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Exploring Partisan Bias in the Electoral College, 1964-2008

Introduction

The purpose of this chapter is to examine the sources of partisan bias within the institutional structure of the United States Electoral College by dissecting the various sources of partisan bias and directly evaluating their individual impact on presidential elections over the last four decades. While several scholars have examined electoral bias in the U.S. House of Representatives (Tufte 1973; 1983; Niemi and Fett 1986; King and Browning 1987; Campagna and Grofman 1990; Brady and Grofman 1991; Campbell 1995; Campbell 1996), only a few have systematically examined bias in the Electoral College (Garand and Parent 1991; Gelman and King 1994; Destler 1996; Berthoud 1997; Brunell and Grofman 1997; Gelman, Katz et al. 2004; Johnston, Rossiter et al. 2005).

Conventional wisdom among many pundits, political strategists, and even political scientists suggest the Electoral College is significantly biased in favor of the Republican Party and consequently provides the Republican Party with a near "lock" on the Electoral College. While empirical research by numerous political scholars (Garand and Parent 1991; Destler 1996; Grofman and Burnell 1997; Gelman and King (2004) has challenged this view, George Bush's Electoral College victory in 2000 with less than a plurality of the vote revived this within the scholarly literature and among political pundits. In order to provide some clarity to this revived

debate, my analysis will provide a direct exploration of the various sources of partisan bias (malapportionment, turnout differences, and geographic distribution of party vote shares) within the Electoral College and examination of their individual impact on the Democratic and Republican Party's electoral fortunes over the last twelve elections.

Electoral College Bias

American electoral institutions are of great interest to political scholars and the two most significant and unique elements of our electoral institutions are the winner-take-all system of choosing elected representatives and the Electoral College through which we select presidents. The manner in which the winner-take-all system of elections interacts with the Electoral College creates an interesting electoral dynamic that has led some scholars to speculate about potential biases inherent within the system.

While the majority of research regarding partisan bias has focused on bias within the House of Representatives, a small number of scholars have examined the issue with regard to the Electoral College. Borrowing liberally from the work of King and Browning (1987), the initial research on this topic was conducted by Garand and Parent (1991) who developed measures of representational form and partisan bias in the relationship between popular vote proportions and electoral vote proportions for each presidential election from 1872 to 1988. The results of their analysis, to the surprise of many observers of the presidential election process, indicated the Electoral College was actually biased in favor of the Democratic Party. Questioning the methods of Garand and Parent (1991), the research team of Grofman and Brunell (1997) re-examined the influence of partisan bias in the Electoral College. Employing a hypothetical method of analysis, Grofman and Brunell's findings indicate while partisan bias favored the Republican Party from 1900 to 1940, there has been no significant partisan bias in recent elections.

While the initial work of Garand and Parent (1991) and Grofman and Brunell (1997) and more recent research by Gelman, Katz, and King (2004) provide sophisticated analyses of bias in the Electoral College over the last century, they fail to provide a *direct* analysis of the sources of bias. The purpose of this work is to feel this void in our understanding of the Electoral College system by examining *directly* each of the sources of bias and to dissect their individual influences on contemporary presidential elections.

Plan of Analyses

Before beginning my analysis of partisan bias in the Electoral College, I first define partisan bias and discuss how it differs from the swing ratio. As noted by Grofman et al (1997a, 1997b), confusion between partisan bias and swing ratio has led too much of the confusion regarding Electoral College bias. Second, sources of partisan bias, wasted votes and the price paid per Electoral College vote are discussed in detail. Third, whether either party has systematically suffered or benefited more than the other party from these sources of bias in their attempts to win Electoral College votes is examined. Finally, a detailed analysis of the factors which led to George W. Bush's Electoral College victory in 2000, despite his popular vote defeat is provided.

Partisan Bias vs Swing Ratio

While much of the confusion over the issue of partisan bias has been due to the use of improper measures, a large portion of the confusion regarding partisan bias in the Electoral College is due to the confusion between partisan bias and swing ratio. In two-party democratic political contests, partisan bias and swing ratio are the two primary measures of the

characteristics of the association between a party's vote share and its share of Electoral College votes.

