

Fuzzy Math:

Wrong Way Reforms for Allocating Electoral College Votes

(Problems with the Whole Number Proportional and Congressional District Systems)

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SUMMARY

This paper analyzes two of the three major options available to state leaders interested in taking action to reform how their state allocates its Electoral College votes: the whole number proportional and congressional district systems. The report evaluates them on the basis of whether they promote majority rule, make elections more nationally competitive, reduce incentives for partisan machinations, and make all votes count equally. We use vote returns from a number of previous elections to analyze what the outcomes would have been if Electoral College votes had been allocated according to the whole number proportional and the congressional district systems.

Our analysis reveals that both of these methods fail to meet our criteria. Neither reform option promotes majority rule, greater competitiveness or voter equality. Pursued at a state level, both reforms dramatically increase incentives for partisan machinations. If done nationally, the congressional district system has a sharp partisan tilt toward the Republican Party, while the whole number proportional system sharply increases the odds of contingent elections (the selection of president by Congress).

For states interested in exercising their responsibility under the Constitution to choose a method of allocating electoral votes that best serves their state's interest and that of the nation's interest, both alternatives fall far short of the National Popular Vote plan, which is under consideration in a number of states.

Report Outline

1. Introduction
2. Whole Number Proportional System
3. Congressional District System
4. Voter Inequality in Congressional District and WNP Systems
5. Increased Partisan Calculations if Implemented State-by-State
6. Conclusion
7. Acknowledgment

1. Introduction

The Constitution establishes the office of the presidential elector and allots each state a number of electors equal to its total number of seats in Congress – one for each U.S. House Member and one for each U.S. Senator. It also gives states plenary power in determining the manner in which to choose their electors and distribute their electoral votes among presidential candidates.

Early in American history, many states chose not to hold popular elections for president, and over the years have adopted a variety of methods for choosing their electors. The winner-take-all or “unit rule” system, in which the presidential candidate winning the plurality of votes in a state takes all its electors, eventually became the norm.

This report examines two of the three major alternatives to the unit rule that states have considered in recent years, which can be enacted at the state level without a federal constitutional amendment or involvement of the U.S. Congress:

1. The **whole number proportional system**, in which a state’s Electoral College votes are divided proportionally among candidates, rounded off to the nearest whole number, according to the percentage of votes received in the state by each presidential slate.
2. The **congressional district system**, in which one elector is elected from each U.S. House district and two electors, corresponding to Senate seats, are elected statewide. This method is currently used in Maine and Nebraska, while the rest of country follows the unit rule approach.

We evaluated these two alternative systems through the lens of five criteria:

1. **Majority rule:** The ideal electoral system should accurately reflect voter intent as measured by the national popular vote, ensuring that any candidate who wins a majority of votes nationwide is elected president.

Analysis: Neither the whole number proportional nor the congressional district system guarantees accurate reflection of the will of the majority as measured by the national popular vote. Done in all states or even just a handful of states, the whole number proportional system increases the odds of elections being decided in the U.S. Congress rather than by voters. The congressional district system would have overturned the national popular vote winner in 2000 and 1976.

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- 2. Competition for votes:** Competitive choice is a highly desirable characteristic because it means that voters have an incentive to vote since campaigns pay attention to their concerns in all parts of the country.

Analysis: Neither system makes presidential elections competitive on a national basis. Both have perverse consequences where voters will gain widely differing attention based on their state's population and competitiveness.

- 3. Partisan consequences:** Reform proposals that transparently benefit one party over another raise troubling questions about how reform will be pursued and how voters will evaluate it.

Analysis: Done state-by-state, both approaches are highly prone to partisan calculations, as they award electoral votes to the party that finishes second and, under the current system, wins no electoral votes in presidential races. Done nationally, the congressional district system has a large bias for the Republican Party because the Democratic vote is generally more concentrated.

- 4. Voter equality:** Voters for our one national office should have equal voting power.

Analysis: Neither system achieves voter equality. The whole number proportional system in fact increases inequality.

- 5. Keeping elections in the hands of voters:** The U.S. Constitution stipulates that if no candidate wins an absolute majority of Electoral College votes, then the U.S. House will elect the president (with each state's delegation having a total of one vote, and the winner needing support from a majority of states) and the U.S. Senate will elect the vice-president. We prefer a system in which the presidency is decided directly on the basis of popular votes cast.

Analysis: The congressional district system has little impact on whether Congress will pick the president, but the whole number proportional system dramatically increases these odds, particularly if done nationally.

2. Whole Number Proportional System

The whole number proportional approach divides a state's electoral votes among presidential candidates on the basis of the share of the statewide popular vote won by each. The share is rounded off to the nearest whole number in order to preserve the indivisibility of a single electoral vote. This rounding-off rule is necessary in order to maintain the office of the presidential elector established under the federal constitution.

The rounding-off rule implies that under the whole number proportional (or WNP) system, a given number of electoral votes in a state will correspond to a range of percentage share of the popular vote. For example, if a state has three electoral votes, a 60 percent popular vote share will translate into 1.8 electoral votes and a 75 percent share into 2.25 electoral votes, but both will round off to two electoral votes. As long as a candidate's popular vote share lies within a certain range, he or she will win exactly two electoral votes.

