

## Export Report of Brian J. Gaines: Citizen Partisanship and District Normal Vote

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### Executive Summary

Counsel for the Wisconsin State Legislature asked me to opine on aspects of partisanship of individual Americans, how it relates to voting, and how it aggregates from individuals to electorates, as formed by district electoral boundaries. Below, I emphasize the following points.

- Individuals’ attachments to and attitudes about parties are often good predictors of their voting behavior, but they are only one of several factors, and candidate traits beyond party labels often matter strongly as well.
- American ballots nearly always feature multiple partisan offices, so that characterizing the partisanship of the voting behavior even of a given individual in one election is more complicated than is frequently recognized. Many voters support candidates from different parties with a single ballot. Models that assume all voters to be *strict* partisans ignore countervailing evidence.
- Electorates, as aggregations of individuals, also have partisanship, but it can be less stable and predictable than the individual-level counterpart, because of changes in composition.

- In the absence of survey data, we often infer partisanship of electorates from election returns, but “normal vote” and “macropartisanship” are conceptually distinct, and both are difficult to measure.
- Simple comparison of estimated normal vote and election outcomes in recent Wisconsin Assembly elections illustrates why normal vote is at best an imperfect predictor of outcomes in which candidates attract or repel voters in many other ways than their party labels. Republican Assembly candidates have consistently outperformed the expectations based only on their districts’ aggregate voting habits in statewide races, even in years with pro-Democratic tides. The implication is that these candidates enjoy substantial personal votes.

## 1 Defining and Measuring Partisanship

In a mature democracy where political competition is organized around and by parties, it is nearly a truism that some citizens become “partisan,” that is, form attachments (and/or antipathies) to select parties. How best to measure partisanship has long pre-occupied political scientists. The United States is rather unusual among long-standing democracies insofar as only two major parties have competed for most partisan offices, at all levels of government that employ partisan elections, for over a century.<sup>1</sup> It is, in turn, typical to assume that Americans develop at most one partisan attachment, and that disassociation with the other major party is a natural concomitant of this identification. Voter registration is an imperfect metric for partisanship for several reasons, including that: partisan registration is not used in many states (including Wisconsin); it is unavailable for those who do not register to vote; and, it is slow to change and prone to inertia, insofar as people tend to alter registration only infrequently, in fairly close proximity to an election.

### 1.1 Citizens’ Partisanship as Party Identification

Instead, party “identification” is typically gauged via public-opinion surveys, so that estimates of levels are always prone to a variety of well-known uncertainties related to surveying.<sup>2</sup> The precise wording of survey items (that, is questions and options) varies, but the most popular approach in political science, as developed by the American National Election Study series starting in 1952, is a series of nested questions, beginning with, “Generally speaking, do you usually think of yourself as a Republican, a Democrat, and Independent, or what?”<sup>3</sup> Those answering “Republican” or “Democrat” are asked, as a follow-up, “Would you call yourself a strong (Republican/Democrat) or a not very strong (Republican/Democrat)?” Those who declare themselves independent are

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<sup>1</sup>Most other long-standing democracies not only have seen more change in their party systems, but have multiple major parties, and sometimes distinct party systems at national and subnational levels, making partisanship a potentially more dynamic, complicated, and multi-dimensional concept.

<sup>2</sup>A useful framework is “total survey error,” which decomposes possible error in estimates generated from surveys into multiple pieces, such as those based on measurement (e.g. how the questions used are understood by respondents), mode of contact (e.g. in-person interview, telephone interview, online survey, etc.), sampling of the population, willingness of those sampled to respond, etc. (Weisberg 2005).

<sup>3</sup>The ordering of options is sometimes randomized or rotated, so that not all respondents get precisely the same wording.

asked, “Do you think of yourself as closer to the Republican or Democratic party?” This design provides two alternative estimates of the proportions that are Republican, Democratic, and independent. The first question creates a three-way classification scheme. Combined, the questions create an ordered, seven-category classification: strong Republican, not-strong Republican, independent closer to the Republican party, independent not closer to either party, independent closer to the Democratic Party, not-strong Democrat, strong Democrat. (Some respondents end up at unclassified because they: name a minor party; decline to answer the first question, sometimes by disavowing any interest in politics; or answer the first question, but decline to answer the follow-up. Usually there are fairly few such respondents and they are mainly ignored in analysis.) The nickname “leaners” is often assigned to those who initially profess independence, but then acknowledge being closer to a major party. Sometimes the strength follow-up is omitted, so that the larger classification scheme has only 5 categories.

