

# Why the Electoral College is good for political science (and public choice)

Nicholas R. Miller

Received: 9 August 2011 / Accepted: 10 August 2011 / Published online: 4 October 2011  
© Springer Science+Business Media, LLC 2011

**Abstract** While the Electoral College may not be good for the political system, it is very good for political science (and public choice). This essay documents many of the ways in which this assertion is true.

**Keywords** Electoral College · Social choice · Institutional analysis

*What's bad for the political system is good for political science,  
and vice versa (attributed to Nelson Polsby)*

*Why the Electoral College Is Bad for America*  
(by George C. Edwards, III, Yale University Press, 2003)

## 1 Introduction

The title and theme of this essay follow as a logical deduction from the major and minor premises stated above. Actually, I am ambivalent about whether the Electoral College is good or bad for the political system. I am inclined to view it as a problematic but serviceable institution. But I am sure of two things: first, that the Electoral College makes presidential elections even more interesting than they otherwise would be and, second—and this is my present theme—that the Electoral College is a terrific boon for political science (and public choice) research (and teaching). Let us count (some of) the ways.

1. *The Origins of the Electoral College and Applied Social Choice Theory.* The framers of the Constitution expected—and certainly hoped—that politics at the national level would be nonpartisan in nature. Accordingly, their presidential selection system was designed

---

N.R. Miller (✉)  
Department of Political Science, University of Maryland Baltimore County (UMBC), Baltimore,  
MD 21250, USA  
e-mail: [nmiller@umbc.edu](mailto:nmiller@umbc.edu)

to choose a single broadly supported winner out of a potentially large field of candidates concerning whom voter preferences were likely to be widely dispersed. Given this expectation, the original Electoral College system was in fact a cleverly designed method of applied social choice, though it probably did not quite merit Alexander Hamilton's affirmation (in Federalist 68) that 'if the manner of it be not perfect, it is at least excellent'.

2. *Unanticipated Consequences in Institutional Design.* The original Electoral College was not only imperfect but contained a fatal flaw, because the framers (understandably) were not aware of two basic principles of modern political science, the first of which may be called 'Schattschneider's Law' and the second of which is widely called 'Duverger's Law'. This fatal flaw was corrected by the Twelfth Amendment in 1803.
3. *Political Strategy and Institutional Equilibrium.* Due to strategies pursued by politicians (whose ambitious character the framers did anticipate) organized into rival proto-political parties (which they did not anticipate), the original Electoral College was rapidly transformed into an electoral system quite different from what the Framers intended. By the 1830s it reached an institutional equilibrium, and it has hardly changed since.
4. *Voting Power in Weighted Voting Systems.* The transformation of the Electoral College converted the top tier of the system into a weighted voting game among the states. This has provided an excellent empirical case for the application of the various measures of voting power developed some half century ago.
5. *Comparative Institutional Analysis.* Because of its problematic features, numerous proposed 'reforms' of the Electoral College have been advocated, under which electoral votes would be apportioned or cast in different ways, or the Electoral College would be replaced by a national popular vote. These variants can be subjected to comparative institutional analysis in terms of their 'mechanical', 'strategic', and 'system' effects.

The transformed Electoral College has problematic features that raise further interesting theoretical and empirical questions for political science:

6. *Individual Voting Power and the Electoral College.* The top-tier 51-state weighted voting game entailed by the Electoral College is mostly a chimera. As it has existed since the 1830s, the Electoral College is really a two-tier popular vote system, since the casting of electoral votes is determined by popular pluralities within each state. While the President is effectively popularly elected, the two-tier nature of the system raises the question of whether it gives unequal voting power to individual voters? And if so, are voters in large or small states favored and by how much?
7. *Election Inversions.* Probably the most discussed and compelling problem pertaining to the Electoral College system is that the candidate who wins the most popular votes nationwide may fail to be elected (as happened in 2000). What features of the Electoral College system make such an inversion possible? How likely is such an inversion and what circumstances affect its likelihood?
8. *Electoral College Deadlock.* Given a 'serious' third-party presidential candidate who carries one or more states, it is possible that no candidate would win the required majority of electoral votes. In this event (or in the event of a 269–269 electoral vote tie), the presidential election would be 'thrown into the House of Representatives'. How might such an Electoral College deadlock be resolved?
9. *Circumventing Formal Structure Through Commitment.* The recently proposed 'National Popular Vote Plan', to which a number of states have acceded, potentially illustrates how institutional rules can be circumvented by a binding agreement among (some) participants—in this case, by an interstate compact among states controlling at least 270 electoral votes.

I have treated Topics 4, 6, and 7 in considerable detail elsewhere and much of the political literature on the Electoral College falls broadly within the rubric of Topic 5. Here I will deal only broadly with these topics, while discussing the others in more detail.

## 2 The origins of the Electoral College and applied social choice theory

Designing the mode of selecting the President was one of the most difficult tasks that confronted the framers. Their most famously difficult task was designing the scheme of representation for a new national legislature. The difficulty in the legislative case lay in the fact that almost all delegates knew exactly what they wanted, but different delegates wanted different things: small-state delegates wanted to preserve the principle of state equality, while large-state delegates wanted state representation proportional to population. In contrast, the difficulty in the executive case was that most delegates were not at all sure what they wanted (though the small-state versus big-state conflict again played a role). In any event, they expected that the presidential selection system would operate in a nonpartisan manner and therefore that typically many potential presidential candidates would have significant support but that they would not declare themselves as candidates and certainly would not actively campaign for the office. Whatever body might choose the President would do so on the basis of the characters, reputations, and connections of the potential candidates, rather than their party affiliations or policy promises.

The commonsense option was that the President would be elected by Congress, as most governors were then elected by their state legislatures. Both the Virginia Plan and the New Jersey Plan provided for legislative selection, though neither specified how such an election would work. But many delegates feared that legislative election would make the President (especially one eligible for reelection) subservient to Congress, and they looked for modes of selection separate from Congress. In so far as delegates saw virtue in popular election of the President, it was primarily on ‘separationist’, rather than ‘democratic’, grounds.

The Electoral College system was put together by the Committee on Postponed Matters (also known as the Third Committee of Eleven) over a few days and it was accepted, after considerable deliberation and with one modification, by the Convention in its closing weeks. It created what was expected to be a two-stage election. Each state would appoint, in a manner determined by its legislature, electors equal in number to its total representation in Congress. Despite common reference to an electoral ‘college’, the electors would never assemble as a single body; rather the electors from each state would assemble in their state on a date specified by Congress. Each elector would have one duty only: to cast two equal and unranked votes for President for two different candidates, at least one of whom was not a resident of the elector’s state. In the event no candidate was supported by a majority of electors (thereby winning more than 25% of the electoral votes), or in the event that two (or more) candidates with the required majority were tied, there would be a ‘runoff election’ in Congress among the top five electoral vote-getters (in the first contingency) or between the tied candidates (in the second contingency).<sup>1</sup> The Committee proposed that the runoff be in the Senate. The Convention considered changing this to the House of Representatives or to Congress as a whole (voting by joint ballot), but it ended up putting the locus of the runoff in the House with each state delegation casting one vote. Finally, the proposal created

---

<sup>1</sup> That the House could choose from as many as the top five electoral vote-getters reflected the expectation that electoral votes would typically be widely dispersed over many candidates.

the office of Vice President, to be awarded to the runner-up in the presidential selection process.

The rationale for the two-vote provision, coupled with the stipulation that at least one vote be cast for a candidate not a resident of the elector's state, is clear enough. In an era when most Americans thought of themselves, not in fact as Americans, but as Virginians, New Yorkers, etc., it could be anticipated that many electors would be strongly inclined to vote for local favorites. The two-vote provision would allow electors to vote for 'favorite sons' but at the same time compel them to look around more broadly for 'continental characters' who might merit their support. This would make it more likely that some candidate would receive the required majority of electoral votes or be chosen by the House, and this consensus candidate would surely be a 'continental' type, not (merely) a favorite son.

The two-vote system bears some resemblance to Approval Voting (Brams and Fishburn 1983),<sup>2</sup> which likewise seeks to elect a candidate with broad support, but with several differences: (i) while Approval Voting allows voters to vote for any number of candidates, electors were required to vote for exactly two candidates; (ii) the runner-up gets a consolation prize; (iii) the out-of-state stipulation was imposed; and (iv) there might be a runoff election.

Because the electors and House members are different electorates, the overall process bears some resemblance to a 'screening or nominating' social choice method as analyzed by Barberá and Coelho (2010). The floor debate shows that delegates thought about interactions between the two stages of the selection process. Indeed, they frequently spoke of the electors 'nominating' a number of candidates from which field Congress would 'elect' a President.

The original Electoral College established an extended sequential choice process: each state legislature would choose how their state's electors were to be appointed; electors would be appointed accordingly; the electors would cast their votes; the electoral votes would be submitted to and counted by Congress; and a President would be selected on the basis of these electoral votes or, in the two contingencies, the House would make the final choice. Contemporary political scientists and social choice theorists recognize that such a sequential-choice process invites strategic behavior at earlier stages.