The formula for calculating the breakpoint (upper limit of the range of popular vote percentages corresponding to a given number of electoral votes) is the following, with “T” as the breakpoint, “x” as the number of electoral vote(s) corresponding to the breakpoint, and “n” as the total number of electoral votes.

$$T = (x + 0.5) / n$$

For example, for a state with a total of three electoral votes, the breakpoint between one and two electoral votes is:

$$T = (1 + 0.5) / 3 = 0.5, \text{ or } 50\%.$$

The breakpoint between two and three electoral votes is:

$$T = (2 + 0.5) / 3 = 0.833, \text{ or } 83.3\%.$$

Therefore, if a candidate’s vote share is more than 50 percent, but less than or equal to 83.3 percent, he or she will win two electoral votes. If, on the other hand, it is more than 83.3 percent he or she will win all three electoral votes. As will be shown below, the need to round off the vote share has highly undesirable and counter-intuitive consequences.

2.1 Close elections reveal differences between systems

Almost any electoral system would produce the same winner in a landslide election; however, close elections illustrate differences among various systems and help analyze their strengths and weaknesses. This report considers three of the closest elections held in the last century – 1960, 1968, and 2000:

1. John Kennedy defeated Richard Nixon in the 1960 general elections by a margin of 112,827 votes nationwide, or a percentage difference of 0.16 percent of the total votes cast.
2. In the election of 1968, Nixon emerged ahead of Hubert Humphrey by a vote margin of 511,944 votes, or 0.7 percent.
3. In the 2000 elections George Bush won despite trailing Al Gore in the popular vote by 543,816 or 0.52 percent.

The popular votes won by each candidate in these elections are used below in determining the allocation of electoral votes under the whole number proportional system (see Tables 1 and 4).

2.2 WNP distributes Electoral College votes more equitably

The following table summarizes the raw number and percentage share of popular and electoral votes for candidates in the 1960, 1968, and 2000 elections. It shows both the actual distribution of Electoral College votes (under the unit rule system) as well as what the distribution would have been under the whole number proportional system if applied in all states.

Table 1. Electoral Vote Distribution under WNP System

Year	1960			1968			2000		
Candidate	Kennedy	Nixon	Others*	Nixon	Humphrey	Others*	Bush	Gore	Nader
Pop. Vote	34,220,984	34,108,157	503,341	31,783,783	31,271,839	10,144,376	50,460,110	51,003,926	2,883,105
% Total	49.72%	49.55%	0.73%	43.42%	42.72%	13.53%	47.87%	48.38%	2.73%
Actual Distribution of Electoral College Votes (Unit Rule)									
EC Vote	303	219	15	301	191	46	271	266**	0
% Total	56.42%	40.78%	2.79%	55.95%	35.50%	8.55%	50.37%	49.44%	0
Distribution of Electoral College Votes under WNP System									
EC Vote	270	261	6	235	225	78	262	262	13
% Total	50.28%	48.60%	1.12%	43.68%	41.82%	14.50%	48.7%	48.7%	2.42%

* Other candidates and write-ins, collectively.

** In D.C., one Gore elector abstained from voting.

In the 1960 election, Kennedy had a 0.17 percent lead over Nixon in popular vote share. Under the unit rule system, this translated into a 15.64 percent lead in the Electoral College. Using the WNP system, on the other hand, Kennedy would have led by 1.68 percent of the total votes in the Electoral College.

In the 1968 election, Nixon won by a margin of 0.7 percent of popular votes, but led Humphrey by a 20.95 percent vote share in the Electoral College. Under the WNP system, Nixon's Electoral College lead would have been 1.86 percent. In the 2000 election, Bush lagged behind Gore by 0.52 percent in the popular vote, but had a lead of 0.93 percent in the Electoral College. Under the WNP system, on the other hand, Gore and Bush would have tied at 262 Electoral College votes each.

Consequently, in each of these three cases the WNP system fares better than the current unit rule in terms of achieving a closer approximation of the popular vote share in the Electoral College. It distributes electoral votes more equitably among candidates, reducing the inflated victory margins created by the unit rule system.

However, the following discussion will demonstrate how, even though the WNP system brings Electoral College vote distribution closer to the distribution of popular votes, it does not ensure that an election's outcome will always be in keeping with the popular mandate. This is a fundamental flaw, as presidential elections are not primarily about fair representation of electors: they are about a fair method of electing a president.

2.3 WNP increases possibility of contingent elections

The Constitution states that in the rare event of an election yielding no majority winner in the Electoral College (threshold of 270 votes), the House of Representatives will vote to elect the president. Only the top three popular vote winners will remain in contention, and each state delegation, rather than individual representatives, will cast one vote. The Senate selects the vice-president, who will become president if no candidate can win support from an absolute majority of U.S. House state delegations.

Under the WNP system in all states, Kennedy would have barely won in 1960 with 270 Electoral College votes. In 1968, Nixon's vote share would have been 235 with Humphrey following at 225, while in 2000 Bush and Gore would have tied at 262 votes each. In other words, only the 1960 election would have proceeded normally under the WNP system, while both the 1968 and the 2000 elections would likely have thrown up a contingent outcome and would have required resolution by Congress.

If the WNP system were in place, contingent elections might have occurred in several other 20th century elections that we do not analyze – for instance, victories by Woodrow Wilson in 1912, Harry Truman in 1948, and Bill Clinton in 1992 and possibly 1996.

With such outcomes, candidates would be likely to attempt to avoid a vote in Congress by striking deals that almost certainly would be seen suspiciously by voters. For example, in 1968 the independent candidate George Wallace, with a strong support base in the South, would have been in a position to influence the outcome before the December 1969 meeting of the electors, as he would have been able to bargain with Richard Nixon or Hubert Humphrey about instructing his electors to support one of those candidates. If such a deal had fallen through, Congress would have likely elected Humphrey despite Nixon's national popular victory because the Democrats held a majority of state delegations at the time.