Whether independent Americans constitute about one-third or only one-tenth of the adult population depends on whether one considers the 3- or 7-way (or 5-way) categorizations. In an October 2018 Marquette Law School Poll of Wisconsin registered voters, for instance, 33 percent chose Republican, 36 percent independent, and 30 percent Democrat, while 1 percent volunteered some other answer, or declined to answer. But once the independents were asked, “Do you think of yourself as closer to the Republican Party or to the Democratic Party?”, with no explicit option of “neither” offered, most relented and chose. They were almost equally divided, leading to a quite different portrait: 44 percent Democrat or Democratic leaner, 8 percent independent, 47 percent Republican or Republican leaner (and 1 percent other).<sup>4</sup> A national Gallup sample, fielded about the same time, found 30 percent Democrat, 28 percent Republican, and 39 percent independent from the question “In politics, as of today, do you consider yourself a Republican, a Democrat, or an independent?”. When the independents were asked “As of today, do you lean more to the Democratic Party or the Republican Party?” most made a choice, so that the revised distribution is: 48 percent Democrats or Democratic leaners, 12 percent independent, 40 percent Republicans or Republican leaners.<sup>5</sup> The examples are merely illustrative, but very typical. A sizable share of survey respondents who deny partisanship when asked only once can be nudged or cajoled into declaring a preference on a second query.

In a lively debate over whether these leaning (or “closet” or “shy”) partisans should be regarded as true partisans, most of the evidence in the affirmative consists of demonstrations that their other survey responses pertaining to parties, including vote reports, more closely resemble those of partisans than those of independents (e.g. Keith et al. 1992). Fiorina (2018) offers one rebuttal, based on panel data (repeat interviews with the same individuals). The partisan leaning, expressed at the second chance, might reflect a short-term vote intention, rather than an ambivalent or reluctantly expressed deeper attachment. This distinction is important because at least since the publication of the highly influential *The American Voter* in 1960, most American political scientists have conceived of partisan identification as a long-term, slow-changing trait of potential voters, predictive of voting behavior, but not identical, and causally prior. So while political scientists will sometimes infer partisanship from voting behavior, the two are not regarded as identical, whether considering an individual (“micro-partisanship”) or of a collection of individuals (“macro-partisanship”). The question of whether a small majority or a very large majority of Americans are partisans is, in part, bound up with the distinct question of how separate are attachments to parties and near-term voting plans or very recent vote history. Generally, a case

<sup>4</sup>Marquette Law School Poll, October 3-7, 2018.

<sup>5</sup>Gallup poll, October 1-10, 2018.

can be made for two different answers to the question, “How many eligible voters are not partisan?” Whether one answers “30-40 percent” or “about 10 percent”, a further qualification is “...with variation from place to place and from election to election.” No one seriously proposes that all American eligible voters or even actual voters are partisans.

### **The Nature of Partisanship**

There is a large, ongoing academic debate on whether partisanship should be seen as an identity (akin to being Catholic, gay, a (die-hard) Cubs fan,...) or, instead, a short-term, comparative preference (as in, “just now, I prefer pasta to beef” or “I’m running less and swimming more these days”). Those who devised the survey items discussed above generally took the former view. Revisionists later emphasized that data strongly adjudicating between these rival theories are hard to come by. Some studies pushing the “identity” view emphasize novel findings on how partisan judgement sometimes shows up in non-political contexts, as when people report liking their neighborhood less when told that their neighbors are less like them in partisanship than they thought (Hui 2013), or express opposition to having their children marry someone from the other party (Iyengar et al. 2012). However, such findings often amount to demonstrating “some effect” rather than a perfect sorting, and they are also sometimes contradicted (for instance, other studies suggest that the importance people say they attach to “similar political views” in how they evaluate a possible spouse was negligible in 1939 and equally so in 2008 (Fiorina 2018, 61)). Despite many innovative studies exploring the breadth and depth of partisan attachments in recent decades, partisanship is plainly not a nearly immutable trait on par with race or sex. There is no consensus that it is genuinely as strong or enduring as religious identification, although with both religion and party, the “none”s are an important category not to be overlooked. Insofar as there is evidence that the significance of partisanship for political actions has varied over time, there is little consensus on precisely why it waxes and wanes, and there is no reason to think that a period of increasingly intense partisan separation or polarization is ever irreversible.

### **(In)Stability of Partisanship**

How often does partisanship change, compared to other mutable, non-fixed attachments, like religious affiliation? The short answer is, yet again, that political scientists do not all agree. The best evidence derives from panel surveys, wherein individuals are re-interviewed many times across a medium-long time span. Panel studies are costly and thus much rarer than one-time (“cross-sectional”) studies. The conclusion that partisanship is quite stable originates in panel models that also posit that the survey questions normally used to measure it do so with non-trivial error (Green and Palmquist 1994, Green, Palmquist and Schickler 2002). The discipline of political science has tended to embrace this finding selectively, latching onto the stability part, but ignoring the measured-with-error part.

For present purposes, moreover, the degree of stability in individual partisanship is less important than the stability of the aggregate partisanship of the electorate, which is lower. Even if everyone were to lock into a partisan category for a lifetime upon reaching voting age—which is clearly not the case—electorates would still shift in partisanship as their composition changed due to replacement (from death, attaining adulthood, and out- and in-migration). Generally, over the lifetime of a redistricting plan, most districts change not only in population levels, but also in their electorates’ partisanship.

