In this EC rule, he wins by 84 electors. Although this is a larger number of seats, the EC is also larger. **Since Trump won 306 out of 538 (56.8%) electors in 2016, his percentage would slightly decrease under the cube-root rule.**

Trump won a plurality in the majority of states, so thesame Trump victory still occurs if we add in the two seat “federal bonus.” In 2016, for House size to matter required a House size so huge as to be unrealistic: the effects of increasing House size do not affect the outcome in 2016 for any House size under at least 800 (data omitted for space reasons). **In Appendix B, we also include a table that compares the Popular Vote and Electoral College under present apportionment with those using the Cube Root Rule of assembly size for the entire time period of our study. In the years JONATHAN FILL IN the cube root size is larger than the actual assembly size.[[28]](#footnote-28)** In 2000, an increase in the size of the House could have mattered in that, in most House sizes starting above 493, including all of them above 655 (the cube root law value), the popular vote winner, Gore, would also have won the Electoral College, a result previously pointed out by Neubauer and Zeitlin (2003). The years in which a cube root allocation would have changed the outcomes are in **the already reversed 1876 and 1888 elections, as well as in the already reversed 2000 election, thus reducing reversals, but there would have been a change in**  1880, thus increasing the number of reversals. [[29]](#footnote-29) JONATHAN IS **THIS CORRECT? Note that even in the years where the cube root allocation is smaller than the actual EC allocation, this shift would not have changed the number of reversals. JONATHAN IS THIS CORRECT?**

# **DISCUSSION**

Using election results from the period 1868 to 2016, we have constructed **ten** **WHAT IS THE RIGHT NUMBER?** counterfactual variants on the Electoral College for the purpose of comparing the actual EC results with those from various proposed reforms. Presidential elections have seen four occasions in this modern political party era of American history in which outcomes of the popular vote and the EC vote diverge, with two of these coming within the past two decades. **While some may argue that even once is too much, others view the relative small number of reversals as vindication for the founders (Hardaway 1994).** If we look at modifications to the Electoral College such as eliminating the two-state bonus, allowing for a more proportional distribution of electors, or switching to House district based outcomes, we discover that at the best they reduce the number of reversals by one, from four to three and, at worst, with the House district-based outcomes, they actually increase the number of reversals. Moreover, with the partial exception of 2016, the years in which reversals occur under alternative electoral college arrangements are different from those in which they occurred under present EC rules. Thus, changing the rules in the ways identified above seems to serve no useful purpose. It does not eliminate or even substantially reduce the prevalence of reversals; all it does is change the years in which they occur.We also considered the implications of a proposal by Ladewig and Jasinski (2008) to increase the size of the House (and thus of the Electoral College) by picking a House size that was proportional to the cube root of population.  Here we found that the election results in 2016 would have been unchanged, **though the net effects of this rule over the entire time period do reduce the number of reversals by two. JONATHAN IS THIS CORRECT?**

**While certainly far from perfect, the Electoral College has proved a robust institution that usually produces clear victories which match the plurality winner. Moreover, the alternatives to it identified above, with the partial exception of a rather large increase in the size of the House of Representatives, have virtually the same flaw in terms of likelihood of creating a reversal between popular vote winner and EC winner, with some even worse. And** the two-seat bonus afforded on the basis of statehood has been shown in this essay to be generally non-determinative of election outcomes.

Reformers should also acknowledge that the Electoral College “wrong winner” is no less legitimate then any legislation passed by Senators representing a minority of the population, or Supreme Court decisions that largely are immune from public opinion, and somewhat less affected by electoral tides due to the long length of service on the court and the absence of a mandatory age-linked retirement.[[30]](#footnote-30) As if that were not enough reason to be skeptical about the insistence on majoritarianism in the Electoral College, in the process by which the Electoral College would change through Constitutional amendment, the smallest 34 states could ratify a change. Some of those states have state legislatures that are so badly gerrymandered that a majority of voters fails to elect a majority of legislators.