2.4 WNP does not ensure accurate reflection of the national popular mandate

Regardless of the eventual outcome in 1968 and 2000 under the WNP system, the fact that these complications would have arisen despite a clear winner in terms of the national popular vote reveals a major weakness of the system. By allocating votes more evenly between candidates, it makes landslide Electoral College wins highly unlikely. But, by the same token, it increases the possibility of a contingent outcome.

Since the WNP system achieves a more equitable allocation of Electoral College votes at the cost of making contingent elections much more likely, it ultimately fails in the objective of always reflecting the national popular mandate.

Some suggest that this weakness can be remedied by awarding Electoral College votes to the top two candidates only. In 2000, this rule would have eliminated Nader's electoral votes and Gore would have ended up with 270 and Bush with 268 votes, thus barely avoiding a contingent outcome. If applied to 1968, however, this would have had little impact on the result, as Wallace was in the top two in several southern states.

WNP does not always ensure outcomes in keeping with the national popular vote because the number of votes in the Electoral College is fixed at 538, which implies an average of 11 electoral votes per state. About three quarters (34 in the 2004 election) of the states have a below-average number of electoral votes.

The smaller the number of Electoral College votes a state possesses, the larger the percentage share of popular votes corresponding to one electoral vote under the whole number proportional approach. In an average-sized state with 11 electoral votes, one electoral vote corresponds to a 9.09 percent share of the state's popular vote, whereas in states with only three electoral votes, one electoral vote corresponds to a 33.3 percent share of the statewide popular vote.

Except for occasional landslides (e.g., Reagan's 60 percent win in 1984, Nixon's 61 percent win in 1972 and Johnson's 61 percent in 1964), most elections are decided by only a few percentage points nationally. A system that requires a 33 percent share or a 9 percent share of the popular vote in a state in order to win one electoral vote is unresponsive to the small-percentage vote shifts that are typically encountered in non-landslide elections.

2.5 Understanding electoral competitiveness

The competitiveness of an election depends on the difference in percentage share of votes between the winning and the losing parties – the narrower the gap, the more competitive the election. Intense campaign activity in a presidential race may increase a candidate’s percentage of the vote by a few percentage points, but any state where such an increase is unlikely to affect the outcome is not competitive.

2.6 Competitiveness under the unit rule system

Under the unit rule system used in most states today, the competitiveness of a state is measured in terms of FairVote’s definition of state partisanship, i.e. the degree to which a state’s division of votes between the two major parties is likely to deviate from the national partisan division.

FairVote measures partisanship on a scale of 0-100 percent from the perspective of the Republican Party, meaning that in a state where no votes are cast for the Republican candidate in a nationally even year would have a partisanship of 0 percent, and a state where all votes are cast for the Republican candidate would have a partisanship of 100 percent. States with a partisanship of 47.5-52.5 percent are considered competitive under the unit rule, and the farther a state falls outside this range, the lower its competitiveness.

2.7 Competitiveness under WNP

Under the whole number proportional system, the definition and measure of competitiveness would change. The competitiveness of a state would depend on the difference between the actual percentage vote share of a candidate and the nearest breakpoint (calculated as shown above). Candidates can swing only small vote percentages in their favor; therefore, under the whole number proportional approach, states where the actual vote percentage for a candidate lies within, say, 2.5 percentage points of a breakpoint are assumed to be competitive.

The following table on page 8 lists the competitive states in the 1960, 1968, and 2000 elections, as well as the states that would hypothetically be competitive under the WNP system for the same years. For the WNP system, the swing status of a state is determined on the basis of whether either of the *top two* presidential candidates’ vote shares was within 2.5 percentage points of a breakpoint.

A new list of states would attain battleground status under the WNP system, but the overall effect would be the same as under the current unit rule system, i.e. a dichotomy between competitive and non-competitive states. The WNP system would replace the unit rule scenario with a “winner-take-one-more” scenario, in which campaign strategies would revolve around winning a single extra electoral vote here and there from a small group of battleground states.

These new battlegrounds would be due to one of the parties’ vote share being near a breakpoint; however, this could just as easily be in a state with 68-32 percent partisanship divide as in a 50-50 partisanship state. Indeed, a state with 50-50 partisanship (logically the most competitive) but having an even number of electoral votes would be least likely to gain attention because states with even number of electoral votes do not have a breakpoint at 50 percent.

Table 2. Battleground States under Unit Rule & WNP System

	1960		1968		2000	
	WTA*	WNP	WTA*	WNP	WTA*	WNP
1	Arkansas	Alaska	Alaska	California	Florida	California
2	California	Arkansas	Arizona	Colorado	Iowa	Colorado
3	Delaware	California	California	Delaware	Maine	Florida
4	Florida	Connecticut	Delaware	Florida	Michigan	Georgia
5	Hawaii	Delaware	Georgia	Illinois	Minnesota	Illinois
6	Illinois	Georgia	Illinois	Kansas	Missouri	Iowa
7	Michigan	Hawaii	Maryland	Kentucky	Nevada	Kentucky
8	Minnesota	Illinois	Missouri	Maryland	New Hampshire	Michigan
9	Montana	Iowa	New Jersey	Michigan	New Mexico	Missouri
10	Montana	Kentucky	Ohio	Minnesota	Ohio	New Jersey
11	Nevada	Massachusetts	Pennsylvania	Mississippi	Oregon	New Mexico
12	New Jersey	Michigan	Texas	Missouri	Pennsylvania	New York
	1960		1968		2000	
	WTA*	WNP	WTA*	WNP	WTA*	WNP
13	New Mexico	Minnesota	Washington	Nevada	Tennessee	Ohio
14	New York	Missouri	Wisconsin	New Jersey	Washington	Oregon
15	North Carolina	Nevada		New York	Wisconsin	South Carolina
16	Pennsylvania	New York		Ohio		Tennessee
17	South Carolina	North Carolina		Pennsylvania		Texas
18	Texas	Ohio		Texas		Utah
19	Washington	Pennsylvania		Utah		Wisconsin
20	Wisconsin	Texas		Virginia		
21		Virginia		West Virginia		
22		Washington		Wisconsin		
23		Wisconsin				