In at least one respect James Madison recognized this point and was willing to rely on strategic behavior to keep presidential elections out of legislative hands. Madison was a preeminent 'big state' delegate, and his Virginia Plan provided that states be represented in both houses of a national legislature proportionally to population and that the legislature choose the executive. However, he subsequently turned against election of the President by Congress, fearing that would make the President subservient to Congress. Despite his intense displeasure with the legislative compromise that gave states equal representation in the Senate, Madison preferred that a presidential 'runoff' take place in the Senate (or the House voting by state delegations), rather than by joint ballot of Congress as a whole (or the House voting by members) for a subtle strategic consideration—namely, that the awful prospect of a final-stage runoff dominated by small states would induce the big-state electors to coordinate their votes at the penultimate stage in order to preclude legislative election.

Mr. Madison considered it as a primary object to render an eventual resort to any part of the Legislature improbable. He was apprehensive that the proposed alteration [election by joint ballot of Congress as a whole] would turn the attention of the large States too much to the appointment [nomination] of candidates, instead of aiming at an effectual appointment of the officer, as the large States would predominate in the

<sup>2</sup>See Nagel (2007) for further development of this point.

Legislature which would have the final choice out of the Candidates. Whereas if the Senate [or the House voting by delegations] in which the small States predominate should have this final choice, the concerted effort of the large States would be to make the appointment in the first instance conclusive. (Farrand 1937, vol. II: 513).

Evidently, Madison had an implicit understanding of the concepts of strategic voting and ‘subgame perfect equilibrium’. However, given the geographically decentralized and contemporaneous casting of electoral votes in conjunction with the absence of speedy communication, Madison surely overestimated the opportunities for large-state electors to concert their votes, and George Mason’s famous projection that the House would choose the President ‘nineteen times out of twenty’ was probably more realistic. (Mason’s projection was wrong, of course, but for reasons quite different from collusion by large-state electors.)

### 3 Unanticipated consequences in institutional design

The design of the original Electoral College was flawed because the framers were not fully aware of two empirical principles of modern political science.

The first principle, which may be called *Schattschneider’s Law* (see especially Schattschneider 1942: Chapter 3), says that, if you create a large legislative body that is popularly elected, you must expect party caucuses to develop in the legislature and political parties to develop in the electorate. Caucuses and parties are organized attempts to win by concentrating votes (through a bloc vote or nominating process) on a few motions or candidates, which arise because ambitious politicians find it expedient to conspire with others to win these contests. The second principle, well known as *Duverger’s Law* (Duverger 1954: especially pp. 206–228), says that, if you have single-winner elections, you get (in equilibrium) two political parties—no more and no fewer, i.e., two rival organized attempts to win elections, each by trying to concentrate votes on a single candidate. The consequence of these principles was that Madison’s expectation (and hope) that ‘concerted effort ... would ... make the appointment [of the President] in the first instance conclusive’ (thereby avoiding legislative selection) was realized, but the concerted effort would be effected by national political parties, not by big-state electors.

However, the original Electoral College did not create single-winner elections but single-plus-a-bit-winner elections, i.e., the Presidency for the winner plus the Vice Presidency for the runner-up. The requirement that each elector cast two votes for two different candidates, at least one of whom was from another state, was clearly designed to make it likely that some candidates would garner broad-based electoral vote support. However, it might be anticipated that some crafty electors (especially from larger states) would try to ‘game the vote’ by casting their out-of-state votes for minor or objectionable candidates, thereby enhancing the probability that their favorite son might place among the top five and get into the House runoff. Even if only a few electors employed this stratagem in early elections, electors in subsequent elections might feel compelled to resort to it, anticipating—in the manner of a Prisoner’s Dilemma—that other electors would likely do the same.

The Committee on Postponed Matters evidently believed that a second office had to be at stake in order to induce electors to cast their second votes non-strategically for serious and worthy candidates. For this reason they created the office of Vice President, which would be awarded to the runner-up in the presidential selection process. A Vice Presidency had never previously been proposed or discussed at the convention. Whether this second office, and the runner-up provision for filling it, could actually deter electors from throwing away their second votes is highly questionable. But, as delegate Hugh Williamson (Farrand 1937, vol.

II: 537) observed, the Vice Presidency was created at the last moment and ‘introduced only for the sake of a valuable mode of election which required two to be chosen at the same time’, which largely explains the awkward and largely impotent place this office occupies in the overall constitutional scheme.

But, perhaps predictably, it turned out that from the outset electors and those who selected them (and most everyone else) thought of a presidential election, not as an occasion to cast two votes for two worthy presidential candidates, but as an occasion to elect a Presidential-Vice Presidential ‘ticket’. In this context, making the Presidential runner-up Vice President was revealed to be a fatal flaw in the original Electoral College plan, creating what historian Richard McCormick (1982) characterized as a ‘hazardous game’.

Even the uncontested first election in 1789 hinted at the hazards. It was widely agreed that George Washington should be the first President and John Adams should be his Vice President. Thus all electors were expected to cast one vote for Washington and one vote for Adams. But this expectation was precarious: if just one elector somewhere, and for whatever reason, were to cast one vote for Adams and one vote for anybody but Washington, Adams would be elected President and Washington would be relegated to the Vice Presidency, contrary to the almost universally held desire that Washington be the first President. On the other hand, if every elector did in fact cast one vote for Washington and one for Adams, there would be an electoral vote tie, sending the election to the House. No doubt the House would have elected Washington as President and Adams, as the runner-up, would have become Vice President as intended. But this would have been a convoluted way of effecting the desired outcome. In fact, all electors did vote for Washington while some did not vote for Adams and scattered their second votes among other candidates, so the agreed upon ‘ticket’ was elected by the Electoral College.

More severe problems came to light in the first contested presidential election in 1796. When Washington announced that he would not serve a third term, competing teams of politicians formed proto-parties to select and back rival Presidential-Vice Presidential tickets. The Federalists ‘nominated’ a ticket of John Adams for President and Thomas Pickney for Vice President, while the Republicans ran Thomas Jefferson for President and Aaron Burr for Vice President. Each party contested the election by trying to secure the appointment of presidential electors pledged in advance to support the party ticket. This often entailed manipulating the mode of selecting electors—the principal modes being legislative election, popular election by district, and popular election on a ‘general ticket’—in a way that would advance the fortunes of one or the other party. The upshot was that the Federalists won the election by securing the selection of 71 Federalist electors as opposed to 68 Republican electors. Alexander Hamilton (who was feuding with Adams) unsuccessfully urged some Southern Federalist electors to vote for Pickney and anybody but Adams, thereby electing Pickney as President and keeping Adams as Vice President. While no Southern electors did this, some Northern electors learned about Hamilton’s treachery and withheld votes from Pickney to assure that Adams would be elected President as intended. Thus, while all 71 Federalist electors cast one vote for Adams giving him the required majority of 70, a dozen withheld their second votes from Pickney and scattered them among a number of other candidates. In like manner, all 68 Republican electors cast one vote for Jefferson, while many cast second votes for candidates other than Burr. Thus, while Adams was elected President, the withholding of some second votes from Pickney dropped his electoral vote total to third place behind Jefferson, so the defeated Republican presidential candidate became Vice President in the victorious Federalist presidential candidate’s administration.

The 1796 election taught several lessons. First, electors—expected by the framers to be ‘local trustees’—had quickly been turned into party men who would themselves be selected,

not on the basis of their personal qualities, but on the basis of the ticket they were pledged to support. Second, state legislative elections (coming perhaps a year or more in advance of presidential elections) became very important for politicians with national ambitions, because the legislatures would determine how electors from their states would be selected and could change the mode of selection from election to election. Moreover, a legislature might choose to appoint the electors itself, as a party that controlled a state legislature might not want to risk a statewide popular election that they might lose. On the other hand, if the party that controlled the legislature was confident that it could win a statewide vote, the mode of popular election could be manipulated for short-term party advantage. Jefferson noted this point—which, like the incentive to throw away second votes, created something like a Prisoner’s Dilemma—in a letter to James Monroe early in 1800 (Wilmerding 1958: 60):

All agree that an election by districts would be best if it could be general, but while ten states choose either by their legislatures or by a general ticket, it is folly or worse for the other six not to follow.

The bitterly contested 1800 election was largely a replay of 1796 with the same battle lines and the same candidates (except that Thomas Pickney was replaced by his older brother Charles Cotesworth Pickney). However, the strategic implications of Electoral College rules were better understood, particularly the danger of withholding too many votes from vice-presidential candidates. The election of 1800 was as close as 1796 but tipped the other way. The Republicans won 73 electors and the Federalists 65.<sup>3</sup> But the Republicans failed to withhold one ‘Vice Presidential’ electoral vote from Burr. Since the existing Electoral College rules did not distinguish between ‘Presidential’ and ‘Vice-Presidential’ electoral votes, there was a 73 to 73 electoral vote tie between Jefferson and Burr, sending the election to the House, which could choose between the two tied candidates only.<sup>4</sup> (Presumably Burr could have resolved the issue by withdrawing, but he chose not to do so.)

