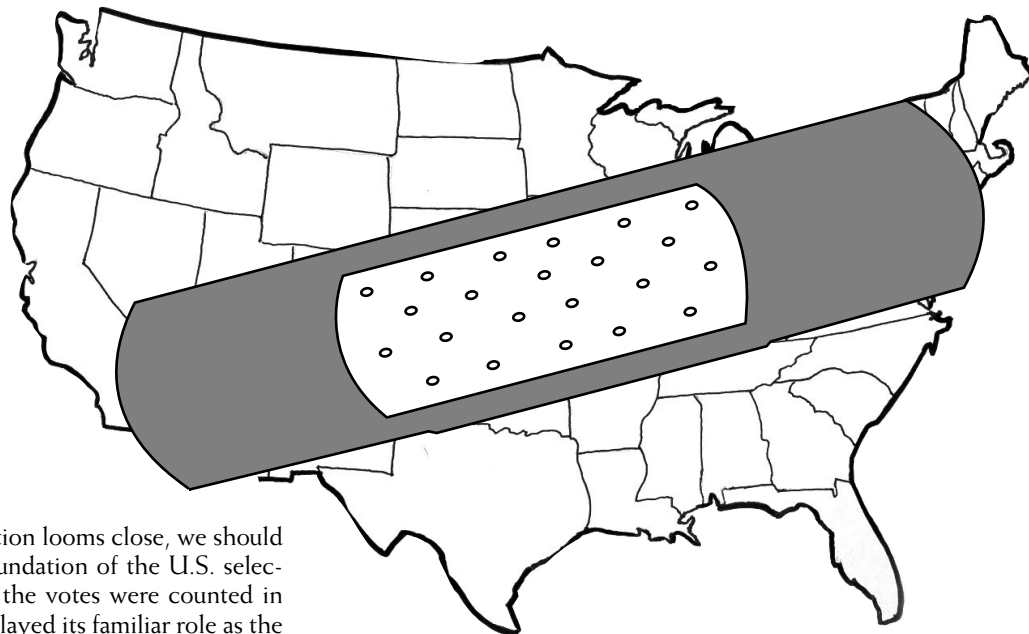


A Cure for the Electoral College?

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As another presidential election looms close, we should recall the utterly shaky foundation of the U.S. selection process. Even before the votes were counted in 2004, the Electoral College had played its familiar role as the funhouse mirror of American politics. By October 31, the main candidates had staged 65 campaign events in Ohio. They had staged only one in more populous Illinois. In the 2000 election, the winner in the popular vote was the loser in the Electoral College. Back in 1984, Walter Mondale got 41% of the popular vote and 2% of the electoral vote.

Many voters think the only good Electoral College is a dead one, and they want it replaced by a national popular vote. But that reform will not happen, because it would require either a constitutional amendment that the small states would not tolerate or other maneuvers that have bleak prospects. A practical proposal for change has to appear attractive to the heavy majority of states, both large and small. With the modesty characteristic of professors, we offer an approach here that we believe might have such an appeal.

Under the new system, each candidate's election showing would be an average of his or her popular vote results in the 51 states (including the District of Columbia). It would not be a simple average, but a weighted one; each state's weight would be its proportion of total electoral votes as calculated under present conventions. The final score for each candidate would be expressed as a percentage.

This suggestion might not seem immediately exciting, but it achieves zest when we realize what it would accomplish. We will argue that, under existing conditions, it would expand the influence of small states on the national tally, while increasing the role of the largest states. It would eliminate what are widely considered the most problematic features of the present winner-take-all rule. And it would preclude a tie or another Electoral College outcome that would force the election into the House of Representatives under strange rules. Though its results would not replicate exactly those in a national popular vote, they would come very close.

Weighted Vote Shares

The weighted vote share (WVS) of presidential candidate j would follow the formula:

$$WVS = \sum e_i p_{ij} \quad (i = 1, \dots, 51, \text{ including the District of Columbia}),$$
 where e_i = state i 's share of the national electoral vote and p_{ij} = the candidate's share of the popular vote in state i .