* Winner-take-all (unit rule)

2.8 WNP does not make presidential elections competitive nationwide

The key to understanding the operation of the whole number proportional approach is that a given number of electoral votes in a state corresponds to a range of percentage share of the popular vote, and a candidate will win the same number of electoral votes in a state regardless of where his/her popular vote share lies within the corresponding range. For example, in states with three electoral votes, a candidate will win two and only two votes if his or her popular vote share is more than 50 percent and less than 83.34 percent.

The popular vote range corresponding to electoral votes varies from state to state, depending on a state’s total number of electoral votes. However, for all but the largest states (> 14 electoral votes) the ranges are quite wide, and even the largest population states are unlikely to have campaign activity result in shifting more than one electoral vote.

Most elections are won by narrow margins, and it is a steep challenge for candidates to increase their vote share in a state beyond small percentage points. In the battleground states under the WNP system, a candidate might win one, and only one, more electoral vote. In all the other states, the percentage jump in popular vote share required in order to increase a candidate’s tally by a single electoral vote will be so large as to effectively place these states beyond the reach of that candidate and, hence, make them non-competitive.

Furthermore, candidates may cede campaign activity in the biggest population states on this list of potentially competitive states, as the cost of shifting 2.5 percent of the vote in a state like

California would be much more than the cost of gaining 2.5 percent in a smaller population state. The big winners, then, would be relatively small population states that happen to be near a breakpoint to win one more electoral vote. Big population states that theoretically could swing one more electoral vote still may end up being ignored by the candidates.

The whole number proportional system is prone to counterintuitive results due to its lack of responsiveness to small shifts in popular vote share. Consider small states with an even number of Electoral College votes. In a state like Hawaii with four electoral votes, any shift in popular vote share within the range of 37.5-62.5 percent would have the exact same result: an even division of electoral votes.

In other words, even if a party increases its popular vote share from, say, 40 percent to 60 percent, its share of electoral votes will not change and will in fact be the same as that of the other party, making the state completely irrelevant from a campaign perspective. If one candidate were ahead in Hawaii by 56 percent to 44 percent in the polls, the state definitely would be ignored. Even if the trailing candidate's backers remarkably turned the result around so that they won the state 51 percent to 49 percent, it would have no impact on each candidate winning two electoral votes.

3. Congressional District System

Under the congressional district system of allocating electoral votes, each U.S. House district in a state would elect one presidential elector, while the statewide winner would take the two Senate electors. Using the same criteria as above to evaluate the desirability of this alternative allocation system, we find that the congressional district approach neither reflects the popular mandate, nor increases the competitiveness of presidential elections.

3.1 Three close elections and one landslide victory

The following table summarizes the results of the presidential elections of 1968, 1972, 1976, and 2000. It lists the actual votes won by the candidates as well as the hypothetical distribution of Electoral College votes under the congressional district system.

Table 3. Electoral Vote Distribution under Congressional District System

Year	1968			1972		1976		2000	
Candidate	Nixon	Humphrey	Wallace	Nixon	McGovern	Ford	Carter	Bush	Gore
Pop. Vote	31,783,783	31,271,839	10,144,376	47,168,710	29,173,222	39,148,634	40,831,881	504,601,110	51,003,926
% Total	43.42%	42.72%	13.53%	60.67%	37.52%	48.02%	50.08%	47.87%	48.38%
Electoral Vote Distribution (Unit Rule)									
EC Vote	301	191	46	520*	17	240**	297	271	266***
% Total	55.95%	35.50%	8.55%	96.65%	3.16%	44.8%	55.2%	50.37%	49.44%
Electoral Vote Distribution (Congressional District System)									
EC Vote	292	183	56	478	60	268	270	288	250
House-Senate-DC	228-64	154-26-3	46-10	88.84%	11.15%	214-54	221-46-3	228-60	207-40-3
% Total	53.7%	34.4%	10.4%	88.85%	11.15%	49.8%	50.2%	53.53%	46.47%

*1972: In Virginia, one Nixon elector cast his vote for John Hospers (President) and Theodora Nathan (Vice-President).

**1976: In Washington State, one Ford elector cast his vote for Ronald Reagan (President) and Robert Dole (Vice-President).

***2000: In D.C., one Gore elector abstained from voting.

3.2 Congressional district system can distort the national popular vote

The chart shows how the congressional district system can greatly distort the national popular vote. In the 1968 elections, for example, Richard Nixon led Hubert Humphrey by 0.7 percent in the popular vote share, but had a 20.95 percent lead in the Electoral College. Using the congressional district system, Nixon's Electoral College lead would have been 19.3 percent.

In 1972, Nixon won a landslide victory over George McGovern. His popular vote lead was 23.15 percent, which translated into an Electoral College lead of 93.5 percent. Under the congressional district system, his Electoral College lead would have been at 77.7 percent – smaller than with the unit rule allocation, but still considerably inflated compared to the popular vote difference.

In the election of 1976, Jimmy Carter led Gerald Ford by 2.1 percent in the popular vote, and 10.4 percent in the Electoral College; but under the congressional district system, his Electoral College majority would have been 0.4 percent. Ford would have fallen just two votes short of making the election contingent, and he indeed would have won without the three electoral votes Carter won in the District of Columbia due to the 23rd amendment to the Constitution.