The *swing ratio* is a measure of the responsiveness of the electoral system to changes in the proportion of the vote each party receives. In general, the swing ratio is the expected Electoral College vote increase for each percentage point increase in a party's share of the aggregate popular vote. The second measure of the association between a party's vote share and its share of Electoral College votes is *partisan bias*, which represents the degree to which competing political parties receiving the same vote proportions receive dissimilar proportions of Electoral College votes. More specifically, an electoral institution characterized by partisan bias produces differential treatment for the advantaged and disadvantaged party, with the former receiving a higher proportion of Electoral College votes than the latter for any given proportion of popular votes.

While an unbiased system yields identical Electoral College votes for equivalent Republican and Democratic vote proportions, a biased system yields more votes for one party than the other party. For example, if the Democratic Party receives 48% of the Electoral College Votes with 50% of the popular vote and the Republican Party receives 52% of the Electoral College Votes with 50% of the popular vote, the system has a 4% bias in favor of the Republican Party.

Sources of Partisan Bias

What are the sources of partisan bias? There are two basic factors which contribute to partisan bias in the Electoral College. The first factor is a disparity in the vote costs between parties. This is due to differences in the population and/or number of voters per Electoral

College vote, which varies as a result of turnout differences and malapportionment. The second factor contributing to partisan bias in the Electoral College is asymmetries in the distribution of wasted votes between the parties which may occur as a result of variation in the distribution of partisan voting strength across states. For instance, if either party consistently wins competitive states and/or the larger states they will waste significantly fewer votes in the United States' winner take all election process.

Ultimately, the number of Electoral College votes a party wins depends on three factors: (1) the number of votes it has available to spend, (2) the price the party pays in popular votes for each Electoral College vote and (3) the number of votes the party wastes. A party which wins states where the number of votes per Electoral College vote is low and/or wins states by narrow margins will spend their votes most efficiently; and the more efficiently a party spends their votes the more Electoral College votes they will win.

Analyses of Bias

Vote Costs

The "price" of Electoral College votes varies significantly between states. Because the U.S. Constitution mandates that Electoral College votes are allocated "equal to the whole number of Senators and Representatives to which the State may be entitled in Congress," there is tremendous variation in the cost of Electoral College votes. Since each state, no matter how small its population, is guaranteed by the U.S. Constitution at least one seat in the House of Representatives and two Seats in the U.S. Senate, even the smallest states receive at least three Electoral College votes. Consequently, the Electoral College over represents the least populous

states, and the cost of Electoral College votes in smaller states is potentially much lower than the cost of votes in larger states. As noted above, these differences in the cost of votes can provide a significant source of partisan bias when one party consistently wins a significant number of small states.

As one would expect, considering the Constitutional requirement of at least three Electoral College votes to every state, smaller states have substantially fewer citizens per Electoral College vote than larger states. As Table 1 clearly displays, the population per Electoral College vote varies dramatically between the states. For instance, the average population per Electoral College vote in California (534,213) over the last twelve elections is 3.73 times as large as the average population per Electoral College vote in Wyoming (143,108).

Table _.1 Top Ten Least Expensive and Most Expensive Electoral College Vote States 1964-2008 by Population

State	EC Pop Rank	Population Per EC Vote	Electoral College Votes 2008	Republican Victories 1964-2008	Democrat Victories 1964-2008
Wyoming	1	143,108	3	11	1
Alaska	2	151,863	3	11	1
Vermont	3	173,009	3	6	6
North Dakota	4	203,457	3	11	1
South Dakota	5	212,165	3	11	1
Delaware	6	212,213	3	5	7
DC	7	227,353	3	0	12
Montana	8	228,023	3	10	2
New Hampshire	9	243,504	4	7	5
Rhode Island	10	243,573	4	2	10
Connecticut	Median	401,823	7	5	7
New Jersey	42	472,723	15	6	6
Ohio	43	474,261	20	7	5
Michigan	44	477,041	17	5	7
Georgia	45	477,349	15	10	2
Pennsylvania	46	482,637	21	4	8
Illinois	47	486,677	21	6	6
New York	48	499,598	31	3	9
Florida	49	518,097	27	8	4
Texas	50	529,136	34	9	3
California	51	534,213	55	6	6

These differences in the population per Electoral College vote present the possibility for significant electoral bias. If either party has a significant electoral advantage in smaller states, they are more likely to spend their votes efficiently and enjoy an advantage in the competition for Electoral College votes. With this in mind, the average number of victories by each party's presidential candidate in the least expensive and most expensive states is presented in Table 1.