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**Table 1: Electoral Contest Seat Shares using Alternative EC Voting Rules**

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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Year** | **Popular Vote** | **Actual Outcome** | **House Delegation-Weighted** | **State Population-Weighted** | **Proportional Representation** | **Two-Seat Bonus** | | 1868 | 47.3% | 27.5 | 28.4 | 47 | 46 | -0.9 | | 1872 | 44.1% | 18 | 18.5 | 43.7 | 42.3 | -0.5 | | 1876 | 51.5% | **49.9** | 51.2 | 51.4 | 51.2 | -1.3 | | 1880 | 49.9% | 42.3 | 40.3 | **50.9** | **50.4** | 2 | | 1884 | 50.3% | 54.6 | 55.1 | 51.3 | 50.6 | -0.5 | | 1888 | 50.4% | **41.9** | **40.6** | 52.2 | 52.4 | 1.3 | | 1892 | 51.7% | 61 | 63.2 | 52.1 | 52.3 | -2.2 | | 1896 | 47.8% | 38.9 | 36.4 | **50.4** | **50.3** | 2.5 | | 1900 | 46.8% | 34.7 | 33.9 | **50** | **50.3** | 0.8 | | 1904 | 40% | 27.9 | 28.2 | 45.5 | 44.1 | -0.3 | | 1908 | 45.5% | 32.3 | 31.7 | 49.5 | 49.5 | 0.6 | | 1912 | 64.3% | 95.7 | 96.1 | 67.5 | 70.4 | -0.4 | | 1916 | 51.6% | 52 | **49.7** | 56.2 | 57.3 | 2.3 | | 1920 | 36.1% | 23.9 | 24.1 | 41 | 39.2 | -0.2 | | 1924 | 34.8% | 25.6 | 25.7 | 40.6 | 38.8 | -0.1 | | 1928 | 41.2% | 16.4 | 16.3 | 44 | 42.7 | 0.1 | | 1932 | 59.1% | 88.9 | 89.2 | 63.2 | 65.3 | -0.3 | | 1936 | 62.5% | 98.5 | 99.1 | 66 | 68 | -0.6 | | 1940 | 55% | 84.6 | 85.7 | 59.2 | 60.6 | -1.1 | | 1944 | 53.8% | 81.4 | 82.8 | 57.5 | 58.9 | -1.4 | | 1948 | 52.4% | 62.3 | 61.8 | 54 | 55.4 | 0.5 | | 1952 | 44.5% | 16.8 | 16.3 | 45.4 | 43.9 | 0.5 | | 1956 | 42.2% | 13.9 | 13.8 | 43.5 | 42.2 | 0.1 | | 1960 | 50.1% | 59 | 61.6 | 50.3 | 51 | -2.6 | | 1964 | 61.3% | 90.3 | 90.8 | 59.6 | 61.5 | -0.5 | | 1968 | 49.6% | 40.5 | 42.2 | 49.3 | 49.4 | -1.7 | | 1972 | 38.2% | 3.2 | 3 | 37.4 | 35.1 | 0.2 | | 1976 | 51.1% | 55.2 | 57.1 | 51.1 | 50.9 | -1.9 | | 1980 | 44.7% | 9.1 | 8 | 44.7 | 43.3 | 1.1 | | 1984 | 40.8% | 2.4 | 2.1 | 40.5 | 38.7 | 0.3 | | 1988 | 46.1% | 20.8 | 20.6 | 46 | 45.2 | 0.2 | | 1992 | 53.5% | 68.8 | 69.7 | 53.2 | 53.5 | -0.9 | | 1996 | 54.7% | 70.4 | 72.2 | 54.5 | 54.6 | -1.8 | | 2000 | 50.3% | **49.6** | 51.6 | 50 | 50.2 | -2 | | 2004 | 48.8% | 46.8 | 48.6 | 48.4 | 48 | -1.8 | | 2008 | 53.7% | 67.7 | 70.2 | 53.5 | 53.7 | -2.5 | | 2012 | 52% | 61.7 | 63.8 | 51.5 | 50.9 | -2.1 | | 2016 | 51.1% | **43.3** | **43.8** | 50.6 | 50.2 | -0.5 | |