In 2000, again, George Bush lost the popular vote to Al Gore by 0.52 percent, but led in the Electoral College by 0.93 percent. With the congressional district method of allocation, Bush's share would have exceeded Gore's by as much as 7.06 percent.

Clearly, the congressional district system does not achieve equitable distribution of electoral votes and, hence, fails to accurately reflect the national popular vote share. It displays the same sort of distortion from which the current unit rule system suffers, inflating Electoral College victory margins and allowing candidates trailing in the popular vote to win the electoral vote and, hence, the presidency. Unlike the statewide unit rule, however, there is a general bias toward the Republican Party because the Democratic vote is more concentrated within states. The fact that Democrats can win a majority of the U.S. House of Representatives does not change this bias; rather, it simply shows that for Democrats to win control of the U.S. House, a large number of Democratic congressional candidates must win in Republican-leaning districts.

The inability of the congressional district approach to accurately reflect the national popular vote in the cases analyzed here is not mere coincidence. It is, by design, susceptible to three sources of error that lead to outcomes deviating from the national popular vote.

3.3 Differences in district-wise concentration of partisan support

First, congressional districts are overall skewed in favor of Republicans. This is due almost entirely to the fact that the Democratic vote is relatively concentrated in those geographic areas where Democrats are in the majority, while Republican support is more evenly spread across non-Democratic strongholds. For example, Bill Clinton won at least 26 percent of the vote in every congressional district in the nation while winning 49 percent overall in 1996, while George Bush won only single digits in some districts while winning 51 percent of the vote in 2004.

This skew partially explains why Nixon won 52.9 percent of the congressional districts in 1968 with 43.4 percent of the national popular vote, while Humphrey won just 36.2 percent of congressional districts with 42.7 percent of the national popular vote. Similarly, Bush carried 228 of the 435 congressional districts in 2000, whereas Gore carried only 207 districts in 2000 despite the fact that Gore received 543,816 more popular votes nationwide than Bush. In other

words, the bias in congressional district wins is strongly pronounced in favor of the Republican candidate.

The Republican geographical bias in congressional districts became even more pronounced after the 2000 census. The congressional district boundaries that were in place at the time of the 2000 presidential election were, of course, the ones that were adopted in the early 1990s using data from the 1990 federal census. When the results of the 2000 presidential election are viewed from the perspective of the up-to-date congressional districts based on data from the 2000 federal census (i.e., those first used in the 2002 congressional elections), George W. Bush wins 241 (55 percent) of the 435 congressional districts, compared to Al Gore's 194 districts. In the 2004 elections, Democrat John Kerry carried Michigan, winning 51 percent of the popular vote, but he carried only five of 15 congressional districts. If Michigan used the congressional district system, Republicans would have taken ten of the state's seventeen electoral votes.

This greater skew for Republicans after the 2002 elections in fact is more along the lines of historical patterns. In 1972, for example, Richard Nixon ran ahead of his national average in 285 districts and behind his national average in only 150 districts – meaning that if that contest against George McGovern had been 50-50 percent nationally, Nixon would have won 135 more congressional districts.

3.4 Statewide unit rule for Senate electoral votes

The second systemic weakness with congressional district allocation is that it retains the existing statewide unit rule approach for the votes corresponding to U.S. Senate seats as well as D.C.'s electoral votes, i.e. 103 out of 538. Insofar as it resembles the current unit rule system, it is susceptible to the same set of the problems as the latter. Thus, by carrying ten more states than Al Gore in 2000, George Bush would have won 20 more of the "Senate seat" electoral votes despite losing the national vote.

3.5 District-wise allocation of votes for nationwide elections

The third and most fundamental reason why the congressional district approach does not accurately reflect the nationwide popular vote is simply that it is a unit rule *district* system. At the end of the day, the congressional district approach would merely replace one kind of district (the existing state boundaries) with another (the congressional district boundaries) for 435 of the 538 presidential electors.

Whenever a single political office is filled by an electoral process in which the unit rule is applied to geographic areas that are smaller than the entire jurisdiction encompassed by the office, there can be significant differences in the political value of individual votes that may or may not be corrected by distortions in other states.

The inequality arises because some geographic areas will be battlegrounds, whereas others will not. Inevitably, candidates will compete vigorously for votes in the closely divided areas, while ignoring the voters in non-competitive areas. In addition, there is always the possibility, in any district system, of electing a candidate who did not receive the most popular votes in the jurisdiction as a whole.

3.6 Congressional district system would not make elections more competitive nationally nor in many states

Under the congressional district system, competitiveness can be measured in terms of district-wise partisanship. The greater the number of competitive or swing districts, the greater would be the overall competitiveness of the election.

But according to 2000 vote returns when the national vote was very close, the presidential vote was within two percent in only 6.7 percent of the congressional districts (29 out of 435). In 10.8 percent of the congressional districts (47 out of 435), the difference in the presidential vote was 3 percent or less, while in 12.6 percent (55 out of 435), the difference was 4 percent or less. In the 2004 elections, only three of California's fifty-three districts were won by less than 3%. In short, the vast majority of congressional districts are non-competitive in presidential elections. Only the most aggressive gerrymandering to foster competitiveness – and ignoring other criteria like compactness and the Voting Rights Act – would change that fact. (See Table 4.)

3.7 Congressional district system increases incentive for partisan gerrymandering

Gerrymandering is one cause for the lack of competitiveness of congressional districts. If votes in presidential elections were allocated on the basis of congressional districts, then the incentive for politically motivated gerrymandering in states would be even greater, resulting in elections that could end up being even less competitive than under the current unit rule approach. Majority parties might try to stretch their advantage farther, putting the interests of their party's presidential candidate over the interests of particular incumbents, and trying to create districts that generally give their party 55 percent to 58 percent in districts – comfortable, but not so comfortable that their party's votes are wasted.