And things got worse. Until the Twentieth Amendment was ratified in 1933, a newly elected Congress did not convene until late in the year following the Congressional election. So the 1800 presidential election was thrown, not into the recently elected (and Republican controlled) House, but into the ‘lame duck’ Federalist-controlled House elected in 1798. There were 16 state delegations, so nine votes were required for election. A majority of members in each delegation would decide how to cast the state’s vote and, in the absence of a majority (resulting either from a tie in an even-numbered delegation or abstention by individual members), a delegation would cast a ‘divided vote’ and effectively abstain. Though the Federalists had overall control, the Republicans actually controlled eight state delegations to six for the Federalists, with two delegations were evenly split. Evidently, Republican representatives voted for Jefferson as their intended presidential candidate and Federalist representatives voted for Burr in order to deny the presidency to more formidable Jefferson and/or to extract concessions from either candidate, while the two internally tied delegations

<sup>3</sup>If Virginia had not switched from districts to the general ticket for the reason Jefferson identified, the Federalists might have carried enough Virginia districts to keep Adams in the White House.

<sup>4</sup>But with this further twist. Four electoral votes from Georgia had been improperly certified, though the ‘intent of the voters’ was clear enough (four votes each for Jefferson and Burr). Had these electoral votes been disqualified as invalid, no candidate would have received the required 70 electoral votes, in which case the House could have chosen any of the five candidates who received electoral votes as President. But Vice President Jefferson, presiding over the counting of electoral votes, did not disqualify them and ‘counted himself [and Burr] in’ (Ackerman and Fontana 2004).



had to abstain. For 35 ballots, the House deadlocked: eight for Jefferson, six for Burr, with two abstentions. Ultimately, Federalists within in the tied delegations abstained, resulting in Jefferson's election on the 36th ballot.<sup>5</sup>

And things could have been even worse for the Republicans. A single Federalist elector had withheld a vote from Pickney, giving it to John Jay instead, so as to avoid an Adams-Pickney tie in the event of a Federalist electoral vote victory. Had this elector cast his second vote for Burr rather than Jay, Burr would have immediately been elected President on the basis of electoral votes (with no opportunity for the House to reverse the outcome) and Jefferson, the presidential nominee of the winning party, would have remained Vice President.

After this fiasco, Congress proposed, and the states quickly ratified, the Twelfth Amendment to the Constitution, under which each elector would cast separate and designated votes for President and Vice President. Thus the required electoral vote majority for President (and the separate electoral vote majority for Vice President) became a simple majority of electoral votes cast for each office (in turn equal to the total number of electors), which at most one candidate for each office could achieve. If no candidate received the required simple majority for President, the House (still voting by state delegations) would choose from among the top three candidates, rather than the top five.<sup>6</sup> If no candidate received the required majority for Vice President, the Senate (voting individually) would choose from among the top two candidates. While early drafts of the amendment included a requirement that electors be popularly elected from districts (thereby making general what Jefferson and others deemed the best option for selecting electors), this provision was subsequently dropped (Kuroda 1994). The Twelfth Amendment remains the constitutional language governing presidential elections to this day.

#### 4 Political strategy and institutional equilibrium: the transformation of the Electoral College

By the 1830s, the Electoral College, already formally modified by the Twelfth Amendment, had been further transformed into the kind of (essentially) automatic popular vote counting system that exists today. This transformation was driven largely by the development of a two-party system, and was brought about without any further constitutional amendments or change in federal law (other than a law passed by Congress in 1845 that designated a uniform day for the selection of electors), but rather by changes in state laws and party practice.

The principal additional elements in the transformation of the Electoral College were:

- (1) the essentially universal use of 'pledged electors', who 'always voted at their party's call and never thought of thinking for themselves at all'<sup>7</sup>;
- (2) the essentially universal practice of popular election (by increasingly inclusive electorates), rather than legislative appointment, of electors;

<sup>5</sup>Federalist members of two Federalist-controlled delegations also abstained on the 36th ballot, so the final vote was ten for Jefferson and four for Burr, with two abstentions.

<sup>6</sup>Presumably the field of candidates from which each house of Congress could chose in the event of an Electoral College deadlock was cut back in recognition of the fact the development of political parties meant that there would rarely be more than two or three candidates winning electoral votes for each office.

<sup>7</sup>To quote the First Lord of the Admiralty in Gilbert and Sullivan's *HMS Pinafore*. However, nine 'faithless electors' have violated their pledges (all since 1948) and 14 'unpledged electors' were elected in 1960.



- (3) the essentially universal practice of popularly electing electors on a statewide ‘general ticket’, rather than from single-member districts or in others ways that might result in splitting a state’s electoral votes; and
- (4) the fact that the two-party system almost guarantees that only two tickets win electoral votes, and therefore one or the other party wins a majority of electoral votes, keeping the election out of the House.

We have already noted the first point, which was well established even by the time of the first contested presidential election in 1796.

In early elections the mode of selecting presidential electors was regularly manipulated by party politicians in each state, on the basis of partisan calculations. By 1832, presidential electors were almost universally (South Carolina was the lone holdout) selected by popular election. Why were state legislatures willing to give up the power to select presidential electors? One consideration was that the intensity of national party competition declined after 1800 (the Federalists never again won a national election), so party politicians had less reason scramble for every possible advantage. Moreover, legislative appointment of electors was disrupting state legislative elections in a way that complicated the lives of their members.<sup>8</sup>

Furthermore, by 1836, the mode of popular election in every state was the general ticket, rather than election from districts (or by some kind of proportional representation), thereby bringing about the almost universal (and often criticized) ‘winner-take-all’ system for the casting of electoral votes at the state level.<sup>9</sup> Why did election of electors by districts give way to election of electors at-large on a general ticket? In the first instance, the partisan strategic considerations expressed by Jefferson in his letter to Monroe probably were dominant. In the longer run, party considerations were reinforced by bipartisan state strategic considerations: no matter what other states may do, each state could enhance the influence of its voters in presidential politics by casting its electoral votes on a winner-take-all basis.<sup>10</sup> As we shall see, even if all states start out using a district plan, there is no ‘equilibrium’ until all states use the winner-take-all method, though this turns out to be an equilibrium more favorable to large states than the district system starting point.

Given a two-party system accommodated by the Twelfth Amendment, it is virtually assured that one or the other ticket receives the required majority of electoral votes. Thus the Electoral College system was transformed into something that in a second way made it more favorable to large states than the Framers expected: not only did large states gain more power in the first stage (due to winner-take-all mode of casting of electoral votes) but the first stage was rendered (almost always) conclusive, reliably keeping the election out of the House (where small states have equal power). On this point, the election of 1824—the

<sup>8</sup>This consideration also helps account for the later willingness of state legislatures to ratify the Seventeenth Amendment, thereby giving up the power to select U.S. Senators (Riker 1955).

<sup>9</sup>Maine (since 1972) and Nebraska (since 1992) use the ‘Modified District Plan’ under which one elector is elected from each congressional district and two are elected at-large. The 2008 election was the first in which this practice actually produced a split electoral vote (in Nebraska, where Obama carried one congressional district).

<sup>10</sup>To take a recent example, in the mid-1990s the Florida state legislature gave serious consideration to switching to a district system for selecting electors, though it ultimately rejected the proposal. If it had adopted the proposal, the 2000 election would have differed in two important ways. First, considering only the mechanical effects of the change, Gore would have straightforwardly won the presidency (by collecting about half of Florida’s electoral votes). Second, considering strategic effects, Florida would have received far less attention from both candidates in the 2000 campaign (and this no doubt was the primary consideration that led the legislature to reject the district plan).

second and last time an election was thrown into the House—is the ‘exception that proves the rule.’

By 1820 the Federalist Party had entirely collapsed at the national level, and James Monroe was unopposed when he ran for his second term. What we may call ‘Inverse Duverger’s Law’ implies that, if one party in a (heretofore) two-party system is greatly weakened, or is unable or unwilling to compete effectively, the dominant party will quickly break apart into multiple factions, because the external threat that had kept it together has been removed. Consistent with this ‘inverse’ principle, the totally dominant Democratic-Republican Party split into factions in the 1824 election, with the result that four candidates, John Quincy Adams, Andrew Jackson, Henry Clay, and William Crawford, all nominally belonging to the same Democratic-Republican party, ran in the presidential election. Unsurprisingly, no candidate received a majority of the electoral votes and the election was thrown into the House.

Preferences over these candidates in the House (and in the nation as a whole) were likely more or less single-peaked, with Adams and Jackson at either extreme and Clay (‘the Great Compromiser’) being the centrist candidate who was almost everyone’s second preference. Crawford, who was in poor health, had little support, but he won electoral votes from his home state of Georgia and a few others. Jackson and Adams placed first and second, respectively, in electoral votes, but Jackson fell short of the required majority. As is common in multi-candidate plurality elections, Clay as the centrist candidate with few first preferences but much second-preference support, was ‘squeezed out’ and received few electoral votes. Indeed, he placed fourth behind Crawford in electoral votes and, under the Twelfth Amendment, the House could choose only from among top three candidates. Given the polarization between Adams and Jackson supporters and Clay’s centrist position (plus the fact that Clay was Speaker of the House), the House probably would have elected Clay as President if it could have, i.e., if it could still have chosen from the top five candidates or if Crawford had not displaced Clay from third place in the electoral vote standings. Even if Adams or Jackson had won the electoral votes cast for Crawford, Clay would have been among the top three and eligible for House election.<sup>11</sup>

By 1828, ‘regular’ Duverger’s Law reasserted itself, as the different factions in the old Democratic-Republican party organized themselves into a new two-party system of National Republicans (and then Whigs) and Democrats. From this time until today, the Electoral College has essentially functioned as a mere popular vote-counting mechanism—that is to say, the President has been popularly elected, not by single national popular vote, but by separate state popular votes aggregated by adding up electoral votes awarded on a winner-take-all basis to the majority winner in each state. This means that the identity of the President-elect is known shortly after Presidential election day.