**NOTE: Popular vote values are given as the Democratic candidate’s percent of total Electoral College two-party vote. Reversals from the National Popular Vote are in Bold.**

Appendix XX



1. Even in **the election of 1876, where politicking in congress determined which of several competing slates of electors were to be accorded legitimacy, the outcome of what has been called the “Compromise of 1877” was still recorded as a victory for Rutherford Hayes within the Electoral College. The award to him of 20 disputed electoral college votes gave him a one elector victory in the EC even though he was not the popular vote winner.** [↑](#footnote-ref-1)
2. Maine adapted this rule in advance of the 1972 presidential election, while Nebraska enacted it starting with the 1992 election. A split has occurred once in each of these states. In 2008, Barack Obama won Nebraska's 2nd Congressional District, picking up a Democratic electoral vote in that state for the first time since 1964. In 2016, Donald Trump won Maine's 2nd Congressional District. [↑](#footnote-ref-2)
3. Other than the U.S., there are no presidential democracies currently using an Electoral College to elect their president. Argentina and Bolivia once had electoral colleges (personal communication, Matthew Shugart, February 2018). Many presidential democracies elect have a runoff procedure to select a president in a multi-candidate contest such that, if no candidate receives a certain percentage of the vote, there will be a second round involving two or more of the candidates with the most votes (Birch, 2003). All parliamentary democracies choose their executive via an indirect form of election. While the prime minister will normally need to command majority support in the national parliament, a prime minister can sometimes govern with only minority support. Minority governments can be quite common in some countries, e.g., Denmark. [↑](#footnote-ref-3)
4. Both sides are right (**Longley and Peirce 1999: 153**). However, when we look at the likelihood that an individual voter in any given state will be pivotal (e.g., using game theoretic indices of pivotality such as the *Banzhaf index* (Banzhaf, 1965) or the *Shapley-Shubik* value (Shapley and Shubik, 1954; see also Shapley and Mann, 1962) as far back as Owen (1975) it has been recognized that these two effects -- greater large state pivotality and small state overrepresentation relative to population—tend in opposite directions, making the *a priori* “power” scores of individual votes to influence EC outcomes much more similar across states than one might think (see Gelman, Silver, and Edlin, 2012; cf. discussion in Grofman and Feld, 2005; Stromberg, 2008). [↑](#footnote-ref-4)
5. In nearly every poll in the Roper Center for Public Opinion Research iPOLL data bank, the public is split about eliminating the Electoral Colleges, especially along partisan lines, albeit with majorities favoring a change to popular vote. After the bitterly fought 2000 election, 41% of Republicans would have amended the Constitution while 75% of Democratic respondents would have liked to see a change, with an overall support for change of 59% and with 3% of those polled with no opinion (Cable News Network, USA Today. Methodology: Conducted by Gallup Organization, December 15 - December 17, 2000. [USGALLUP.00DC15.R28]). After the even more bitterly fought 2016 election, Gallup asked again about the Electoral College, this time 49% choose the option to amend the Constitution (Gallup Poll 2016 [USGALLUP.120216.R01]. November 28-29, 2016). Again, there was a strong partisan split. Republican support of the current system significantly increased after the election. Gallup found that only 19% of Republican or leaning Republicans favor a system where the winner is the candidate that wins the popular vote (compared to 81% of their Democratic counterparts).In 2011, the numbers were 54% and 69%, respectably, who favored amended the Electoral College to a popular vote system. (http://www.gallup.com/poll/198917/americans-support-electoral-college-rises-sharply.aspx) Aldrich, Reifler and Munger (2014) have modeled the circumstances where we might expect changes in preferences about the desirability of the Electoral College. [↑](#footnote-ref-5)
6. See also Grofman and Feld (2005). [↑](#footnote-ref-6)