4. Voter Inequality in Congressional District and WNP Systems

Both the congressional district approach and proportional allocation approach maintain three different inequalities that are part of the current system, namely, (a) inequalities resulting from the fact that each state has two statewide (senatorial) presidential electors regardless of its population; (b) inequalities stemming from the decennial apportionment of the membership of the House of Representatives among the states; (c) inequalities caused by differences in voter turnout due to the level of civic participation in the state or district or the state's rate of population growth during a decade.

4.1 All states, regardless of size, have two Senatorial electoral votes

A vote cast in a large state for the two statewide (senatorial) presidential electors has less weight than a vote cast in a small state for its two senatorial electors. For example, in the 2000 presidential election, Wyoming had two statewide presidential electors (with a 1990 population of 453,588), whereas California had two statewide presidential electors (with a 1990 population of 29,760,021).

4.2 Apportionment of electoral votes not proportional to state populations

A vote cast in certain states has less weight than a vote cast in certain other states because of inequalities in the apportionment of the membership of the House of Representatives among the several states. For example, in the 1990 census, Wyoming had a population of 453,588, and

Montana has 799,065; however, both states received one House seat. Numerous other such substantial variations could be cited between various pairs of states, including variations among states with differing number of electoral votes.

4.3 Differences in voter-turnout

Third, among states with equal numbers of electoral votes, a vote cast in a state with a lower voter turnout has a greater weight than a vote cast in a state where more votes are cast. Voter turnout may be high in a particular state because of a high level of civic participation (e.g. Oregon and Idaho) or because the state is fast growing during the course of a decade (e.g. Nevada). These distortions based on turnout can be particularly pronounced with congressional districts, especially those operating with lopsided majorities in favor of one party.

5. Increased Partisan Calculations if Implemented State-by-State

Advocates of either the whole number proportional allocation system or congressional district allocation system might respond to these criticisms by suggesting that they need not be done nationally in all states, but state-by-state. But if anything, such state-by-state reforms are even worse, as they inevitably will lead to partisan calculations, particularly when advanced in states that are safe for one party or the other under the current unit rule system.

In late 2000, for example, noted Republican strategist Grover Norquist urged three states with Republican governors and Republican-controlled state legislatures to go to a congressional district or proportional allocation system. It was not coincidental that these states were ones regularly won by Democrats in nationally close presidential elections: Michigan, New Jersey and Pennsylvania.

In 2007, North Carolina came close to adopting a congressional district allocation system that that in 2008 would likely award four or five electoral votes to a Democratic presidential candidate that otherwise would be sure to go a Republican. Similarly, in August 2007 leading California Republicans are angling toward a June 2008 ballot measure to establish the congressional district system there – one that would almost certainly result in a bigger bloc of electoral votes going to a Republican candidate than the total number of votes at stake in Ohio.

Even when pursued without partisan intentions, a mix of states using different approaches will distort national outcomes based on the partisan leanings of those states. It would also further exaggerate distortions among states in campaigning. At its most extreme, consider a scenario in which every state used proportional allocation of electoral votes except Texas, which maintained the winner-take-all unit rule. The candidates would abandon campaigning in all states except Texas, as its vote would be sure to decide the presidency.

6. Conclusion

The above analysis demonstrates fundamental problems with the whole number proportional and congressional district systems of allocating Electoral College votes. Some suggest these approaches as alternatives for reforming the winner-take-all unit rule system that has so distorted candidate attention and upset the principle of majority rule. However, neither approach resolves the problems of the unit rule system – they merely lead to a different manifestation of the same basic weaknesses, and add new complications.

What we need is a presidential election that is competitive across the nation and makes all areas and all voters equally relevant, making each vote count equally, and ensuring that the candidate who truly represents the popular will gets elected.

For reformers in the states, there is no real choice: the only defensible approach over time is the National Popular Vote plan. According to this plan, states will enter into an interstate agreement to award their Electoral College votes to the candidate who wins the nationwide popular vote. The agreement will come into effect as soon as enough states join it to make up 270 or more electoral votes.

The method will make presidential elections direct and national without a Constitutional amendment, since it preserves the office of the presidential elector. It is thoroughly constitutional because states have the power under the Constitution to decide how to award their electoral votes.

Instead of 51 concurrent elections as happens under the unit rule, whole number proportional, or congressional district approaches, electing the president in a single direct national election will satisfy all the criteria of a good electoral system. It will ensure majority rule, make elections nationally competitive, reduce partisan machinations, preclude contingent outcomes, and ensure that every vote counts equally.

7. Acknowledgment

We are grateful to former FairVote intern Stephanie Collier for compiling congressional district-wise presidential vote returns for the years 1972 and 2000. Rob Richie made use of analysis from *Every Vote Equal*, a book he co-authored in 2006.