There are 538 electoral votes in total. In 2004, the e_i 's varied from 3/538 for eight small states to 55/538 for California. Ohio, for example, had 20 electoral votes in 2004, meaning its electoral vote share (e_i) was $20/538 = 3.72\%$. President George W. Bush received 51.0% of the state's popular vote, and Massachusetts Senator John Kerry received 48.5%. Thus, Ohio's contribution to Bush's WVS in 2004 was $.0372 * (.510) = 1.90\%$, while its contribution to Kerry's was $.0372 * (.485) = 1.80\%$. The candidate with the highest WVS would be declared the winner of the presidency.

In 2004, Bush's WVS was 51.0%, while Kerry's was 47.9%. These numbers are a fraction of a percentage point away from the candidates' actual shares of the national popular vote, which were 50.7% and 48.3%, respectively.

We assume that making WVS the criterion for victory would require a constitutional amendment. Clearly, the mathematics are more complex than those for the Electoral College. The system would have to be explained with great care (possibly through an extremely lucid web animation). Perhaps people could be reminded that they routinely encountered weighted averages in high school, for instance when a teacher announced that the final exam counted as 50% of the grade, the midterm exam as 25%, homework as 15%, and class participation as 10%. We knew what that statement meant: If a student got 82% on the final exam, he or she would get a

total of $82\% \times 50\% = 41$ percentage points credited toward his or her final score. If he or she got 90% for class participation, the corresponding credit would be $10\% \times 90\% = 9$ percentage points. The sum of the four contributions would be his or her final numerical grade.

We believe, however, that the considerable effort to explain the system might well be worth making. Certain characteristics of the WVS system might make it palatable to even those who are most suspicious of Electoral College reforms.

Advantages of the Proposed System

Under recent voting patterns, WVS would increase the role of the smaller states as a group. Using the e_i 's, these states would fully retain their present Electoral College advantage in delegate share. But their influence would grow, because, in recent elections, they have tended to vote more lopsidedly than the country at large. For example, Bush carried Utah in 2004 by 45 percentage points relative to Kerry and received its five electoral votes. In the Electoral College, however, he would have done just as well had he won Utah by one-fifth of a percentage point. The WVS formula counts both the margin of victory and its electoral vote share.

The net difference, D_{jk} , in weighted vote shares for the two serious candidates, j and k , would follow the rule:

$$D_{jk} = \sum e_i (p_{ij} - p_{ik}).$$

A few definitions help us elaborate on how small states as a group would benefit under WVS. A state's impact on a presidential election is its numerical contribution to the candidate who wins the state (i.e., impact is, by definition, always a positive quantity). Under the present system, it is simply the state's number of electoral votes. A state's impact share is its own impact divided by the total impacts of all 51 states. For the Electoral College, therefore, impact share is the number of electoral votes divided by 538. The sum of all impact shares must be one.

Under WVS, a state i 's impact is $e_i |p_{ij} - p_{ik}|$ and its impact share is $e_i |p_{ij} - p_{ik}| \div \sum_b e_b |p_{bj} - p_{bk}|$, for $b = 1$ to 51. Thus, a small state with a higher-than-usual value of $|p_{ij} - p_{ik}|$ will benefit from both its existing Electoral College advantage and the 'extra credit' the D_{jk} formula gives to large victories. The combined effect is indicated in Table 1, where the total 2004 impact share of small states (i.e., those that have a higher share of electoral votes than popular votes) grows from 16.3% under the Electoral College to 26.0% under WVS.

Of course, not all small states have greater impact under WVS than under the Electoral College. A counterexample is New Hampshire, in which the popular vote tallies for the two major candidates were close in 2004. But Table 1 documents the presence of a strong general tendency.

Table 2, a compressed version of Table 1 for the 2000 election, indicates that the outcome in 2004 was not freakish. Once again, impact share is about 1.6 times as high under WVS as under the Electoral College.