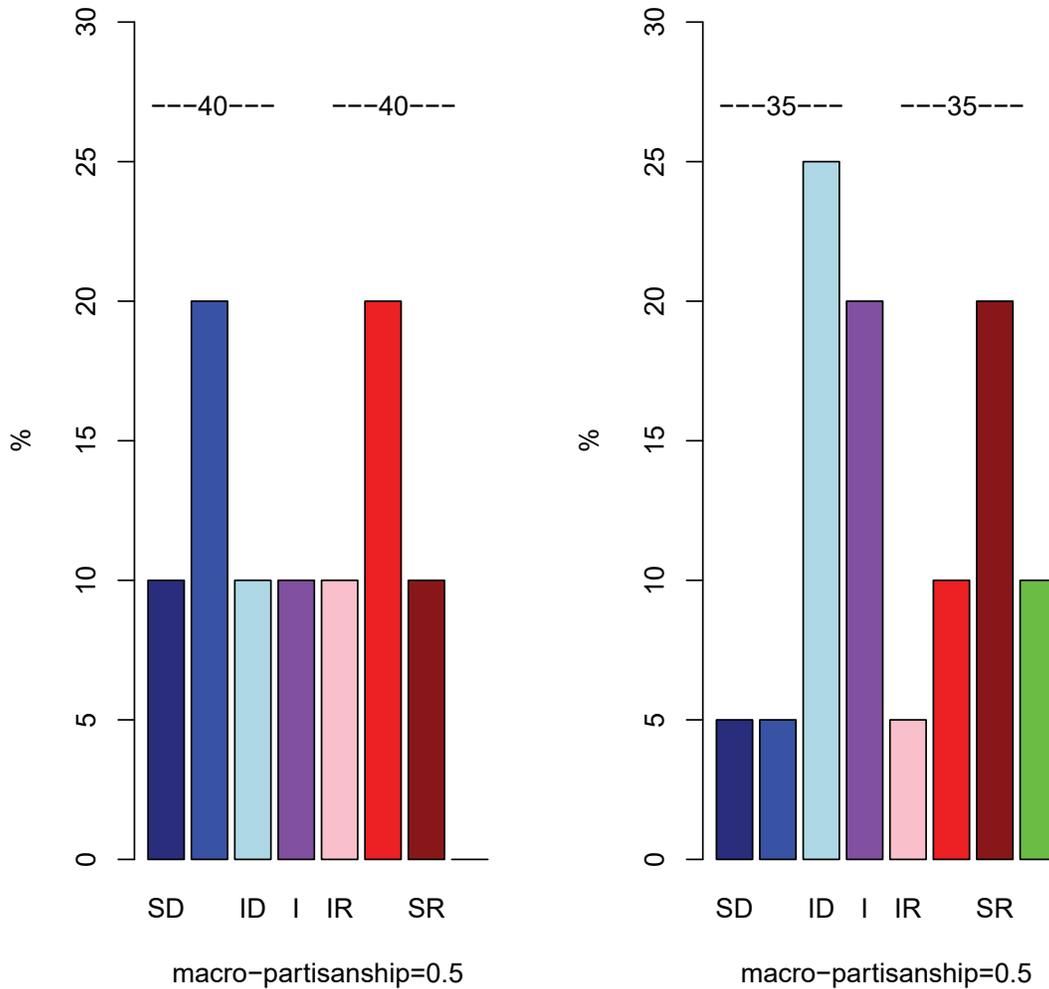
### **Macropartisanship**

For present purposes, the various arguments about how to understand micro-partisanship

raised above are thus somewhat less important than the difficulties inherent in aggregation from individuals to collectives. What is most important for (re)setting electoral-district boundaries is not so much the partisanship of the electorate, individual by individual, but the distribution of partisanship across subsets of possible voters. Individuals can be classified as falling into one of eight categories, the seven ordered categories from strong Republicans to strong Democrats plus the residual “all others” category which is “off scale” or unordered.<sup>6</sup> A set of individuals is then described by a compositional vector or distribution, detailing what proportion or percentage fall into each category. Such variables are difficult to work with, and so political scientists routinely resort to further strong simplifying assumptions. Hence, macropartisanship is frequently defined in reference to only that portion of the electorate that identifies as Democratic or Republican (MacKuen, Erikson, and Stimson 1989). The number of Democrats divided by the number of Democrats and Republicans, sometimes called the “two-party” proportion, gives a simple variable with interval and ratio properties (i.e, 40% is the same distance from both 35% and 45% and is twice 20%, one-half of 80%, and so on). But this measure obscures or discards much about partisanship of the individuals it describes. Macropartisanship so defined treats identically sets of voters that differ dramatically. For instance, two polities scoring as a balanced 0.50 could have quite different partisanship distributions as pictured in Figure 1 below. The left-hand district is evenly balance between symmetrical parties. In the right-hand district, by contrast, despite equal numbers of Democrats and Republicans, both parties tilt to the Republican side, with strong Republicans outnumbering Republican leaners, but many more Democratic leaners than Strong Democrats. And a substantial residual category is an unpredictable factor in the politics of this second hypothetical district.