Table 4. Battleground Districts under Congressional District System

2000			2004		
District	Bush Vote (%)*	Gore Vote (%)*	District	Bush Vote (%)*	Kerry Vote (%)*
Arizona-8	50	46	Arkansas-1	52	47
Arkansas-1	48	50	Arkansas-2	51	48
Arkansas-2	49	48	Arizona-4	51	48
Arkansas-4	48	49	California-18	50	49
California-45	51	47	California-20	49	51
Colorado-7	49	50	California-47	50	49
Florida-10	49	51	Colorado-7	48	51
Florida-22	48	52	Connecticut-5	49	49
Georgia-2	51	49	Florida-10	51	49
Georgia-3	52	47	Florida-22	48	52
Georgia-11	51	47	Illinois-12	48	52
Illinois-10	47	51	Illinois-17	48	51
Illinois-11	50	48	Iowa-3	50	50
Iowa-2	48	49	Iowa-4	51	48
Iowa-4	49	48	Kentucky-3	49	51
Kentucky-3	48	50	Michigan-9	51	49
Maine-2	46	47	Minnesota-1	51	47
Michigan-8	51	47	Minnesota-3	51	48
Michigan-9	51	47	Nevada-3	50	49
Michigan-11	51	47	New Hampshire-1	51	48
Minnesota-1	49	45	New Jersey-2	50	49
Minnesota-3	50	46	New Jersey-3	51	49
Nevada-3	48	49	New Mexico-1	48	51
New Hampshire-1	49	46	New York-1	49	49
New Hampshire-2	47	48	New York-3	52	47
New Jersey-4	46	50	New York-23	51	47
New Jersey-7	49	48	New York-25	48	50
New Mexico-1	47	48	Ohio-1	51	50
New York-19	49	47	Ohio-6	51	49
New York-23	49	47	Ohio-12	51	49
New York-24	48	47	Ohio-15	50	50
North Carolina-7	52	48	Oregon-4	49	50
North Carolina-13	50	49	Oregon-5	50	49
Ohio-6	49	47	Pennsylvania-6	48	52
Oregon-4	49	44	Pennsylvania-8	48	51
Oregon-5	48	47	Pennsylvania-12	49	51
Pennsylvania-3	45	41	Pennsylvania-15	50	50
Pennsylvania-6	49	49	Tennessee-5	48	52
Pennsylvania-7	47	51	Virginia-11	50	49
Pennsylvania-15	48	49	Washington-2	47	51
Tennessee-4	50	49	Washington-3	50	48
Tennessee-6	49	49	Washington-8	48	51
Tennessee-8	48	51	Wisconsin-3	48	51
Texas-15	50	50	Wisconsin-7	49	50
Texas-27	50	50			
Texas-28	49	51			
Washington-2	46	48			
Washington-3	48	46			
Washington-8	47	49			
West Virginia-3	47	51			
Wisconsin-3	46	49			
Wisconsin-7	47	48			

*Vote shares are rounded

Source: *America's Choice in 2004: Votes by Congressional District*. www.polidata.org

Table 5. Electoral Vote Allocation by Whole number Proportional System (WNP)

State	1960				1968				2000				
	Total	Kennedy	Nixon	Other	Total	Nixon	Humphrey	Wallace	Total	Gore	Bush	Nader	Other
Alabama	11	6	5	0	10	1	2	7	9	4	5	0	0
Alaska	3	1	2	0	3	1	1	1	3	1	2	0	0
Arizona	4	2	2	0	5	3	2	0	8	4	4	0	0
Arkansas	8	4	3	1	6	2	2	2	6	3	3	0	0
California	32	16	16	0	40	19	18	3	54	29	22	2	1
Colorado	6	3	3	0	6	3	3	0	8	3	4	1	0
Connecticut	8	4	4	0	8	4	4	0	8	5	3	0	0
DC	NA	NA	NA	NA	3	1	1	1	3	2	1	0	0
Delaware	3	2	1	0	3	1	2	0	3	3	0	0	0
Florida	10	5	5	0	14	6	4	4	25	12	12	1	0
Georgia	12	8	4	0	12	4	3	5	13	6	7	0	0
Hawaii	3	2	1	0	4	2	2	0	4	2	2	0	0
Idaho	4	2	2	0	4	2	1	1	4	1	3	0	0
Illinois	27	14	13	0	26	12	12	2	22	12	9	1	0
Indiana	13	6	7	0	13	7	5	1	12	5	7	0	0
Iowa	10	4	6	0	9	5	4	0	7	4	3	0	0
Kansas	8	3	5	0	7	4	2	1	6	2	4	0	0
Kentucky	10	5	5	0	9	4	3	2	8	3	5	0	0
Louisiana	10	5	3	2	10	2	3	5	9	4	5	0	0
Maine	5	2	3	0	4	2	2	0	4	2	2	0	0
Maryland	9	5	4	0	10	4	4	2	10	6	4	0	0
Massachusetts	16	10	6	0	14	5	9	0	12	7	4	1	0
Michigan	20	10	10	0	21	9	10	2	18	9	8	1	0
Minnesota	11	6	5	0	10	4	5	1	10	5	5	0	0
Mississippi	8	3	2	3	7	1	2	4	7	3	4	0	0
Missouri	13	7	6	0	12	6	5	1	11	5	6	0	0
Montana	4	2	2	0	4	2	2	0	3	1	2	0	0
Nebraska	6	2	4	0	5	3	2	0	5	2	3	0	0
Nevada	3	2	1	0	3	2	1	0	4	2	2	0	0
New Hampshire	4	2	2	0	4	2	2	0	4	2	2	0	0
New Jersey	16	8	8	0	17	8	7	2	15	8	6	1	0
New Mexico	4	2	2	0	4	2	2	0	5	3	2	0	0