When one examines the ten least expensive states, the results clearly suggest a bias in favor of the Republican Party. Of the twelve elections since 1964, Republicans have been victorious 62% of the time in the 10 least expensive states as compared to only 53% of the time in the most expensive states. However, when one examines the average population per Electoral College vote between the two parties the results indicate only a modest and statistically non-significant Republican Party advantage. Specifically, for the 1964-2008 elections the states which the Republican candidate was victorious had an average population of 372,068 individuals per Electoral College vote compared to Democratic states which had an average population of 376,255 votes per Electoral College vote. This represents a difference of only 4,187 or rather 1.1% of the average population per Electoral College vote.

While state populations are used to determine the number of Electoral College votes allocated to each state, the population per Electoral College vote only provides an indirect measure of the cost of Electoral College votes. As one would expect, turnout varies significantly from state to state and therefore provides the chance for additional variation in the cost of Electoral College votes between states. The more direct and accurate measure of the cost of Electoral College votes can be determined by calculating the average number of *actual votes cast* per Electoral College vote in each state.

Table 2 presents the average number of votes cast per Electoral College vote in the 10 most and least expensive states between 1964 and 2008. Once again these results indicate substantial variation in the cost of Electoral College votes between states. While the costs of an Electoral College vote in Alaska averages only 35,845 votes, the average cost per Electoral College vote in Massachusetts is 116,480 votes. The cost of an Electoral College vote from

Massachusetts is 3.25 times the cost of an Electoral College vote from Alaska. Clearly, variation in the cost of Electoral College votes provides a potentially significant source of partisan bias.

Table _.2 Top Ten Cheapest and Most Expensive Electoral College Vote States 1964-2004 by Turnout

State	Cost Rank	Popular Votes Per EC Vote	Republican Wins	Democrat Wins
Alaska	1	35,845	11	1
Wyoming	2	37,789	11	1
Vermont	3	44,187	6	6
Hawaii	4	47,519	2	10
Delaware	5	49,647	5	7
South Dakota	6	52,809	11	1
North Dakota	7	52,924	11	1
Nevada	8	53,081	8	4
Montana	9	56,956	10	2
DC	10	57,893	0	12
Kansas	Median	88,669	11	1
Ohio	42	104,271	7	5
California	43	105,520	6	6
New York	44	105,721	3	9
Wisconsin	45	105,970	4	8
New Jersey	46	108,310	6	6
Michigan	47	109,407	5	7
Florida	48	110,180	8	4
Illinois	49	110,345	6	6
Minnesota	50	110,369	1	11
Massachusetts	51	116,480	2	10

While Table 2 unmistakably indicates a disparity in the *cost* of Electoral College votes between the states, once again this will only produce partisan bias if the system consistently

provides one party with a distinct and systematic electoral advantage. In order to examine this issue, we first report the number of times each party has been victorious in the least expensive and most expensive Electoral College vote states. A review of this data parallels the above analysis, once again supporting conventional wisdom and indicating the Republican Party more consistently wins the least expensive states while the Democratic Party relies more heavily on the most expensive states for their support.

Although Table 2 provides a cursory view of the partisan differences in the cost of Electoral College votes, it does not present the complete picture. The more telling and appropriate means of examining this factor is to compare the actual difference in the average cost per Electoral College vote between the two parties. With this in mind, the average cost each party has paid per Electoral College vote over the period of the analysis (1964-2008) has been calculated. When one examines the overall difference between the parties in costs, there is a small but statistically significant difference in favor of the Republican Party. Specifically, Republican candidates have paid an average of 80,390 votes per Electoral College vote in comparison to Democrats who have paid an average of 87,214. This represents a difference of only 6,824 votes cast per Electoral College or rather 1,842,480 fewer votes for the Republican Party to achieve the 270 Electoral College votes required to win the Presidential election.