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<sup>6</sup>It is common to assume that those seven (or five) partisan categories fall along a single dimension or “scale.” The question wording partly imposes that assumption by omitting an option of “both a Republican and a Democrat” and pressing those who choose neither Republican nor Democrat to do so on a second try. For these categories to be a scale, there is an additional strong assumption of intervality, so that the differences between any two adjacent categories are identical (i.e. a “strong Republican” is more Republican and less Democratic than a “weak Republican” by precisely the same amount as a pure independent is compared to an independent Democrat). The questions were not written to try to assure that this assumption is correct, but it simplifies analysis.



**Figure 1. Different Micropartisanship, Common Macropartisanship**

Perhaps because it ignores so much information, but also because survey data are scarce for geographic regions smaller than states, macropartisanship has seen fairly limited use, and has chiefly been employed as a variable describing the whole nation, in time series analysis.

In turn, work on partisanship's significance in regard to voting has tended not to deal, much, with districts and distinct electorates, while estimation of the partisanship of aggregates has largely worked backwards from election results, with often only implicit assumptions about how these relate to the (unobserved) partisanship of the relevant voters. It is helpful, instead, to consider quite explicitly how to describe the partisanship of a set of individuals varying in their party identifica-

tions and in their voting behavior within categories of party identification.

## 1.2 Partisanship and Voting

For most (not all) voters, party identification is a good, but not perfect, predictor of votes. How good a predictor has varied over time and across states, and there has been less study of down-ballot voting than of voting for candidates for president, the US House and Senate, and, sometimes, governor. Bartels (2000) is a prominent study demonstrating changes, over time, in the degree of partisan voting. Considering 1952-1996, he estimates an extremely simple model of presidential vote and, separately, US House vote, based *only* on the seven-category partisanship question, plus region (south or not) and incumbency status for the congressional races. His findings, in brief, are that: over this period, non-voters became steadily more likely to deny partisanship in the first question (and thus to fall into the independent or leaning categories), falling from about 70 percent to about 50 percent partisan; voters changed less, dropping from nearly 80 percent partisan in the 1950s and early 1960s to about 70 percent from the mid-1960s onward; the predictability of presidential vote based on partisan identification fell from 1952 to 1972, then rose steadily so that the 1992 and 1996 elections had the most partisan presidential voting in the period; this pattern was in evidence in the south and non-south; combining the two effects of changing levels of partisanship (1. more independents and leaners over time, and 2. changing effects of being in a given partisan category), congressional and presidential voting were very closely matched, and declined in parallel, from 1952 to 1972; thereafter, voting for both president and US House rose in partisanship, but with presidential voting showing much stronger partisanship, while congressional levels in 1996 roughly matched those from 1968.

Weinschenk (2013) replicated and updated the analysis, extending it through 2008. He found further increases in partisanship of congressional voting, which remained lower than the partisanship of presidential voting, which, in turn, seemed to have leveled off, the 2008 value being lower than the peak at 2004, and about the same as the 1992 value. He concluded that recent elections were “highly polarizing” with “partisan conflict...quite salient” (616).

Notably, this approach to assessing how significant is partisan identification to voting takes account of both the distribution of partisan types and the effect of these types on actual voting (the loyalty rates for the partisans and the partisan splits of the independents). When observers estimate the partisanship of an electorate, they use both kinds of information, and thus simplify a complicated combination of levels and effects into a single number. For the purposes of describing whether partisan voting is increasing or decreasing, such simplification is useful, but it can also be misleading insofar as a given level can correspond to very different underlying processes at the individual level.

A second point to note is that the approach described above takes account of only presidential and congressional (House) votes, one at a time. So it is deliberately insensitive to even two-way ticket-splitting, and it ignores most of the quite large number of contests on a typical American ballot, which create many more opportunities for voters to back both parties at once. And because the model ignores nearly all candidate traits, it is not really an effort to construct a complete model of the vote choice, but only to focus exclusively on partisan identification, and then assess over-time change in its importance. And while, of late, these findings point to a resurgence of partisanship, the primary lessons are that the extent of partisan voting varies over time, for a host of reasons, and that even when it is comparatively higher, it is far from perfect. Election outcomes in

the US have never been fully predictable from the levels and effects of partisanship of the potential voters. Attending to the possibility that American voters change partisan hats as they move up and down the ballot is important when evaluating the significance of partisan tendencies in any given electorate.