## 5 Voting power in weighted voting systems<sup>12</sup>

Perhaps the most notable characteristic of the transformed Electoral College is its winner-take-all feature with respect to the casting of state electoral votes. At least one delegate to

<sup>11</sup> However, if Jackson had won 32 or more of Crawford’s 41 electoral votes, he would have been elected without a House runoff. New York’s 36 electoral votes were split among all four candidates. If Adams had won Crawford’s five electoral votes in addition to the 26 he actually won, he probably would have lost the election, as Clay then would then have placed third in electoral votes and probably won the House runoff. This provides a historical example of ‘monotonicity failure’ in runoff elections.

<sup>12</sup> This section summarizes material presented in Sects. 1–2 of Miller (2009).

the Constitutional Convention understood that the casting of bloc votes affects voting power. In a report to the Maryland legislature, Luther Martin (a delegate to the convention and an opponent of the ratification of the Constitution) argued that:

Even if the States who had the most inhabitants ought to have the greatest number of delegates [to the proposed House of Representatives], yet the *number of delegates* ought not to be in *exact proportion* to the *number of inhabitants* because the influence and power of those states whose delegates are numerous will be *greater*, when compared to the influence and power of the other States, than the *proportion* which the numbers of their delegates bear to each other; as, for instance, though Delaware has *one* delegate, and Virginia but *ten*, yet Virginia has *more than ten times* as much *power* and *influence* in the government as Delaware. (Farrand 1937, vol. III: 198–199)

Martin assumed that each state delegation in the House would cast its votes as a bloc, and he went on to count up various voting combinations of states in order to support his claim. While Martin's expectation that state delegations in the House would act as blocs was not borne out, we have seen that state electoral votes would soon be cast in blocs, and the Electoral College has subsequently been one of the principal institutions to which voting power analysis has been applied.<sup>13</sup>

Martin's objection to apportioning seats proportionally to population clearly anticipated one of the fundamental propositions of modern voting power analysis—namely, that *voting power* is not the same as *voting weight* (e.g., electoral votes, parliamentary seats, etc.). Indeed, when Riker (1986) discovered Martin's argument, he thought it sufficiently insightful to be characterized as 'the first power index' (though Martin never proposed an actual summary measure of voting power).

The development in the mid-1950s of the Shapley-Shubik (1954) voting power index provided a tool for evaluating *a priori* voting power in the Electoral College. While it is not possible to apply the Shapley-Shubik index directly to weighted voting games of the magnitude of the Electoral College (51!  $\approx 10^{66}$  permutations of states must be examined), by the late 1950s Monte Carlo computer simulations provided estimates of state voting power. Since then other mathematical and computational techniques have been developed that can provide still more accurate values. Moreover, a rival voting power measure proposed about a decade later by Banzhaf (1965, 1968) is (arguably) more appropriate than Shapley-Shubik for evaluating *a priori* voting power (Felsenthal and Machover 1998).

While voting power measures tell us that voting power need not be proportional to voting weight, they also tell us that often power is (approximately) proportional to weight, especially as the number of voters increases.<sup>14</sup> Under the provisional apportionment of House seats to which Martin referred, each state's share of voting power was in fact closely aligned with its seat share. And the same statement applies to the much larger Electoral College today; only California has a noticeably greater share of voting power than of electoral votes, and its advantage is modest.

<sup>13</sup>However, the U.S. Electoral College has in recent decades been displaced in this respect by the ever changing voting system used by the European Union Council of Ministers.

<sup>14</sup>For an up-to-date discussion of this issue, see Leech (forthcoming).

## 6 Comparative institutional analysis

Because of the voting power and election inversion problems (among others), a number of Electoral College variants have been proposed or discussed, under which electoral votes would be apportioned among, or cast by, states in different ways.

Variants of the first type retain the winner-take-all practice for casting electoral votes but employ different formulas for apportioning electoral votes among states—for example, apportionment on the basis of House seats only, apportionment of fractional electoral votes precisely proportional to population, or apportionment of electoral votes equally among the states.

Variants of the second type, which have been more widely discussed, retain the existing apportionment of electoral votes among the states but change the winner-take-all practice for casting electoral votes (or, in one case, adds ‘national’ electoral votes). Variants of the second type include the following:

- (a) each state is divided into as many equally populated single-member districts as it has electors, and one elector is elected from each district (*Pure District Plan*);
- (b) one elector is elected from each congressional districts and two are elected statewide (*Modified District Plan*);
- (c) the electoral votes of each state are cast (fractionally) for party tickets in precise proportion to their state popular vote totals (*Pure Proportional Plan*);
- (d) the electoral votes of each state are cast in whole numbers for party tickets on the basis of an apportionment formula applied to the state popular vote (*Whole Number Proportional Plan*); and
- (e) the existing electoral votes are apportioned and cast as at present, but the national popular vote winner earns an additional electoral vote bonus of some magnitude (*National Bonus Plan*).<sup>15</sup>

The remaining alternative is abolition of the Electoral College and its replacement by a nationwide popular vote.

Political scientists can run historical (or simulated) election data and through these Electoral College variations and powerfully demonstrate Duverger’s (1954) ‘mechanical effects’ of the variants—that is, show how different electoral systems can translate the same popular votes into different electoral votes and a different winner. They can also constructively speculate about the ‘strategic effects’ (or ‘psychological effects’ in the language of Duverger 1954)—that is, indicate how different electoral systems induce different choices by voters, candidates, and parties. And finally political scientists can speculate still more generally about the ‘system effects’ of alternative modes of presidential selection. A large political science literature falls into this category; it typically either criticizes the existing Electoral College (e.g., Wilmerding 1958; Zeidenstein 1973; Peirce and Longley 1981; Abbott and Levine 1991; Longley and Peirce 1996; and Edwards 2004) or defends it against these criticisms (e.g., Best 1971; Diamond 1977; Hathaway 1991; Ross 2004). The defenses tend to be more philosophical than analytic, and they often quote

<sup>15</sup> As noted earlier, the Pure District Plan was incorporated into early versions of the Twelfth Amendment, but was later dropped. The Modified District and Pure Proportional Plans were both considered as constitutional amendments in the 1950s. The Whole-Number Proportional Plan was proposed as Proposition 36 in Colorado in 2004 (to apply in Colorado only). The principal purpose of the National Bonus Plan is evidently to reduce the probability of an election inversion—the larger the bonus, the less likely inversions. A bonus of 102 electoral votes has been most commonly discussed. (It would make sense, however, to make the bonus an odd number so as to preclude electoral vote ties.)

Senator John F. Kennedy's 1956 senate speech in opposition the Lodge-Gossett (Pure Proportional) Plan (e.g., Ross 2004: 95):

[I]t is not only the unit vote [i.e., winner-take-all feature] for the Presidency we are talking about, but a whole solar system of governmental power. If it is proposed to change the balance of power of one of the elements of the solar system, it is necessary to consider all the others.

Kennedy's point is well taken—the American political system is indeed a 'system' and a defining characteristic of system is that you can't change just one part of it (Jervis 1997).

## 7 Individual voting power and the Electoral College<sup>16</sup>

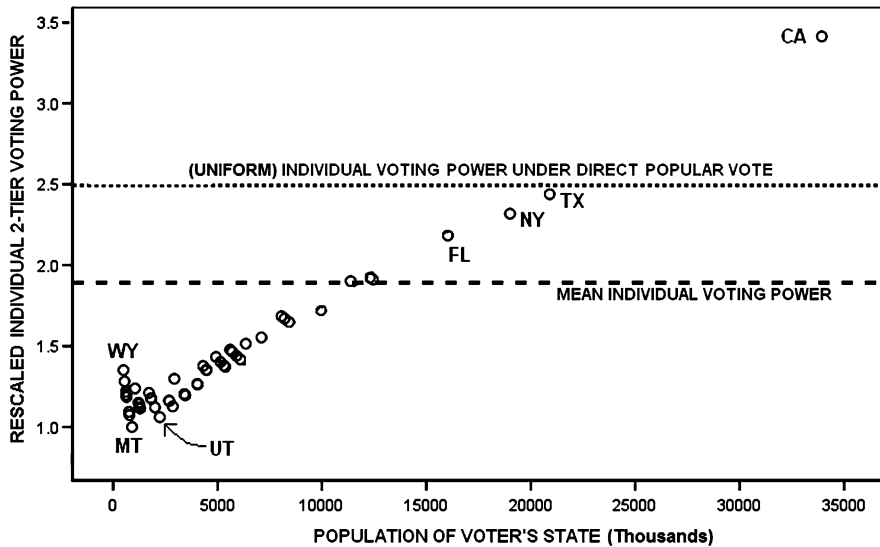
Does the transformed Electoral College system give voters in different states unequal voting power? If so, are voters large or small states favored and by how much? With respect to this question, directly contradictory claims are commonly expressed as result of the failure by commentators to make two related distinctions: the theoretical distinction between 'voting weight' and 'voting power', and the practical distinction between how electoral votes are apportioned among the states (which determines their voting weights), and how electoral votes are cast by states (which influences their voting power).