State	1960				1968				2000				
	Total	Kennedy	Nixon	Other	Total	Nixon	Humphrey	Wallace	Total	Gore	Bush	Nader	Other
New York	45	24	21	0	43	19	22	2	33	20	12	1	0
North Carolina	14	7	7	0	13	5	4	4	14	6	8	0	0
North Dakota	4	2	2	0	4	2	2	0	3	1	2	0	0
Ohio	25	12	13	0	26	12	11	3	21	10	10	1	0
Oklahoma	8	3	5	0	8	4	2	2	8	3	5	0	0
Oregon	6	3	3	0	6	3	3	0	7	3	3	1	0
Pennsylvania	32	16	16	0	29	13	14	2	23	12	11	0	0
Rhode Island	4	3	1	0	4	1	3	0	4	3	1	0	0
South Carolina	8	4	4	0	8	3	2	3	8	3	5	0	0
South Dakota	4	2	2	0	4	2	2	0	3	1	2	0	0
Tennessee	11	5	6	0	11	4	3	4	11	5	6	0	0
Texas	24	12	12	0	25	10	10	5	32	12	19	1	0
Utah	4	2	2	0	4	2	2	0	5	1	4	0	0
Vermont	3	1	2	0	3	2	1	0	3	2	1	0	0
Virginia	12	6	6	0	12	5	4	3	13	6	7	0	0
Washington	9	4	5	0	9	4	4	1	11	6	5	0	0
West Virginia	8	4	4	0	7	3	3	1	5	2	3	0	0
Wisconsin	12	6	6	0	12	6	5	1	11	5	5	1	0
Wyoming	3	1	2	0	3	2	1	0	3	1	2	0	0
Total	537	Kennedy	Nixon	Other	538	Nixon	Humphrey	Wallace	538	Gore	Bush	Nader	Other
		270	261	6		235	225	78		262	262	13	1
Total (Unit Rule)	537	303	219	15	538	301	191	46	538	266*	271	0	0

*In D.C. one Gore elector abstained from voting.

Source: Vote returns taken from *Dave Leip's Atlas of U.S. Presidential Elections*. www.uselectionatlas.org

Table 6. Electoral Vote Allocation by Congressional district System

State	1968			1972		1976		2000	
	Nixon	Humphrey	Wallace	Nixon	McGovern	Ford	Carter	Bush	Gore
Alabama	0	0	9	9	0	2	7	8	1
Alaska	3	0	0	3	0	3	0	3	0
Arizona	7	0	0	6	0	4	2	8	2
Arkansas	1	0	5	6	0	0	6	4	2
California	22	23	0	36	9	24	21	19	36
Colorado	6	1	0	7	0	6	1	6	3
Connecticut	1	7	0	8	0	6	2	0	7
Delaware	3	0	0	3	0	0	3	0	3
D.C.	0	3	0	0	3	0	3	0	3
Florida	11	3	3	17	0	7	10	19	8
Georgia	1	1	10	12	0	0	12	11	4
Hawaii	0	4	0	4	0	1	3	0	4
Idaho	4	0	0	4	0	4	0	4	0
Illinois	19	7	0	21	5	18	8	8	13
Indiana	12	1	0	13	0	10	3	9	2
Iowa	8	0	0	8	0	7	1	1	6
Kansas	7	0	0	7	0	5	2	6	0
Kentucky	6	3	0	9	0	2	5	7	1
Louisiana	0	1	9	10	0	3	7	8	1
Maine	0	4	0	4	0	4	0	0	4
Maryland	6	4	0	9	1	3	7	2	8
Massachusetts	0	14	0	2	12	0	14	0	12
Michigan	8	13	0	19	2	16	5	10	7
Minnesota	1	9	0	7	3	1	9	4	6
Mississippi	0	0	7	7	0	3	4	5	1
Missouri	9	3	0	11	1	5	7	7	3
Montana	4	0	0	3	1	4	0	3	0
Nebraska	5	0	0	5	0	5	0	5	0
Nevada	3	0	0	3	0	3	0	3	2
New Hampshire	4	0	0	4	0	4	0	3	1
New Jersey	12	5	0	16	1	11	6	3	12
New Mexico	4	0	0	4	0	4	0	1	4
New York	25	16	0	33	12	24	17	6	25
North Carolina	9	0	4	13	0	0	13	12	3
North Dakota	3	0	0	3	0	3	0	3	0
Ohio	15	9	0	22	3	14	11	15	5
Oklahoma	7	1	0	8	1	5	3	7	0
Oregon	5	1	0	5	1	4	2	3	5
Pennsylvania	13	14	0	23	4	11	16	9	12
Rhode Island	0	4	0	4	0	0	4	0	4
South Carolina	5	1	2	8	0	0	8	7	1
South Dakota	4	0	0	3	0	3	1	3	0

State	1968			1972		1976		2000	
	Nixon	Humphrey	Wallace	Nixon	McGovern	Ford	Carter	Bush	Gore
Tennessee	5	1	4	10	0	2	8	8	3
Texas	9	16	1	24	2	7	19	23	11
Utah	4	0	0	4	0	4	0	5	0
Vermont	3	0	0	3	0	3	0	0	3
Virginia	10	0	2	12	0	8	4	11	2
Washington*	NA	NA	NA	9	0	6	3	2	8
West Virginia	0	6	0	6	0	0	6	3	1
Wisconsin	7	4	0	11	0	4	7	4	6
Wyoming	3	0	0	3	0	3	0	3	0
Total	Nixon	Humphrey	Wallace	Nixon	McGovern	Ford	Carter	Bush	Gore
	292	183	56	478	60	268	270	288	250
Total (Unit Rule)	301	191	46	520	17	240**	297	271	266***

*1968: Presidential vote returns by congressional district not available for Washington State.

**1976: In Washington State, one Ford elector cast his vote for Ronald Reagan (President) and Robert Dole (Vice-President).

***2000: In D.C., one Gore elector abstained from voting.

Source: Vote returns taken from *Dave Leip's Atlas of U.S. Presidential Elections*. www.uselectionatlas.org

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