### **Split-Ticket Voting**

In practical terms, by far the most important manifestation of partisanship is voting. In turn, one demonstration of limitations to partisanship's influence on behavior is "split-ticket" voting, wherein an individual (other than an independent) supports candidates from different parties on a single ballot. The models discussed immediately above ignore the phenomenon, but many others have studied it in some manner. While levels of ticket splitting have changed over time, all studies find some voters engaging in such behavior, and it is not only independent who spread their support across the parties.

In the case of multi-member districts (used in some state legislative chambers and by the US Senate), it is sometimes possible for a voter simultaneously to cast votes for a Republican and a Democrat for the same office (e.g. representatives to the state house from the *n*th district). The six-year terms of US Senators are not synchronized within states, so voters do not often get to cast two votes for US Senator in a single election. Exceptions arise when vacancies from death or resignation cause short-term appointments and off-cycle special elections. In the November 2018 election, for example, voters in Mississippi and Minnesota cast votes for both of their US Senate seats, and so had the option to support one Republican and one Democrat.<sup>7</sup> Because American ballots usually feature a relatively large number of elective offices, many of which are partisan, "split-ticket" voting is more typically backing candidates for different parties for *different* offices. A large literature analyzes ticket splitting, usually from survey self-reports, but sometimes from aggregate returns, and, rarely, from the cleanest and most informative data on the phenomenon, actual ballot images.

Much of the literature on split-ticket voting is devoted to explaining why it occurs, that is, why some voters exhibit multiple partisan personalities in their voting. Scholars have examined the effects of individual-level voter characteristics, including strength of partisanship, levels of political interest, and desire for policy moderation, as well as features of the political or electoral context, such as competitiveness and incumbency status, and also institutional features like ballot design. Most of the research has focused on national level offices, that is, voters supporting candidates for president and candidates for the U.S. House and/or Senate from different parties. Many studies rely on survey data, where partisanship and recent vote (in a post-election survey) or vote intention (in a pre-election study) can both be measured, for comparison. Analyses based only on aggregate returns or ballot images dispense with partisanship, as such, in favor of vote choices alone.

### *Survey-Based Studies*

A strong theme in the literature is the importance of incumbency. Incumbents from the "wrong party" from the point of view of voters' partisanship, often draw substantial crossover votes, par-

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<sup>7</sup>Both Minnesota Democrats, Amy Klobuchar and Tina Smith, won their contests, by margins of roughly 24 and 10 percentage points, respectively. Given the aggregate vote totals, logical bounds on the rate of straight-ticket voting are, roughly, 12 to 88 percent. In exit polls, the proportion reporting having cast such ballots is very close to the upper limit (<https://www.cnn.com/election/2018/results/minnesota>).

ticularly, but not exclusively from not-strong partisans (“weak” and “leaning” partisans). Soss and Canon (1995), studying senatorial and gubernatorial voting in 1990, Born (2000), studying votes for president and Congress from 1956 to 1992, and Maddox and Nimmo (1981), examining votes for president, US Representative, US Senator, and governor over the period 1952-1976 are all examples of studies detecting incumbency effects in this regard. Precise levels of split-ticket voting seem to vary over time, roughly in the range of 10 to 40 percent. These studies and others also locate some split-ticket voting in voter uncertainty about candidate positions. Karp and Garland (2007) found that about 16 percent of voters in the Texas 19th congressional district in 2004 cast votes for Republican George W. Bush and the Democratic House candidate, mostly because they believed the Democrat to be at least as conservative as his Republican opponent.

Other studies (e.g. Lewis-Beck and Nadeau (2004), studying 1992 and 1996 federal voting from survey reports) indicate that some voters split not only because individual candidates have managed to separate themselves from their party in the minds of these voters, but also because the voters prefer divided to unified government and like to place checks on both parties’ agendas.

Beck and colleagues (1992) surveyed voting-age adults in Ohio in 1990, in search of split-ticket voting for state-level offices, where information about candidate positions is often scarcer than is the case for congressional races. The percentage of voters who split their tickets in each pair of races (governor-attorney general, governor-secretary of state, etc.) ranged from about 23 to 38 percent. Across five contests, a total of 54 percent of voters cast at least one vote for each party. More visible candidates—typically incumbents—tend to draw support from voters aligned with the opposing party, particularly those without strong identification.

Mulligan (2011) finds that the percentage of voters who split their federal tickets has shifted from about 15% in the 1950s and 1960s to roughly 25-30% in the 1970s and 1980s before declining back to about 17% in the 1990s and 2000s. Partisan ambivalence is positively associated with split-ticket voting for both President-House and President-Senate tandems. Votes for the state executive-branch offices in Ohio (governor, secretary of state, attorney general, state auditor, and state treasurer) in 1998 exhibit a similar relationship between partisan ambivalence and split-ticket voting.