Those claiming that the Electoral College system favors voters in small states point to the advantage small states have with respect to the apportionment of electoral votes. States have electoral votes equal to their total representation in Congress. Since every state is guaranteed at least one seat in House and has two Senators, every state is entitled to at least three electors regardless of population. Approximate proportionality to population takes effect only beyond this three-electoral-vote floor, and this creates a substantial small-state advantage in the apportionment of electoral votes.

However, other commentators (starting with like Luther Martin) emphasize that voting power is not proportional to voting weight (e.g., electoral voters), for two reasons. First, the voting power of a state depends not only on its share of electoral votes but on how the remaining electoral votes are distributed among the other states. Second, the voting power of a state depends on whether it casts its electoral votes as a bloc for a single candidate or splits them among two or more candidates, as well as how other states cast their votes. Intuition seems to tell us that the fact that elector slates are elected on a general ticket and therefore cast as bloc produces a large-state advantage—but intuition doesn't tell us how big this advantage may be. Moreover, we saw earlier that this intuition is only weakly supported in the state voting power calculations. The large-state advantage in the 51-state weighted voting game resulting from winner-take-all is not great enough to counterbalance the small-state advantage with respect to apportionment except in the case of the mega-state of California, so those claiming a (modest) small-state advantage may appear to be correct. However, the top-tier 51-state weighted voting game entailed by the transformed Electoral College is a chimera, and the picture changes dramatically when we consider the more realistic 130-million-voter two-tier popular election.

The Banzhaf (1965, 1968) voting power measure has a direct and meaningful useful interpretation. Suppose we know nothing about the workings of a voting system other than its formal rules. Then our *a priori* expectation must be that voters vote randomly, i.e., as if

<sup>16</sup>This section summarizes material in Miller (2009).



**Fig. 1** Individual voting power by state population under the existing apportionment of electoral votes

they were independently flipping fair coins. It then turns out that a voter's Banzhaf power is the probability that the individual casts a 'decisive vote' that decides the election (in effect, the probability that the vote is otherwise tied). Thus, in a two-tier popular-vote system such as the transformed Electoral College system, an individual's voting power is the probability that his vote is decisive within the state times the probability that his state's bloc of electoral votes is decisive in the Electoral College. Clearly the first term is inversely related to the number of voters in the state, while the second is positively related to the number of electoral votes the state cast (and thus to the number of voters in the state). However, probability theory tells us that, given random voting, the first probability is inversely proportional, not to the number of voters in the state, but (to a very good approximation) to the *square root* of this number. Therefore, overall voting power in the two-tier voting system increases with the square root of the population of the state, much more than counterbalancing the small-state advantage in apportionment. This effect, first noted with explicit reference to the Electoral College by Banzhaf (1968), may therefore be dubbed the 'Banzhaf effect', and it implies that voters in the most favored state (California) have almost three and half times the voting power as voters in the least favored state (Montana, the largest with only one House seat).<sup>17</sup> (Without the small-state apportionment advantage, this ratio would be about ten to one.)

The complete picture for the existing Electoral College is displayed in Fig. 1, which shows how individual voting power under the existing Electoral College varies across states with different populations. Voting power has been rescaled so that the power of voters in the least favored state is set at 1.0000 and other values are multiples of this. It can be seen that voters in the smallest states have an advantage over those in somewhat larger states, though

<sup>17</sup> Likewise, if Luther Martin had focused on the two-stage voting power of *individual members* of the House (on the assumption that state delegations would cast bloc votes), his objection would have been much better founded, as each of the ten Virginia members would have had more than two and half times the Banzhaf voting power of the lone Delaware member.

there is a scattering effect as small states fall just above or below House seat thresholds. But the large-state advantage in individual voting power is conspicuous.

Another feature of the Banzhaf power measure is that mean individual voting power varies under different voting rules. For example, each voter in a simple majority-rule system has more voting power than each of the same number of voters in a unanimity-rule system. Indeed, Felsenthal and Machover (1998: 56) have shown that simple majority rule not only gives all voters equal power but gives these individuals voting power greater than the mean level of voting power under any other system. The horizontal lines in Fig. 1 show how mean individual voting power under the existing Electoral College falls short of (uniform) individual voting power under a national popular vote system. Only voters in the presently most advantaged state of California would lose voting power under a national popular vote and, on average, individual voting power would be about 1.35 times greater.<sup>18</sup>

Electoral College variants that make the apportionment of electoral votes more proportional to population while keeping winner-take-all mode of casting them obviously further enhance the advantage of voters in large states. On the other hand, variants that maintain the existing apportionment but replace winner-take-all with systems that allow state electoral votes to be split not only remove any advantage to voters in large states but give voters in small states a voting power advantage comparable to what large-state voters now have. The voting power implications of the Whole Number Proportional Plan are particularly bizarre (see Beisbart and Bovens 2008). Voters in the seventeen states with an even number of electoral votes are rendered (essentially) powerless. Voters in the 33 states and the District of Columbia with an odd number of electoral votes have voting power (essentially) as if each of these states had equal voting weight (as in the House runoff). Here's why this happens. In random elections with many votes, the popular vote in each state is split almost equally between the two candidates. If a state has an even number of electoral votes, its electoral votes are invariably equally split and, if it has an odd number of electoral votes, effectively only one electoral vote is up for grabs. The voting power implications of the National Bonus Plan depend on the magnitude of the bonus. If the bonus very small, we have essentially the existing Electoral College; as the bonus increases, voting power becomes more equal and, in all but the largest states, mean voting power increases. When the bonus increases to about 150, the Plan is essentially the same as a national popular vote.<sup>19</sup>

There are several important critiques of Banzhaf voting power measurement as applied to the Electoral College and similar two-tier voting systems (e.g., Margolis 1983; Gelman et al. 2004). These critiques rest fundamentally on the (indisputable) observation that random elections in no way resemble actual voting patterns. But these critiques overlook the fact that the Banzhaf measure pertains to *a priori* voting power. It measures the power of states—and, in the two-tier version, of individual voters—in a way that takes account of the Electoral College voting rules but nothing else (e.g., which states may have 'battleground' status in

<sup>18</sup>These calculations can be modified to demonstrate the power of Jefferson's observation that it would be folly for a state to split its electoral votes while other do not. If Florida had switched to the pure district system in the 1990s, the power of individual voters in Florida would have been reduced to about one-third of the power of the heretofore least favored Montana voters (and the power of voters in all other states would have been slightly increased). More generally, this indicates why all states converged on casting bloc votes by the 1830s and why (almost) no states have since deviated from this practice. For a related argument, see Hummel (2011). While it appears that Maine and Nebraska have been penalizing themselves for several decades, the penalty for departing from winner-take-all is less severe for smaller states. Moreover, both states use the Modified (not Pure) District Plan, which hardly differs from winner-take-all for small states.

<sup>19</sup>Only when the bonus reaches 533 is it logically equivalent to a national popular vote. Miller (2009) presents charts similar to Fig. 1 for all Electoral College variants.



a particular election). But we can agree with the critique to the extent that a valuable paper yet needs to be written addressing the question “Is the Banzhaf Effect for Real?”

## 8 Election inversions<sup>20</sup>

It is well known that the Electoral College is subject to *election inversions* such as occurred in the 2000 presidential election, in which the candidate who wins the most popular votes fails to win the most electoral votes and therefore loses the election. However, the likelihood of inversions and the factors that produce them are less well known, and there has been considerable confusion about the circumstances under which election inversions occur. For example, the susceptibility of the Electoral College to inversions is sometimes blamed on the small-state bias in the apportionment of electoral votes and/or the ‘winner-take-all’ manner of casting state electoral votes, but inversions can occur in the absence of either or both of these factors.

The Electoral College has produced the three historical election inversions, in 1876, 1888, 2000. In addition, it produced one massive but ‘latent’ inversion in 1860, when Lincoln won an electoral vote majority on the basis of a popular plurality of less than 40%. The Democratic Party had split into Northern and Southern wings, each with its own presidential candidate (Stephen Douglas and John Breckinridge, respectively) and a fourth candidate, John Bell, had been nominated by the remnants of Southern Whigs under the label of the Constitutional Union Party. Under a national popular vote, the two Democratic candidates would have been ‘spoilers’ against each other, if we can suppose that, in the event of the withdrawal of one, the other would have inherited most of his support and would therefore have defeated Lincoln. However, under the Electoral College system, Douglas and Breckinridge were *not* spoilers against each other. Indeed, Lincoln’s electoral vote victory is preserved even if we suppose both that (i) the Democrats had held their Northern and Southern wings together and thereby won all the votes captured by each wing separately, and (ii) the election had been a typical two-candidate contest, with the Democrats inheriting all the votes for Bell. Even against such a unified opposition with a popular vote majority of more than 60%, Lincoln would have won the 1860 election on the basis of electoral votes.