Wasted Votes

The second factor contributing to partisan bias in the Electoral College is asymmetries in the distribution of wasted votes between the parties which may occur as a result of variation in the distribution of partisan voting strength across states. Because of the winner take all system employed by the vast majority of states (Maine and Nebraska are the exception), all votes above

50% + 1 for a party's candidate can be considered wasted votes. In addition, because of the winner take all system all votes cast in states which the party's presidential candidate is defeated are considered wasted votes.

The number of votes each party wasted in states which they were victorious over the period of this analysis is presented in Table 3. An initial examination of this data suggests the Republican Party has wasted (80,843,674) significantly more votes than the Democratic Party (68,246,195) over the last 12 elections in states which they were victorious. However, upon further analysis the data reveals this difference is actually due to the greater number of Republican Presidential victories over the period of the analysis. More specifically, the party receiving the greatest number of popular votes naturally wins a greater number of states and as a result wastes more votes than the losing party.

Table _.3 Wasted Votes Over 50 Percent Plus One, by Year by Party

	Sum		2 Party Percent	
Election Year	Democrat	Republican	Democrat	Republican
1964 (LBJ)	17,048,665	1,097,287	12.34%	17.81%
1968 (Nixon)	2,212,660	2,838,636	7.54%	6.05%
1972 (Nixon)	312,863	18,312,391	16.34%	14.31%
1976 (Carter)	3,395,138	1,712,168	5.92%	4.22%
1980 (Reagan)	553,166	8,973,436	7.88%	8.51%
1984 (Reagan)	155,160	17,033,050	18.02%	11.33%
1988 (Bush)	1,154,052	8,231,155	6.09%	7.14%
1992 (Clinton)	7,317,348	1,512,092	6.47%	4.86%
1996 (Clinton)	9,791,131	1,587,529	8.70%	4.83%
2000 (Bush)	6,477,569	5,937,671	7.36%	8.30%
2004 (Bush)	5,373,444	8,675,344	6.48%	9.04%
2008 (Obama)	14,454,999	4,932,915	9.78%	7.87%
Avg Democrat Wins	10,401,456	2,168,398	8.64%	7.92%
Avg Republican Wins	2,319,845	10,000,240	9.96%	9.24%
All Years	68,246,195	80,843,674	9.41%	8.69%

A more appropriate means of examining the number of votes wasted by each party is to evaluate separately the average number of votes each party wastes in years which their candidate wins and also loses the general election. In contrast to the analysis of the total number of votes, these more appropriate measures suggest only a slight bias in favor of the Republican Party. In comparing the average number of votes wasted by each party in years which they won the general election, one finds the Democratic Party wasted an average of 401,216 more votes than the Republican Party. Moreover, comparing the average number of votes wasted by each party in years which they lost the general election, the results indicate the Democratic Party wasted more votes with an average of 151,447 more votes.

While all votes over 50% +1 can be considered wasted votes, all votes in states which a candidate receives less than 50% are also considered wasted votes. Consequently, if either party consistently loses competitive states they will spend their votes less efficiently which once again may lead to partisan bias.

The number of votes and average percent of votes wasted by each party in states which their candidate was defeated over the last twelve Presidential elections are reported in Table 4. As one might expect, the results indicate both parties consistently waste more votes in losing states in years which they lose the national popular vote. Moreover, this difference is quite substantial, with the losing party wasting thirty-four times as many votes as the winning party in 1984, twenty-four times as many votes in 1972, and seventeen times as many votes in 1964. Consequently, as a result of losing more Presidential elections, Democratic candidates have wasted a significantly greater number of votes in losing causes than Republican candidates over the 44 year period of the analysis. Specifically, the Democratic Party has wasted 55,095,203 more votes than the Republican Party in states which they have lost. While this suggests a significant bias toward the Republican Party, further analysis shows these results are primarily a consequence of the two landslide victories which the Republican Party enjoyed in 1972 and 1984. In the remaining five elections, which the Republican Party received a smaller margin of victory, the difference in the number of wasted votes between the two parties is significantly smaller and actually favors the Democratic Party. Interestingly, when one compares the average percent of votes wasted in losing causes between the two parties there is practically no difference. Both parties, on average, receive about 38.5 percent of the vote in states which they lose. Ultimately, neither party is systematically disadvantaged by the number of votes which they waste in losing states.