Davis (2015) amends the ambivalence theory by arguing that indifference is even more strongly associated with split-ticket voting. While ambivalent voters possess mixed or conflicting attitudes toward both parties, indifferent voters lack affective attachments to the parties and are neither positively nor negatively oriented toward either of them. In statistical models of self-reported ticket-splitting behavior between Presidential and US House voting from 1984-2004, partisan ambivalence is positively associated with split-ticket voting, but the association between indifference and split-ticket voting is stronger.

In related work, Davis and Mason (2016) focus on “highly sorted” voters—those whose partisan and ideological identities are matching or highly congruent. The authors show that a high degree of partisan-ideological sorting (not just strong partisanship) has the strongest negative effect on split-ticket voting. They employ data from the 1972-2012 ANES Time-Series, to focus on President and US House votes only, and the larger 2010 CCES survey which permitted analysis of more pairings, including governor-U.S. Senator, governor-U.S. House representative, governor-state senator, and governor-state representative.

In short, survey-based work has provided varying estimates of levels of top-of-ticket ballot splitting, and also provided a moderately large catalog of reasons why voters will spread their support across parties. Any model of American voters assuming, implicitly or explicitly, that citizens are all strict partisans, ignores not only much countervailing evidence on party identification

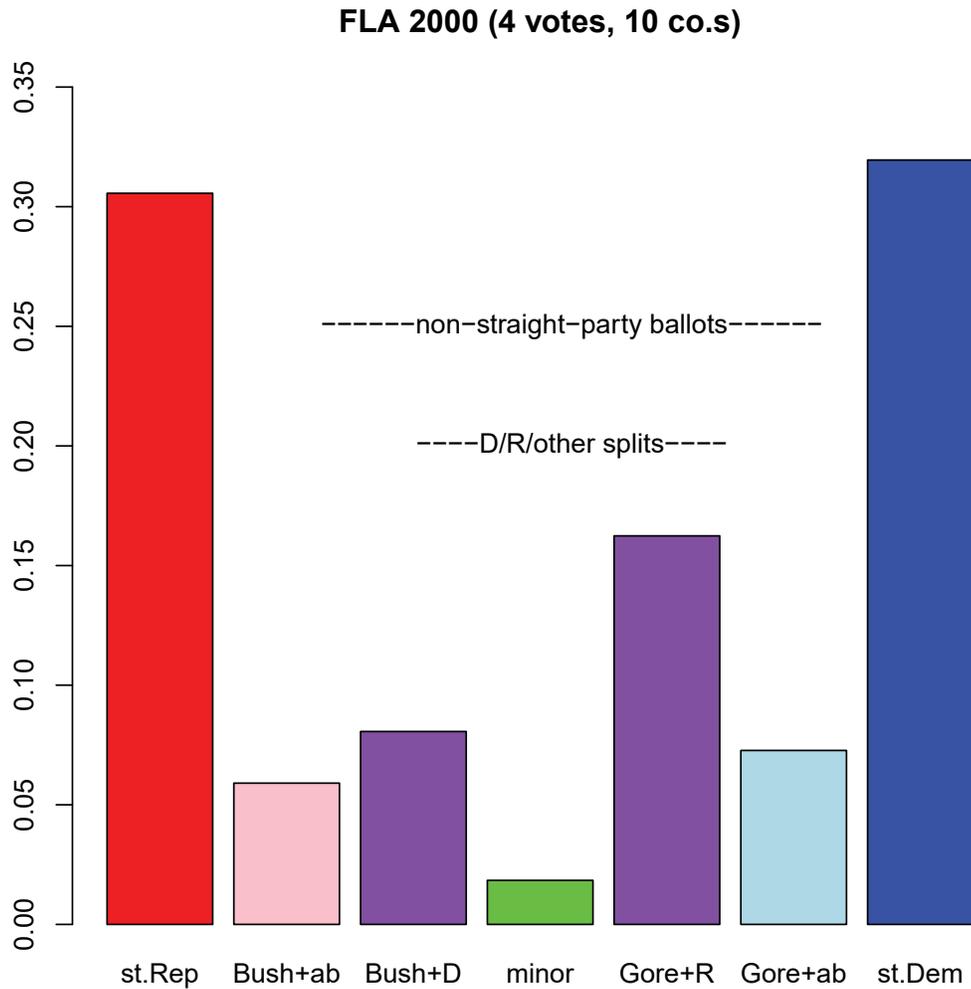
but also evidence in what voters say about how they vote.

*Ballot Image Data*

In one of few studies to employ data from actual ballots as opposed to survey or aggregate-level data, Gitelson and Richard (1983) measured the frequency of split-ticket voting in a single municipality (an anonymous Midwestern community of 40,000 that they dubbed “Midcity”) in the 1972 and 1976 elections. The authors measured ticket splitting across multiple pairs of offices, using votes for: president and Senate, House of Representatives, governor, coroner, attorney general, and state senate. The mean percentage of split-tickets for all pairs examined was 20.3 percent in 1972 and 22.8 percent in 1976. Lacking ballot-level data, many others have used the difference between the highest and lowest percentage of the two-party vote cast for either party among the array of offices in any given election as a crude estimate of the level of splitting. This quantity is better regarded as the minimum level of split-ticket voting, and this article reveals, perhaps unsurprisingly, that actual levels can be much higher, so that taking the minimum level as an estimate of the actual level is unwise.