We can pursue a more informative empirical analysis of election inversions that by using state-by-state popular vote percentages to construct what I have elsewhere called a ‘Popular Vote-Electoral Vote’ (PVEV) function for election based ‘uniform swing analysis’ (Miller 2012). In each election we can identify an *inversion interval* that lies either just below or above the 50% mark in the two-party national popular vote. For example in 2008, when Obama won 53.69% of the two-party popular vote, the inversion interval extended from a Democratic popular vote of 49.14% to 50%. This means that, if the 2008 popular vote had swung against Obama uniformly across all states, he still would have won an electoral vote majority provided that he had won at least 49.14% of the popular vote. Thus there was an inversion interval 0.86 of a percentage point wide extending from 49.14% to 50.00% of the Democratic popular vote that would produce an election inversion in which Obama would have won a majority of the electoral votes (and the Presidency) while winning less than 50% of the two-party popular vote. (The comparable inversion interval in the counterfactual 1860 election extended from 50% to 61.26% of the Democratic popular vote, giving a pro-Republican inversion interval 11.26 percentage points wide.)

<sup>20</sup>This section summarizes material in Miller (2012).

If we repeat this analysis for all presidential elections since 1828 (excluding those in which a third candidate carried one or more states), inversion intervals are typically quite small, rarely exceeding two percentage points, with a mean absolute magnitude (ignoring whether they reflect pro-Republican or pro-Democratic bias) of only 0.76 of a percentage point and, unlike 2008 (but like counterfactual 1860), exhibiting an anti-Democratic bias. However, considering only elections from the mid-twentieth century on, the intervals have been smaller, rarely exceeding one percentage point and averaging about 0.5 of a percentage point, and exhibiting no particular party bias. These data suggest an overall *a priori* inversion probability of less than 0.05, which diminishes to almost zero if the popular vote is at all lopsided and increases to 0.5 as the popular vote approaches a perfect tie.

Three distinct factors combine to make election inversions possible under two-tier voting systems like the Electoral College. The first is the *rounding effect* necessarily entailed by the fact that a PVEV function moves up or down in discrete steps as the popular vote swings up or down essentially continuously. For example, as the Democratic popular vote swings upwards, the pivotal state that gives the Democratic candidate 270 or more electoral votes almost certainly will not tip into the Democratic column *precisely* as the Democratic popular vote crosses the 50% mark but rather a little below or above the 50% mark, thereby producing a (pro-Democratic or pro-Republican) inversion interval of at least some small magnitude.

The second source lies in *apportionment effects*. We start with the theoretical benchmark of a *perfectly apportioned* two-tier electoral system, in which apportionment effects are eliminated because electoral votes are apportioned among the states in a way that is precisely proportional to the total popular vote cast within each state (which requires that states be apportioned fractional electoral votes). Perfect apportionment is an analytical tool; as a practical matter, an electoral system can be perfectly apportioned only retroactively—that is, after the popular votes in each state have been cast and counted. Apportionment effects encompass whatever may cause deviations from perfect apportionment. The Electoral College system is imperfectly apportioned for the following reasons: (i) electoral votes are apportioned in small whole numbers, and therefore cannot be precisely proportional to anything; (ii) electoral vote apportionments are anywhere from two to ten years out-of-date at the time of a presidential election; (iii) the apportionment of electoral votes is skewed in favor of smaller states; (iv) electoral votes are apportioned to states on the basis of their total population and not on the basis of their voting age population, or voting eligible population (excluding non-citizens, etc.), or number of registered voters, or number of actual voters in a given election.<sup>21</sup> Historically, the most important apportionment effect resulted from the suppression of (especially, but not exclusively, African-American) voting turnout in the Jim Crow South.

The third source lies in *distribution effects* resulting from winner-take all at the state (or district) level, which can make one candidate's popular vote support be more 'efficiently' distributed than the other's. The most extreme possible election inversion in a perfectly apportioned system results when one candidate wins just over 50% of the popular votes in just over 50% of the districts (or in states that collectively have just over half the electoral votes) and no popular votes in the remaining districts or states. The winning candidate therefore wins just over 50% of the electoral votes with just over 25% of the popular vote, implying an inversion interval just short of 25 percentage points wide. The counterfactual 1860 election approximates this extreme pattern: Lincoln won modest popular vote pluralities in all

<sup>21</sup>In addition, the 'three-fifths compromise' resulted in a substantial apportionment effect benefiting slave states through the 1864 election.

the free states (other than New Jersey) which collectively cast about 60% of the electoral voters, while winning no electoral votes and almost no popular votes in the slave states. The inversion interval was only 11 percentage points wide partly because distribution effects fell short of the theoretical maximum, but primarily because substantial apportionment effects favored slave states and the Democrats.

The overall pattern in of inversion intervals since 1828 duplicates in attenuated form what we see in the counterfactual 1860 election: historically apportionment and distribution effects have worked in opposite directions, the former favoring Democrats and the latter Republicans, producing relatively small inversion intervals. However, this aggregate pattern results almost entirely from elections in the Jim Crow era. No consistent pattern appears in the earlier and later periods.

None of the Electoral College variants previously discussed precludes an election inversion (though the Pure Proportional Plan does remove rounding and distribution effects), but it remains to be determined whether they would make election inversions more or less likely. A theoretically productive approach is compare the probability of election inversions in random elections under different plans. Indeed, Feix et al. (2004) have already estimated, by means of simulations, the probability of election inversions in uniform (in which all districts have the same number of voters and voting weight) and perfectly apportioned two-tier electoral systems, which they find quickly approaches a limit of about 0.205 as the number of districts increases. My own preliminary work along the same lines indicates that the probability of inversions is somewhat greater than this in Electoral College simulations, but the extent to which this is due to non-uniform districts or to imperfect apportionment is as yet unclear. One advantage of the random election approach is that systematic distribution effects are removed and estimates of inversion probabilities therefore reflect only the properties of the electoral institutions themselves (with respect to the Electoral College, the manner of apportioning and casting electoral votes) and not more contingent features pertaining to the geographical basis of party support in any particular historical period.

## 9 Electoral College deadlock

In every presidential election since 1824, once it was known who had won the electoral votes of each state, one candidate has always had the required majority of electoral votes. If and when it happens that no candidate wins the required majority of electoral votes, there will be a (prospective) Electoral College deadlock.

Apart from the possibility of a 269–269 electoral vote tie, a necessary condition for an Electoral College deadlock is the presence of a third candidate who wins some electoral votes. This in turn requires that the third candidate wins at least one-third of the (three-candidate) popular vote in at least one state. The likelihood of an Electoral College deadlock depends not only on how well the third candidate does and but also on how close the contest between the two leading candidates is. For example, over the course of the 1968 campaign, polls showed that, even as George Wallace's support fell, the Nixon-Humphrey race was tightening up, so the likelihood of an Electoral College deadlock actually increased over the course of the campaign.

In considering how an Electoral College deadlock might be resolved, it is essential to keep in mind the specifics of the sequential choice process outlined in the Constitution, and it is useful to distinguish between two different (ideal) types of third-party candidates who might deadlock the Electoral College, as the implications of deadlock are rather different for the two types.

With respect to the former, presidential electors are selected on presidential election day in early November. In mid-December, the electors meet in their respective state capitals to cast their electoral votes, which are then transmitted to Congress. In early January, the electoral votes are counted before a joint session of Congress (made up of members elected at the same time as the electors). If no candidate receives 270 electoral votes, the House promptly meets to select a President from among the three candidates with the most electoral votes, following rules established in 1825. Presumably the vote for Vice President would also be deadlocked, in which case the Senate would meet to choose a Vice President from (only) the two top candidates.

Historically, the typical third candidate has been an *insurgent*—that is, a candidate who is positioned either (more or less) to the right or to the left of both major candidates and appeals to a section of the electorate with some special grievance. This typically gives an insurgent a sectional base of support that allows him to carry several states and potentially deadlock the Electoral College, in which case he can perhaps play the role of a ‘kingmaker’. Examples of insurgent candidates include James Weaver (Populist) in 1892, and Robert LaFollette (Progressive) in 1924, Strom Thurmond (Dixiecrat) in 1948, unpledged elector slates (Dixiecrat) in 1960, and George Wallace (American Independent) in 1968. Henry Wallace (Progressive) in 1948 and Ralph Nader (Green) in 2000 fit the insurgent pattern with respect to ideological positioning but neither had a sectional base so, even given a close contest between the two major candidates, neither had a reasonable prospect of winning electoral votes and deadlocking the Electoral College.<sup>22</sup>

In recent decades, a different type of third candidate has attracted more attention and speculation, namely an *independent* (or compromise) candidate—that is, one who is ideologically positioned (more or less) between the two major candidates and is running as an independent or on some kind of ‘national unity’ ticket. Such a candidate may appeal to a broad segment of the electorate (especially independents) unhappy with both major parties and may have some reasonable prospect of being elected President, if not on the basis of electoral votes then in a House runoff. Without a sectional base, such a candidate needs upwards of one-third of the popular vote to win electoral votes and, if such a candidate were to run more or less even with both major-party candidates, the distribution of electoral votes among the three candidates would be highly uncertain. Examples include Theodore Roosevelt in 1912 (although his candidacy primarily reflected a split in one of the two major parties), John Anderson in 1980, and Ross Perot in 1992 and 1996. However, neither Anderson nor Perot was strong enough as election day approached to have any reasonable prospect of winning electoral votes deadlocking the Electoral College. Colin Powell in the 1990s and Michael Bloomberg more recently have been discussed as possible ‘national unity’ candidates.