Table _.4 Democratic and Republican Wasted Votes in Losing States

	Sum of Votes		Average Percent		N	
Election Year	Democrat	Republican	Democrat	Republican	Democrat	Republican
1964 (LBJ)	1,415,718	24,665,183	32.1%	37.5%	45	6
1968 (Nixon)	16,376,224	11,506,776	38.3%	39.1%	17	34
1972 (Nixon)	27,710,216	1,147,304	34.9%	33.4%	2	49
1976 (Carter)	17,013,478	20,422,147	44.5%	43.3%	24	27
1980 (Reagan)	32,080,019	2,850,698	37.9%	38.1%	7	44
1984 (Reagan)	36,360,413	1,061,612	38.3%	31.6%	2	49
1988 (Bush)	31,685,734	8,969,699	42.3%	43.3%	11	40
1992 (Clinton)	11,240,323	26,352,135	35.4%	34.8%	33	18
1996 (Clinton)	10,905,562	26,705,664	40.5%	36.7%	32	19
2000 (Bush)	21,836,063	22,682,407	40.1%	40.4%	21	30
2004 (Bush)	26,099,985	25,895,833	39.5%	41.9%	20	31
2008 (Obama)	16,093,577	38,908,322	39.6%	41.4%	29	22
Republican Wins	440,965,966	285,282,109	38.8%	38.3%	80	277
Democrat Wins	497,634,624	422,335,560	38.4%	38.7%	163	92
All Years	248,817,312	211,167,780	38.6%	38.5%	243	369

Partisan Bias?

Is the Electoral College biased toward the Republican or Democratic Party? In line with the findings of Grofman and Brunell (1997) and Destler (1996), the results of this analyses suggest an absence of any significant partisan bias within the contemporary Electoral College. While it may *appear* that the Republican Party would enjoy an advantage in the Electoral College because of consistently winning more of the cheap Electoral College states, the top 10 least expensive states only represent a total of 32 Electoral College Votes. The Democratic Party can overcome this advantage by simply winning two of the top 10 most expensive states which each represent on average of 26 Electoral College votes. As noted above, while the Republican Party has spent their votes more efficiently over the period of this analysis, the difference

between the two parties represents an average of only 6,824 popular votes per Electoral College vote which is not substantially or statistically significant. Regarding the second source of bias, wasted votes, the two parties are relatively even. While the total number of wasted votes for the Democratic Party is significantly greater, the analyses indicate this difference is due to their presidential candidates winning the popular vote less often and losing by landslides in 1972 and 1984.

The 2000 Presidential Election

While the above discussion and analyses substantiate the findings of previous research which found the Electoral College to be generally unbiased, one must still explain how George W. Bush attained an Electoral College victory in the 2000 Presidential election despite losing the popular vote. Clearly, the Electoral College system did not treat the two parties equally in the 2000 Presidential election. As noted above, there are two basic sources of bias in the Electoral College. The first is based on the price each party pays for Electoral College votes. The second is the number of votes each party wastes in states which they are victorious and states which they are defeated. Tables 5 and 6 display the least expensive and most expensive Electoral College states in the 2000 election and the average number of votes each candidate paid per Electoral College vote. At first glance, the data does not indicate that the Republican Party in 2000 enjoyed the success they normally find among smaller states in presidential elections. In the 2000 presidential election they won only half of the 10 least expensive states. Among the most expensive states, Bush won only 3 states. More importantly, a comparison of the average number of votes cast for each party's 2000 Electoral College votes suggest only a minimal difference favoring George W. Bush. Specifically, the Republican Party in 2000 spent only

4,687 fewer votes per Electoral College vote than the Democratic Party. As with the aggregate analysis, the difference in vote costs is not statistically or substantially significant.