Hansen (2015) also used actual ballots to determine how often voters split their tickets. He obtained a sample of 6,669 ballots from six towns in Vermont in the 2014 general election. The author includes in the calculations all statewide and legislative offices on the ballot as well as all parties (Democratic, Republican, Liberty Union, and Progressive), and the observed frequency of split-ticket voting in this analysis is comparatively high. Only 32.8 percent of the ballots in the sample featured a straight-party-ticket vote.

Analyzing a much larger sample of ballot images, from 10 counties in Florida in 2000, Herron and Lewis (2007) considered four races in common across the counties: US President (votes cast for George W. Bush, Albert Gore, Patrick Buchanan, and Ralph Nader only); US Senate (6 candidates, including one Democrat and one Republican); Florida Treasurer (only 2 candidates, one Democrat and one Republican); and Florida Commissioner of Education (one Democrat, one Republican, one candidate with no party affiliation). More than one-third of the roughly 3 million ballots were “split” across parties in some manner, and that is a minimum level for actual splitting, given that they ignored the many other races down the ballot (because candidates for these other offices varied by (and within) county). The figure below shows what proportion of the ballots were straight-ticket, that is featured four Republican votes or four Democratic votes, at opposite ends. In between are the proportions featuring: a vote for Bush, and no Democrats, but not for at least one of the other three Republicans (an “incomplete” Republican ballot); a vote for Bush and between 1 and 3 votes for Democrats; a vote for Buchanan or Nader (for the presidency); a vote for Gore plus 1-3 votes for Republican candidates; and, a vote for Gore and no Republicans, but not for at least one of the other three Democrats.



**Figure 2. Straight- and Split-Ticket Voting in Florida, 2000**

Most studies, excepting Hansen (2015) have truncated their inspection of the phenomenon of ballot splitting, by examining only a few contests, usually at the top of the ticket. The figure above suggests that a sizable proportion of voters are not fully partisan: some merely withhold support from some of the candidates from the party they mainly support, but others casts votes both ways, even when we limit attention to only contests featuring candidates from both major parties (ignoring races uncontested by one major party or literally uncontested except for the single, partisan candidate ensured of a win.)

To gain a sense for how much splitting at any level takes place, consider just one precinct

	0D	1D	2D	3D	4D
0R	0.10	1.18	1.24	3.87	30.01
1R	1.65	0.81	1.60	6.25	
2R	1.82	1.98	5.95		
3R	4.26	7.90			
4R	31.37				

Table 1: Percentage of Ballots with 0-4 Republican and Democratic Votes in 4 Florida contests, 2000

from the Florida data shown above. Below are data from precinct 1A in Broward County. The analysis on the left employs the same four races as the table above, with a very slight relabeling of ballot types. It reveals, again, a good deal of splitting. The panel on the right employs the same classification scheme, but considers all ten partisan, contested races on the ballots cast in the particular precinct. The additional six contests were: US Representative (33rd district); State Senator (31st district); State Representative (91st district); Clerk of the Circuit Court; Property Appraiser; and Supervisor of Elections. Nine of the races featured exactly two candidates, one Republican and one Democrat. The County Commissioner race also had a Reform party candidate. (For convenience, I ignore 3 ballots featuring no votes for any Republican or Democrat.) In that election, about as many voters were willing to support both parties, in some degree, as were fully and purely partisan.

Large proportions of Americans do split their tickets, but most analyses to date, lacking the necessary data, have studied only limited manifestations of ballot splitting. With only sporadic ballot-image data sets, it is difficult to generalize. But it is plausible that estimates based on comparison of two or even three or four races exaggerate how many Americans are straight-ticket voters, exemplifying very strong partisanship. The explanations on offer for deviating from straight-ticket voting, meanwhile, relate both to candidate and voter traits.