Even if the identity of the President-elect remains unknown on the day after the presidential election due to a prospective deadlock, the partisan makeup of the new Congress will be known. If one-party controls 26 or more state delegations, the outcome of a prospective House election may be fairly predictable. However, some members of the House might be willing (or even anxious) to vote against their party’s President candidate. Especially

<sup>22</sup>However, each was a prospective ‘spoiler’ to the Democratic ticket—a role that Nader achieved and that Wallace came close to achieving. In his potential spoiler role, Wallace’s candidacy interacted with Thurmond’s insurgent candidacy, as Wallace deprived Truman of New York’s electoral votes and he came close to doing the same in California and Ohio. But if Wallace had succeeded in tipping the latter two states into the Republican column, the result would not have been a Dewey electoral victory but an Electoral College deadlock, resulting from the 46 Southern electoral votes cast for Thurmond (including one from a ‘faithless’ Democratic elector).

if neither party controls 26 state delegations, there would be a strong prospect of a House deadlock on early ballots.

Two distinct periods of uncertainty, conflict, and bargaining would arise in the event of an Electoral College deadlock: between the selection of electors and the casting of electoral votes, and between the casting of electoral votes and counting them before the joint session of Congress. Each period corresponds to two distinct modes of breaking the deadlock: bargaining over the casting of electoral votes and bargaining within and between state delegations in the House, with the latter also encompassing possible House-Senate interactions. In the manner of Madison's strategic analysis noted earlier, the outcome of the first stage may depend on expectations concerning the prospective outcome of the second stage, which may be either quite predictable or highly uncertain. Neither type of third candidate (in contrast to both major-party candidates) would have an automatic base of support in the House. However, a 'national unity' candidate might ultimately win in the House (as Henry Clay likely would have in 1825), while an insurgent candidate almost surely could not.

An insurgent candidate would likely try to strike a bargain with one of the two major candidates, promising electoral votes in return for concessions in policy and/or personnel.<sup>23</sup> Such a candidate would have considerable bargaining leverage before electoral votes are cast but (lacking a base of support in the House) would lose it entirely afterwards. Other things equal, the insurgent candidate would expect to make a deal with the ideologically more proximate major-party candidate. But other things might not be equal, since partisan makeup of the new House would be known. If the outcome of a House election were predictable, the major-party candidate expected to lose in the House would have a stronger incentive to deal with the insurgent candidate.

An independent third candidate might seek to bargain with the major-party candidates, in the same manner as an insurgent candidate. Given his centrist positioning, such a candidate could more readily play the two other candidates off against each other. But, especially if he ran ahead of one or both major-party candidates, such a candidate might try to bargain the other way, i.e., offer the major candidates promises in return for their support. However, the regular party candidates could not reliably promise electoral votes the way Wallace and other insurgents might. Democratic and Republican electors are unconditionally pledged to support their party nominees and are bound by party rules (and, in some states, by law as well). So an Electoral College deadlock involving an independent third candidate probably would not be resolved prior to the casting of electoral votes.

Finally, an Electoral College deadlock resulting from a 269–269 tie almost certainly would not be broken prior to the casting of electoral votes, since the absence of a potential 'kingmaker' third candidate would leave no room for bargaining.

If no deal is made prior to the casting of electoral votes, it will be evident that the House runoff procedure will come into play. While nothing official can happen until electoral votes are counted in early January, there surely would be much preliminary wheeling and dealing,

<sup>23</sup>In 1968 George Wallace extracted from each of his elector candidates a pledge to vote for Wallace *or whomever he designated*, so as to enhance Wallace's bargaining power prior to the casting of electoral votes in the event Wallace was able to deadlock the Electoral College. (The 'unpledged elector' gambit in 1960 was similarly motivated.) Nixon was the ideologically more proximate major party candidate and was perhaps was more willing to make concessions on civil rights and related issues. In the House, Democrats controlled 26 state delegations, Republicans 19, and five were equally divided. However, the 26 Democratic delegations included all Southern and Border state delegations except Virginia's (which was equally divided). Some Southern and Border State Democrats were sympathetic to Wallace, more had constituents sympathetic to Wallace, and many probably preferred Nixon to Humphrey for President, so the outcome of a House election would have been quite uncertain.

focused primarily on the House of Representatives that will choose the President from the top three candidates. But an electoral college deadlock for President presumably implies a deadlock for Vice President as well, so the Senate would also figure in the bargaining.

If the counting of electoral votes confirms an electoral vote deadlock, the Twelfth Amendment requires the House ‘immediately’ to begin balloting for President. Unless it chooses to change them, the House will follow the rules it drew up in 1825 to resolve the Electoral College deadlock of 1824. A quorum consisting of at least one member from two-thirds of the state delegations is required. Election requires support by a majority of all state delegations, i.e., 26 votes. (Though it has three electoral votes, DC has no representation in the House runoff.) Prior to each House ballot, formal balloting takes place within each state delegation. A presidential candidate receives the vote of a state delegation if and only if the candidate is supported by a majority of its members. If no candidate receives such support, the state casts a ‘divided vote’ and effectively abstains. Balloting continues until a President is elected. A motion to adjourn temporarily must be supported by a majority of state delegations.

Since the House contingent procedure has never come into play since the country has had an established two-party system, no one has much idea as to how members of the House would decide how to vote. It is also unclear how the three presidential candidates would behave at this stage. Would they try appeal to House members on the basis of party, ideology, promises of policy or personnel, etc.? Might a candidate withdraw in favor of another? Would they try to strike a deal among themselves? At this stage, an independent third candidate would likely play a pivotal role. Indeed, if the independent candidate were truly an appealing compromise, his or her election might be the way to break a House deadlock.

How would the House election of a President and the Senate election of a Vice President interact? At the outset, the Senate would probably wait to see what happens in the House. The House might easily deadlock for multiple ballots, for a multiplicity of reasons: (i) if some House members initially abstain or vote for the third candidate, their delegations may remain ‘divided’ for many ballots; (ii) even if only two candidates get votes from a delegation, even-number sized delegations may remain ‘divided’; (iii) even if no state delegations are internally divided, the number of states is even, so the House as a whole may be divided 25–25; and (iv) strategic absence by a minority of members appropriately distributed over state delegations could block a quorum. In sum, the House contingent procedure is not a ‘strong simple game’ and has many blocking coalitions.

While the Senate’s role in electing the Vice President may seem to be of distinctly subsidiary importance, that body has two advantages *visa vis* the House, which may give it a critical role in the election of a President. First, if the House remains deadlocked as of January 20, the Twentieth Amendment provides that ‘the Vice President elect shall act as President until a President shall have qualified’. Second, the Senate is unlikely to deadlock, because (i) the Twelfth Amendment allows the Senate to choose between the top two candidates only; (ii) voting is by individuals, not delegations; (iii) support of a simple majority is sufficient for election; and (iv) while the number of Senators is always even, the (outgoing) Vice President can break a tie (presumably). However, a two-thirds quorum is required, as in the House. In sum, the Senate runoff procedure is a strong simple game with no blocking coalitions other than the quorum requirement, so it is unlikely to require more than a single ballot.

The Senate would probably hold off electing a Vice President, on the grounds the grounds that it should (if possible) elect the running mate of the presidential candidate elected by the House. But if the House deadlocks indefinitely, the Senate can name the new Vice President who would act as President as of January 20. Since the Senate can’t deadlock, it may be clear



whom the Senate would elect in the event the House fails to elect, and this very prospect may break the House deadlock.

A deadlock resulting from an electoral vote tie might be even more difficult to resolve, since the election would almost certainly go to the House, and which point no third candidate would be available as a compromise. However, if one candidate had won a clear plurality of the national popular vote, there would be strong pressure on the House to elect that candidate.

## 10 Circumventing formal structure through commitment

Given the problematic nature of the transformed Electoral College and the difficulty of using the constitutional amendment procedure to modify it or replace it with a national popular vote, a so-called ‘National Popular Vote Plan’ (NPVP) has been proposed to circumvent this difficulty. The basic idea is that individual states could cast their electoral votes, not for the presidential candidate winning the popular vote of the state, but for the candidate winning the popular vote nationwide. While amending the Constitution requires ratification by at least 38 states, an interstate compact among a smaller set of states controlling 270 electoral votes could guarantee the election of the national popular vote winner.<sup>24</sup> The National Popular Vote Plan illustrates how institutional rules can be circumvented by a binding agreement among (some) participants (see Ingberman and Yao 1991).

Apart from legal details and uncertainties pertaining to interstate compacts, NPVP raises three sets of problems. The first includes all the issues that also pertain to a constitutional amendment that would abolish the Electoral College and replace with a national popular election. The second pertains to special problems that arise in trying to convert the Electoral College system into a national popular election through this particular device. The third pertains to the credibility of the commitments that states acceding to compact promise to uphold. Some of the issues in the first set were noted earlier and some are alluded to below, but I won’t otherwise address them here.