Table _.5 Top Ten Cheapest and Most Expensive Electoral College Vote States 2000/2004

State	Votes Per EC Vote	Cost Rank	Winning Candidate
Wyoming	49,316	1	Bush
Vermont	49,674	2	Gore
Hawaii	51,322	3	Gore
Alaska	55,799	4	Bush
New Mexico	57,357	5	Gore
North Dakota	58,284	6	Bush
Delaware	60,023	7	Gore
Rhode Island	62,377	8	Gore
South Dakota	63,567	9	Bush
West Virginia	67,295	10	Bush
Oregon	102,906	Median	Gore
Maryland	114,401	42	Gore
Florida	116,512	43	Bush
North Carolina	116,512	44	Bush
Minnesota	116,827	45	Gore
Illinois	117,683	46	Gore
Texas	118,739	47	Bush
New Jersey	119,257	48	Gore
Michigan	120,579	49	Gore
New York	124,476	50	Gore
Massachusetts	134,707	51	Gore

Table _.6 Cost of Electoral College Votes in 2000 Presidential Election

	Democrat Electoral College Vote Cost	Republican Electoral College Vote Cost
N	21	30
Minimum	49,674	49,316
Maximum	134,707	118,739
Mean	96,848	92,161

Wasted votes are also an important source of partisan bias and Table 7 displays the sum of votes each party wasted in states which they were victorious and states which they were defeated in the 2000 Presidential election. Not surprisingly, the results are at odds with each other for the 2000 Presidential election. While the Democratic Party wasted more votes in states Al Gore won, the Republican Party actually wasted more votes in the states that George W. Bush was defeated. A comparison, however, of the total number of wasted votes indicates that the Republican Party actually wasted 306,446 more votes than the Democratic Party. Clearly, wasted votes do not explain George W. Bush's 2000 Electoral **College victory.**

Table _.7 Wasted Votes in the 2000 Presidential Election

	Democrat		Republican	
	Wasted Votes Over 50%+1	Wasted Votes in Losing States	Wasted Votes Over 50%+1	Wasted Votes in Losing States
N	21	30	30	21
Mean	308,456	727,869	197,922	1,080,115
Sum	6,477,569	21,836,063	5,937,671	22,682,407
Total Wasted	28,313,632		28,620,078	

Considering the findings of both the cheap votes and wasted votes analyses, the results suggest the Republican Party's advantage in the 2000 Electoral College was primarily due to their spending votes more efficiently by wining more of the least expensive states. While the Republican Party spent only 4,687 fewer votes per Electoral College vote than the Democratic Party, this represents a total of 1,265,454 votes when one multiplies it times the actual number of Electoral College votes required to win the Presidential Election. Clearly this represents a substantial number of votes which had a significant impact in such a close election. The second question which one must answer is whether this was due to a systematic bias in favor of the Republican Party or rather the strategic decisions the Bush Presidential Campaign made during the 2000 election with regards to allocating their resources.

Conclusion

In conclusion, this work broadens the understanding of the issue of partisan bias in the Electoral College in providing a fuller analysis of the institutional mechanisms of the Electoral College. First, the various sources of potential bias in the Electoral College (cheap votes and wasted votes) are clarified. Second, each of these sources of potential bias are examined and do not present a significant advantage in favor of the Republican or Democratic Party, which supports the previous findings of Grofman and Brunell (1997) and Destler (1996). Third, the analysis suggest the erroneous perception of a Republican Bias in the Electoral College which persists is likely due to the Party's advantage in smaller states (which contributed substantially to Bush's 2000 Electoral College victory) and their historical popular vote success combined with the tendency of our winner take all system to artificially inflate the victorious candidate's Electoral College margin.

While the potential for bias within the institution of the Electoral College is clearly high, neither party over the last half century has been able to consistently take advantage of these potential advantages. This is likely due to the fact that Presidential Candidates and the parties they represent or rational political actors which understand the opportunities and problems of the institutional structure which they work under. Through the use of sophisticated polling and the strategic allocation of campaign resources each party is able to diminish the inherent inefficiencies which confront their candidate and party. This has been most vividly displayed in the most recent Presidential elections with the amount of attention and resources each campaign committed to swing states. T he Democratic Party knows they are unlikely to achieve an electoral victory in solidly Republican states such as Wyoming and North Dakota and the Republican Party recognizes they are unlikely to achieve electoral success in solidly Democratic states such as California and Massachusetts, so neither party waste limited resources in these states (Shaw 1999; Althaus, Nardulli et al. 2002; Reeves, Chen et al. 2004). Ultimately, each party's presidential candidate expends their limited resources (time and money) rationally and as a result the level of partisan bias in the Electoral College is severely restricted.

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