7. Google trends reveals spikes in the popularity of searches of the term “Electoral College” in the months before a presidential election, **search numbers** quickly diminish to near zero shortly after the election. **Some of this data is** displayed in Figure XX1 in Appendix XX.  [↑](#footnote-ref-7)
8. “The people know the candidates of President and Vice President; rarely do they know the identity of the electors for whom they actually vote. Such ‘go-betweens’ are like the appendix in the human body. While it does no good and ordinarily causes no trouble, it continually exposes the body to the danger of political peritonitis.” – Henry Cabot Lodge, as cited in *The Electoral College Primer*,**AUTHOR AND YEAR** p. 110. [↑](#footnote-ref-8)
9. For issues of problematicity of the meaning of “popular vote winner” see Gaines (2001). [↑](#footnote-ref-9)
10. **The last seven elections have been decided by under five percentage points.** [↑](#footnote-ref-10)
11. The Electoral College often appears to give the President-elect a landslide victory even when the Popular vote is close. This is a result of the winner-take-all rules that translate even small pluralities into 100% of the state’s electoral slate. By definition, Electoral College victories are always over 50%, while popular votes have been as low as 38% (in 1860). No president has won with a smaller percentage of the Electoral College then popular votes. [↑](#footnote-ref-11)
12. The District of Columbia received three seats **after the passage of** the Twenty-Third Amendment in 1961. [↑](#footnote-ref-12)
13. **Of course we recognize that candidates will adapt strategies to the rules in use, but we still believe it a worthwhile exercise to examine how the previous voting patterns would have affected outcomes under different electoral college formulae.** [↑](#footnote-ref-13)
14. **In reading that literature and in presentation of our results at conferences and colloquia it is clear that many political scientists hold the popular vote principle to be sacrosanct. Nonetheless it is useful to remind readers** that only one state voted for the popular election of the president during the Constitutional Convention while nine voted against. Popular election of the president was again brought up in Congress as a proposed amendment in 1816, and since then has been proposed in Congress at least 100 times, every time failing. [↑](#footnote-ref-14)
15. That is, nearly 14% of the vote went to candidates who did not finish in the top two. If we had a good way of determining the preferences of voters for these other candidates had only the two mainstream candidates been on the ballot, we might find that Hubert Humphrey might have led in the popular vote. George Wallace’s independent campaign drew support primarily from the south, capturing 46 electoral votes from five southern states. Even had Humphrey won all 9.9 million of Wallace’s voters and the 46 EC votes that accompanied them, he still would have lost in the Electoral College. [↑](#footnote-ref-15)
16. **Speaking about the third-party candidacy of Ross Perot in 1992, Bill Clinton strategist James Carville said it was “the single most expensive act of masturbation in the history of the world.”** As quoted in the *Los Angeles Times*: <http://articles.latimes.com/2012/apr/01/entertainment/la-ca-second-look-20120401> We thank Joshua Zingher for this reference on twitter. [↑](#footnote-ref-16)
17. In the same tweet in which President Trump said that the Electoral College was "genius", he also claimed that he would have won the popular vote if, rather than the present EC system, who won the popular vote decided who got elected president. Under that rule for deciding outcomes he said he would have campaigned in populous states that were being conceded to the Democrats under the present winner-take-all feature of the Electoral College.  **But, of course, if he had changed his strategy so, too, would his Democratic opponent have been able to do a better job of motivating turnout among her supporters.** [↑](#footnote-ref-17)
18. S.J. Res 28 1979; National Popular Vote Bill --enacted in 11 states. [↑](#footnote-ref-18)
19. By some estimates, over 700 attempts to change or abolish the Electoral College have been advocated or proposed (Hardway 1994). **JONATHAN ARE THESE REALLY SUPPOSED TO BE 700 DISTINCT PROPOSALS OR DO SOME OF THE SAME IDEAS COME UP AGAIN AND AGAIN?** [↑](#footnote-ref-19)