This pattern is important because, once the situation is understood, smaller states as a group will have no clear incentive to oppose the reform. That is in sharp contrast to a proposed shift to a national popular vote.

Table 1—Influence of Small U.S. States in the Electoral College and under Weighted Vote Shares, 2004 Election

Number of Electoral Votes	Number of States	Percentage of National Popular Vote	Electoral Vote Impact Share	WVS Impact Share
3	8	2.2%	4.5%	10.2%
4	5	2.4%	3.7%	4.3%
5	5	3.3%	4.7%	6.8%
6	3	2.8%	3.4%	4.7%
Total		10.7%	16.3%	26.0%

Note: WVS impact share is based on Electoral College strength and the winner's margin of victory. States with six or fewer electoral votes have a larger share of electoral votes than of the national popular vote.

Table 2—Two Calculated Impact Shares in the 2000 Presidential Election for Small States with between Three and Six Electoral Votes

Number of Small States	% of Popular Vote	Electoral Vote Impact Share	WVS Impact Share
20	8.8%	14.3%	23.4%

Note: Due to adjustments based on the 2000 Census, the electoral vote distribution across states was slightly different in 2004 than in 2000.

Democrats need not worry; the small states are not uniformly Republican. Indeed, of the 21 states in the table, the District of Columbia—the most Democratic enclave in the solar system—is by far the most influential under WVS. (In 2004, Kerry carried D.C. by 81 percentage points). Opposing partisan tendencies largely counteract each other. As noted, WVS outcomes in 2004 and the national popular vote were extremely close.

WVS also would increase the overall influence of the largest states. Of the five most populous states in 2004—California, Texas, New York, Florida, and Illinois—all but Florida were effectively ignored because, under the winner-take-all rule, both major candidates deemed the outcome a foregone conclusion. However, 31% of the nation's residents live in these four states. Under WVS, the largest states would regain influence: Even if a two-point gain in popular vote share does not change the winner in California, it would mean as much in the D_{jk} formula as the same-sized gain in a half-dozen middle-sized states taken together. Thus, the candidates would rediscover the way to San Jose (and to Chicago and Fort Worth and Brooklyn).

Table 3—The Winning Candidate’s Vote Share under Three Criteria: Presidential Elections from 1960–2004

Year	Winner	Popular Vote Share	Weighted Vote Share	Electoral Vote Share
1960	Kennedy	49.72(%)	49.54	56.32
1964	Johnson	61.05	59.49	90.33
1968	Nixon	43.42	43.05	55.95
1972	Nixon	60.67	61.44	96.65
1976	Carter	50.08	50.15	55.20
1980	Reagan	50.75	50.73	90.89
1984	Reagan	58.77	59.03	97.58
1988	Bush (GHW)	53.37	53.51	79.18
1992	Clinton	43.01	42.85	68.77
1996	Clinton	49.23	49.00	70.45
2000	Bush (GW)	47.87	48.25	50.37
2004	Bush (GW)	50.73	51.04	53.16

Note: Weighted vote share is calculated under the WVS formula in this article.

Florida, itself, would not gain in influence; it is among the closely fought “swing states” that we will discuss presently. While two extra percentage points in Florida would be valuable to a candidate, they would not be nearly as much so as a shift from loss to win under the Electoral College. (In the latter, the candidate’s electoral vote tally would shift from 0 to 27 for Florida.) But we are speaking of a general tendency to benefit the larger states, rather than a universal principle.

WVS would dispel the most troubling consequences of the winner-take-all rule. The winner-take-all rule seems at its most unfortunate when the two candidates are essentially tied in a state, and thus the winner’s electoral vote share exceeds his or her popular vote share by roughly 50 percentage points. In extremely close elections, the inevitable problems in vote-counting can create uncertainty about which candidate actually won. The poster child for these problems, of course, is Florida in 2000, where uncertainty about the state winner (and thus the next president) lasted for 34 days and ended with a Supreme Court decision halting a recount.