With respect to the second set of issues, the most basic problem is that, at the present time, the ‘national popular winner’ is an unofficial designation bestowed only by the media and commentators.<sup>25</sup> No official body designates such a winner and, in a very close election, the designation may be contested, and this is precisely the circumstance in which the NPVP would be mostly likely to make a difference. NPVP requires ‘the chief election official of each member state’ to make a determination of ‘the national popular vote winner’ and, in doing so, to treat as ‘conclusive’ official statements concerning the popular vote for president from non-member (as well as member) states. This presumably guarantees that the election officials of all member states would make the same determination of the ‘national popular vote winner’, but it accomplishes this by depending on (possibly questionable and/or contested) statements by officials in non-member states. Furthermore, the national popular vote, however determined, might be extraordinarily close. (In 1880, the recorded national popular vote margin was 1,900.) This would make a national vote recount essential, even if the popular vote were not close in any individual state. But under present law states are the only entities able to conduct recounts, and the NPVP could not compel non-member states to do so.

<sup>24</sup>Under the 2000 apportionment, the 11 largest states control 271 electoral votes. The NPVP is fully explained in Koza et al. (2006); also see the NPVP website: <http://www.nationalpopularvote.com/>.

<sup>25</sup>This observation also pertains to the National Bonus Plan.



There is also the problem that states are not constitutionally required to hold direct popular votes for unified elector slates (so that non-member states might fail, even in principle, to produce statewide presidential popular vote counts), though of course at present all states (including Maine and Nebraska with their district systems) actually do this.<sup>26</sup> The compact requires member states to hold such elections, but obviously it cannot require non-member states to do so. A provision in the plan implies that non-member states that fail to hold such elections will not be included in the determination of ‘the national popular vote winner’. This sidesteps the problem and provides an incentive for all states (non-members as well as members) to (continue to) hold such elections. But if some non-member state were nevertheless to fail to hold such an election (for example, by voting for electors individually) and were thereby excluded from the compact’s determination of a national popular vote winner, and if the outcome of the election turned on this exclusion, a huge controversy would likely arise.

Moreover, the concept of a ‘national popular vote winner’ remains muddled even in principle as long as different states have somewhat different voter qualification laws (regarding residency, felon disqualification, etc.) and—more importantly—considerably different laws pertaining to ballot access for minor parties and independent candidates, with the result that identifying ‘the national popular vote winner’ entails adding up votes across states in which voters were presented with somewhat different sets of candidates.

Finally, there is the issue of who the ‘national popular vote winner’ would be in the event of a genuinely multi-candidate presidential election. In principle (and supposing that ‘national popular vote winner’ means national plurality vote winner), the NPVP has the advantage of reliably keeping elections out of the House of Representatives, but it does so in way that might provoke great controversy—if, for example, the popular vote winner got only about 35% of the vote and no candidate got the required 270 electoral votes when counted in the normal manner.

The third set of issues pertains to the durability of the interstate compact itself, especially in the face of controversies such as those noted above. The compact provides a nice example of a ‘social contract’ in a cooperative game but also highlights the problem of ‘credible commitment’—whether and how the terms of the ‘social contract’ among states could be enforced promptly and reliably in highly controversial cases. Clearly there would be strong incentives for some states to defect from the compact in precisely the circumstances in which the compact produces a winner different from the Electoral College winner, and such defections would tend to be legitimized in circumstances producing the kinds of controversies noted above.

In sum, ‘I foresee many unforeseen difficulties’ with the NPVP.<sup>27</sup> It is something of a jury-rigged addition to an already jury-rigged Electoral College system. In contrast, a properly drafted constitutional amendment could produce new presidential election system from the ground up. If the national popular vote is really to determine the presidential election winner, a federal entity needs to run presidential elections (and, while we are at it, congressional elections as well), with nationally uniform voter qualifications, national voter registration, a nationally uniform ballot access law, etc. In addition, thought has to be given to whether there would be some sort of runoff (instant or otherwise) requirement or not. (These issues are inadequately addressed in most discussions of ‘the popular vote alternative’ to the Electoral College.)

<sup>26</sup> However, in Alabama electors were elected individually in 1960 and no electors pledged to the Democratic ticket were on the ballot 1948 and 1964.

<sup>27</sup> To quote Sir Humphrey Appleby of *Yes, [Prime] Minister*.

## 11 Conclusion

Whatever the merits of the Electoral College as a political institution, it is terrific as a subject for political analysis. In this respect at least, we may say (quoting Hamilton) that, ‘if it not be perfect, it is at least excellent’—it is truly a gift that keeps on giving.

**Acknowledgements** This is a revised and much expanded version of my Presidential Address to the 2010 Annual Meeting of the Public Choice Society Monterey, California, March 11–14, 2010.

## References

- Abbott, D. W., & Levine, J. P. (1991). *Wrong winner: the coming debacle in the Electoral College*. New York: Praeger.
- Ackerman, B., & Fontana, D. (2004). Thomas Jefferson counts himself into the presidency. *University of Virginia Law Review*, 90, 551–643.
- Banzhaf, J. F. III (1965). Weighted voting doesn’t work. *Rutgers Law Review*, 19, 317–343.
- Banzhaf, J. F. III (1968). One man, 3,312 votes: a mathematical analysis of the Electoral College. *Villanova Law Review*, 13, 304–332.
- Barberá, S., & Coelho, D. (2010). On the rule of  $k$  names. *Games and Economic Behavior*, 70, 44–61.
- Best, J. (1971). *The case against direct election of the president*. Ithaca: Cornell University Press.
- Beisbart, C., & Bovens, L. (2008). A power measure analysis of the Amendment 36 in Colorado. *Public Choice*, 134, 231–246.
- Brams, S. J., & Fishburn, P. C. (1983). *Approval voting*. Boston: Birkhäuser.
- Diamond, M. (1977). *The Electoral College and the American idea of democracy*. Washington: AEI Press.
- Duverger, M. (1954). *Political parties*. New York: Wiley.
- Edwards, G. C. III (2004). *Why the Electoral College is bad for America*. New Haven: Yale University Press.
- Farrand, M. (Ed.) (1937). *The records of the Federal Convention of 1787* (revised ed.). New Haven: Yale University Press.
- Feix, M. R., Lepelly, D., Merlin, V. R., & Rouet, J.-L. (2004). The probability of conflicts in a U.S. presidential type election. *Economic Theory*, 23, 227–257.
- Felsenthal, D. S., & Machover, M. (1998). *The measurement of voting power: theory and practice, problems and paradoxes*. Cheltenham, UK: Edward Elgar.
- Gelman, A., Katz, J. N., & Bafumi, J. (2004). Standard voting power indexes do not work: an empirical analysis. *British Journal of Political Science*, 34, 657–674.
- Hathaway, R. M. (1991). *The Electoral College and the Constitution: the case for preserving federalism*. Westport: Praeger.
- Hummel, P. (2011). Proportional versus winner-take-all electoral vote allocations. *Public Choice* 148, 381–393.
- Ingberman, D. E., & Yao, D. A. (1991). Circumventing formal structure through commitment: Presidential influence and agenda control. *Public Choice*, 70, 151–179.
- Jervis, R. (1997). *System effects: complexity in political and social life*. Princeton: Princeton University Press.
- Koza, J. R., Fadem, B., Grueskin, M., Mandell, M. S., Richie, R., & Zimmerman, J. F. (2006). Every vote equal: a state-based plan for electing the President by national popular vote. National Popular Vote Press (available at <http://www.nationalpopularvote.com>).
- Kuroda, T. (1994). *The origins of the Twelfth Amendment: the Electoral College in the early republic, 1787–1804*. Westport: Greenwood Press.
- Leech, D. (forthcoming). Power indices in large voting bodies. *Public Choice*. doi:10.1007/s11127-011-9840-9.
- Longley, L. D., & Peirce, N. R. (1996). *The Electoral College primer*. New Haven: Yale University Press.
- Margolis, H. (1983). The Banzhaf fallacy. *American Journal of Political Science*, 27, 321–326.
- McCormick, R. P. (1982). *The presidential game: the origins of American presidential politics*. New York: Oxford University Press.
- Miller, N. R. (2009). *A priori* voting power and the U.S. Electoral College. *Homo Oeconomicus*, 26, 341–380.
- Miller, N. R. (2012). Election inversions by the U.S. Electoral College. In D. S. Felsenthal & M. Machover (Eds.), *Electoral systems: paradoxes, assumptions, and procedures*. Berlin: Springer.
- Nagel, J. H. (2007). The Burr dilemma in approval voting. *The Journal of Politics*, 69, 43–58.
- Peirce, N. R., & Longley, L. D. (1981). *The people’s President: the Electoral College in American history and the direct vote alternative* (revised ed.). New Haven: Yale University Press.

- Riker, W. H. (1955). The Senate and American federalism. *American Political Science Review*, 49, 452–469.
- Riker, W. H. (1986). The first power index. *Social Choice and Welfare*, 3, 293–295.
- Ross, T. (2004). *Enlightened democracy: the case for the Electoral College*. Dallas: Colonial Press.
- Schattschneider, E. E. (1942). *Party government*. New York: Holt, Rinehart and Winston.
- Shapley, L. S., & Shubik, M. (1954). A method for evaluating the distribution of power in a committee system. *American Political Science Review*, 48, 787–792.
- Wilmerding, L. Jr. (1958). *The Electoral College*. New Brunswick: Rutgers University Press.
- Zeidenstein, H. (1973). *Direct election of the President*. Lexington: Lexington Books.