20. **For states that enter the Union after a Census has been taken but are still allocated Electoral College seats, we take the population in the subsequent Census.** [↑](#footnote-ref-20)
21. **T**he US Census has used this method since 1940. For more details see 2 U.S.C § 2a (1941), http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title2-section2a&num=0&edition=prelim [↑](#footnote-ref-21)
22. We recognize that there are many different formulas that can be used to allocate seats, and that the differences might, in the words of Gallagher (1991: 33), **might** “produce significantly different seat allocations for a given distribution of votes…” Similarly, Gaines and Jenkins (2001 **page cited needed** ) observe that “When the direct vote is particularly close, choice of apportionment method might be determinative.” For the purposes of this essay, we only look at the alternative results based on the apportionment **currently** used by the US Census for determining Electoral College seats. Looking at apportionment we see that differences among the six main forms of proportional allocation tend to affect only a handful of states. Gallagher observes that “each PR method minimizes disproportionality according to its own principles”. Here we use the Gallagher (1991) index of disproportionality, which is the one appropriate for the present rule. JONATHAN PLEASE DOUBLECHECK THIS STATEMENT [↑](#footnote-ref-22)
23. As noted previously, this was an election that was decided not by the votes of the people but instead by a deal between the Democratic and Republican candidates that involved the federal government ending Reconstruction in the South. [↑](#footnote-ref-23)
24. **Blatant partisan gerrymandering was made more likely by the Supreme Court’s consistent refusal to reign in this practice. (McGann et al 2016).** [↑](#footnote-ref-24)
25. There is an especially large difference when allocating by Congressional District in 2012, due in no small part by the aggressive House gerrymandering that took place in the census before the election, mostly to the benefit of Republicans. (McGann et al 2016). Since benefit from incumbency advantage reduces the vote shares of challengers, *ceteris paribus*, once incumbents are in place **whose** election is in part or largely due to gerrymandering, apparent partisan bias in subsequent elections may appear lower (Theodore Arrington, personal communication, February, 2017). [↑](#footnote-ref-25)
26. Taagepera (1972) argued that, for optimal communication purposes between representatives and those they represent, an assembly size should be the cube root of the polity’s population. He also demonstrated that this model did a rather good job in explaining actual assembly size in the world’s democracies, with the U.S. in the last 100 or so years being one of the most notable exceptions. [↑](#footnote-ref-26)
27. In addition to the work of Ladewig and Jasinski (2008),the effects on presidential outcomes under the EC of increasing/varying the size of the House have been studied by other authors (e.g., Neubauer and Zeitlin, 2003; Barthélémy, Martin and Piggins, 2014; Miller, 2014). Here we limit ourselves to consideration of results in 2016 under the cube-root proposal. [↑](#footnote-ref-27)
28. In that Appendix, we also provide comparisons to cube root results for the Electoral College without the two-seat bonus, and the Whole-Number and Fractional Proportionality rules, both with and without two-seat bonus. The district based measures cannot be calculated since we cannot know the partisan composition of a House Delegation that has never existed, and the Popular Vote rules would be the same regardless of the House size. **JONATHAN I AM NOT SURE THAT THIS additional analysis is AT ALL NECESSARY** [↑](#footnote-ref-28)
29. There might have been an effect in 1876 but that is hard to assess.   [↑](#footnote-ref-29)
30. Reformers who demand majoritarian winners as normative doctrine of democracy should look no further than the multi-party coalition governments **common in PR systems.** Leaders emerge through post-election negotiation, and their party may not even receive a plurality of the votes, t**hough the largest party normally gets first chance to put together a winning majority coalition** [↑](#footnote-ref-30)