Under WVS, no such troubles would arise. The contribution to D_k is essentially zero in a state with a very close result. Thus, the state effectively abstains from the contest. That circumstance is not inherently troubling; when voters are equally divided, having the state abstain might better reflect the outcome than a rule that exalts half the voters over the other half. Small uncertainties in the vote count could not take on gargantuan importance; a tie would be treated as a tie.

WVS would eliminate the danger that the president would be chosen by the House of Representatives. Various combinations of state outcomes could yield 269 electoral votes out of 538 for each of the two main candidates. Moreover, a strong third-party candidate could keep any single competitor from getting a majority of electoral votes. In either of these situations, the president would be selected by the House of Representatives under the rule that all states, regardless of size, get one vote each. Use of WVS would virtually eliminate the

chance of Congressional involvement in presidential selection. The two leading candidates would not be tied to a thousandth of a percentage point. It is true that the winner could have a plurality of votes cast, but not a majority. But that circumstance has been fairly common under the Electoral College, having arisen recently in 2000, 1996, 1992, 1968, and 1960.

Unlike Electoral College outcomes, WVS results closely mirror the split of popular votes. The difference between WVS and the popular vote result was about one-third of a percentage point in 2004. That is a typical outcome. Table 3 shows that, going back to 1960, the absolute difference between the winner’s WVS and his or her share of the popular vote averaged two-fifths of one percentage point. In only one election did the difference exceed one percentage point (1964), and, even then, the disparity was less than two points. In contrast, the average absolute difference between the winner’s popular vote share and his or her Electoral College vote share averaged 20.5 percentage points over the period 1960–2004—more than 50 times as high as that under WVS.

That is not to say, however, that the presidential winner under WVS will always be the same as the popular vote winner. In 2000, Bush barely would have won under WVS, even as he barely lost (in percentage terms) in the popular vote. In all the other elections since 1960, WVS and the popular vote came out with the same victor.

The exception in 2000 will disappoint those who strongly believe in a popular vote election. But the country is not moving toward electing the president by popular vote, while WVS might be achieved because it is more tolerable to small states. And when WVS yields a different winner than the popular vote, the runner-up almost surely fails by an extremely small margin. There is scant possibility of the acute violation of “popular sovereignty” that is a real danger under the Electoral College. In 2004, for example, a shift of 60,000 Ohio votes from Bush to Kerry would have made Kerry the president, even though, nationally, Bush still would have defeated Kerry by approximately 3 million votes.

In principle, the new approach could raise voter enthusiasm and voter turnout. When margin of victory—rather than just the fact of victory—is the relevant measure of the state outcome, a citizen might be less likely to say, “Kerry is sure to carry my state, so it doesn’t matter whether I vote.” To be sure, voters in swing states might see their votes as less pivotal than before; at a minimum, the disincentive to voting would vary less across states under WVS than under the Electoral College.

But the reference to swing states raises an obvious point: Not all states would benefit from changes to the WVS system. The main losers in influence would be the very close states that, in the most recent elections, have become obsessive foci of the candidates. Would they collectively try to block the constitutional amendment that could institute WVS?

Perhaps, but not necessarily. For one thing, being a swing state is a sometime thing; California, Texas, and Illinois all have been closely fought swing states in the past, which is hardly the role they played in 2004. The new ultra swing state, Florida, was, for a long period, considered a standard part of

the “solid South.” Moreover, these states might be less viscerally opposed to reform than the small states, which have had an Electoral College advantage for two centuries and might view it as crucial to having any role in a national election. For the swing states, fear of irrelevance may not be a major part of their psychological makeup. They might, therefore, be more amenable to arguments about fair play.

In any case, a constitutional amendment does not require passage by 100% of the states, but rather 75%. Even if a half-dozen swing states could not bring themselves to relinquish their present advantage, they would not have veto power.

Simpler Changes to the Electoral College?

Other than abolition, might there be lesser modifications of the Electoral College than the one proposed here? Yes, but they suffer serious problems. One major thrust is to retain the Electoral College, but end the winner-take-all rule. Already, Maine and Nebraska allot two electoral votes to the statewide winner and give one delegate to the winner in each congressional district. Amendment 36 was the subject of a 2004 referendum in Colorado. It would have split the state’s delegates—to the nearest whole number—to reflect the state’s popular vote outcome.

The trouble with these procedures is that they offer only a crude proxy for the popular vote. Maine and Nebraska have, in practice, always awarded 100% of their electors to the winner, which sometimes overstated his vote share by more than 45 percentage points. If the Maine/Nebraska procedures had been applied nationally in 2004, Bush would have received 58.6% of electoral votes; he carried 255 Congressional districts and 30 states. That figure is 7.6 percentage points higher than his share of the popular vote, a difference five times as large as the biggest of the 12 WVS discrepancies reported in Table 3.

In Colorado, Amendment 36’s insistence that the vote split be rounded to whole numbers—though understandable, given that individual human electors would continue to cast votes—presents technical difficulties. Suppose the two candidates divide the vote 58%–42% in a state with six electoral votes. Then, the proposed rules would translate into a 3–3 split, obliterating a 16-point difference in the popular outcome. Across the states, the cumulative effect of such “round-off” errors could be substantial.

Amendment 36 was defeated heavily at the polls, partially because some residents saw it as a form of “unilateral disarmament.” While other states could offer the winner sizable blocks of electoral votes, the Colorado split most likely would have been 5–4. The outcome suggests how difficult it would be to implement Electoral College reforms state by state in a game in which the more innovative states might fear they have much to lose.


Actually, one recent proposal would abolish the Electoral College while retaining its façade. All of a set of states with a majority of electoral votes would agree to cast all their electoral votes for the popular vote winner. This maneuver would guarantee a popular vote election. The approach is clever, but it has evoked limited enthusiasm. As of this writing, the proposal has been around nearly a year, but only one state legislature (California) has approved it. Even there, the measure was opposed by 42 of 43 Republican lawmakers, and it was vetoed subsequently by Governor Arnold Schwarzenegger. Skepticism has been expressed that any such “all-for-one” promises

would be binding in the future: What a state legislature can do today, a future one can undo. But perhaps the Achilles heel of the proposal is its audacity. In effect, the approach would have the large states conspire to destroy, in one fell swoop, all the Electoral College advantages of the smaller states. Such a sharp deviation from the spirit of compromise might seem highly distasteful to many decisionmakers, which brings us back to WVS...

A Last Thought

Working on the behalf of WVS are the facts that it would be easy to implement mathematically and that the election of 2000 stirred much discontent with the Electoral College. But the change would, to say the least, be difficult to achieve. There is the obvious point that few prospective constitutional amendments pass; the law of inertia is not confined to physics. Moreover, many people may furtively like the Electoral College more than they would admit openly. Some Democrats might be willing to tolerate a system under which Kerry—3 million votes behind in the popular vote tally—would have become president in 2004 had one in 90 Ohio voters switched sides. Some Republicans might tolerate a system that made Bush president in 2000, even though there was never a doubt that he lost the popular vote. And, as noted, the proposal might well seem confusing, unless it is explained clearly with lots of specific examples. Indeed, this last problem might be insurmountable.

It is at least conceivable, however, that the “inscrutability issue” can be overcome. Some careful wording might go a long way (e.g., “Instead of forcing a choice between the Electoral College and the popular vote results, the new system combines the two to achieve the objectives of both.”). And, with American kids falling ever further behind their counterparts in mathematics, pursuing a more quantitative approach to a foremost national issue might have some popular appeal. It is also true that the Electoral College system is not as transparent as often claimed. How many Americans know how many electoral votes their states have, or the rules by which those numbers are determined? The people already seem to tolerate a presidential voting scheme that they do not fully understand.

The immediate question becomes: Is it worth taking a chance to advance WVS, despite its limited prospects of success? The authors vote yes. 

Editor’s Note: The political views expressed or implied in this article are those of the authors, and not of the ASA.

Further Reading

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