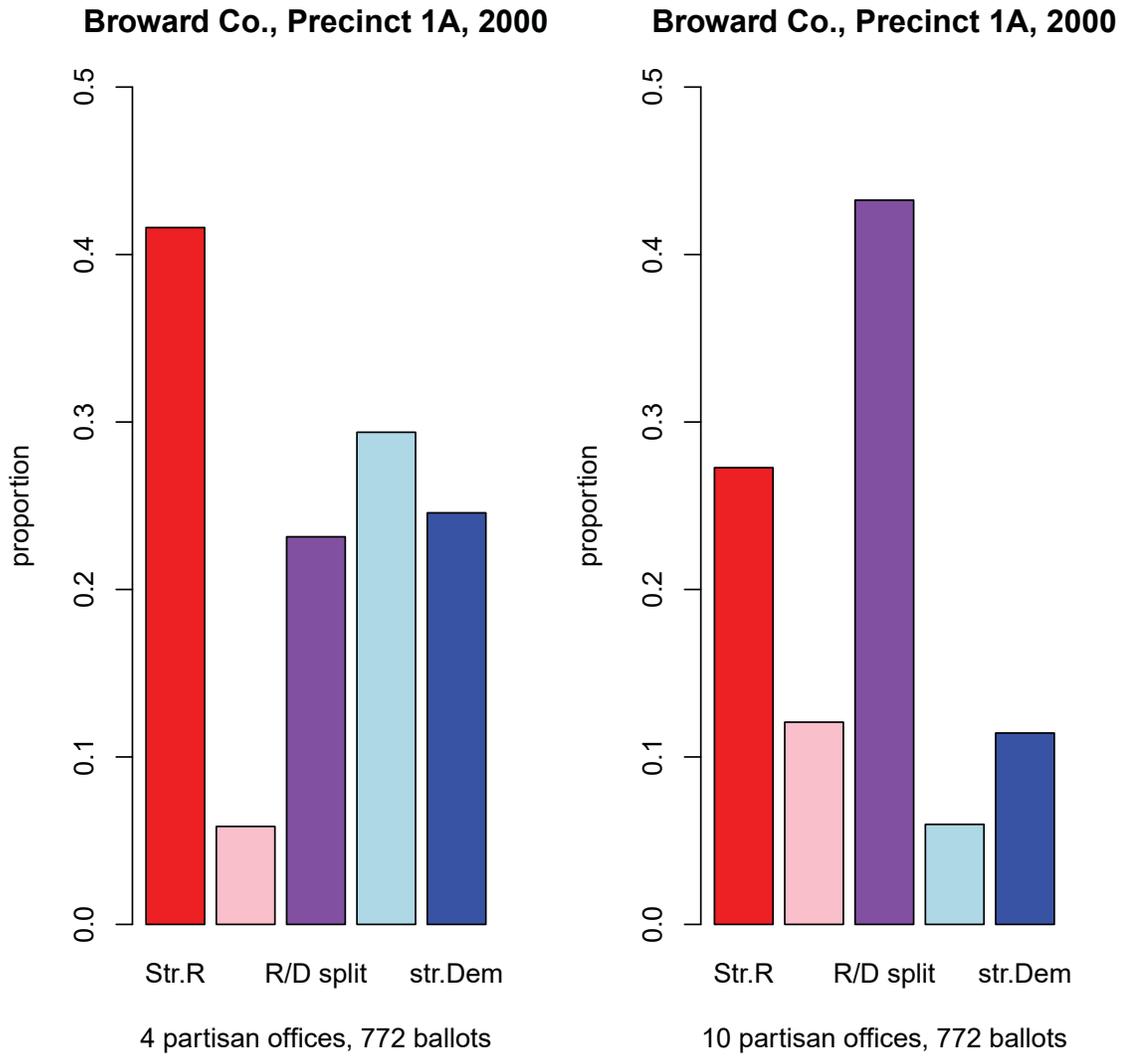


Figure 3. Split-Ticket Voting Rates Increase with Number of Elections Considered

	0D	1D	2D	3D	4D
0R	0.4	0.9	1.3	2.6	24.5
1R	0.6	1.0	2.6	5.7	
2R	1.7	1.6	4.3		
3R	3.5	7.9			
4R	41.5				

Table 2: Percentage of Ballots with 0-4 Republican and Democratic Votes, 4 contests, Precinct 1A, Broward Co., Florida 2000

	0D	1D	2D	3D	4D	5D	6D	7D	8D	9D	10D
0R	0.3	0.5	0.1	0.4	0.3	0.1	0.4	0.3	0.3	3.6	11.4
1R	0.3	0.1	0.1	0.6		0.3	0.1	0.4	2.1	3.6	
2R	0.3	0.3		0.4		0.3	0.5	1.3	3.2		
3R	0.4	0.4	0.1	0.1	0.4	0.3	0.5	1.8			
4R	1.0	0.1	0.1	0.6	0.6	0.4	1.6				
5R	0.1	0.4	0.4	0.1	1.4	1.2					
6R	0.4	0.1	0.4	1.3	1.9						
7R	0.5	0.6	1.3	2.5							
8R	0.9	1.4	2.8								
9R	8.2	6.7									
10R	27.2										

Table 3: Percentage of Ballots with 0-10 Republican and Democratic Votes, 10 contests, Precinct 1A, Broward Co., Florida 2000

#### *Bounds on Straight-Ticket Voting from Official Returns*

In the absence of ballot images, one is resigned to estimating levels of ticket splitting or computing logical bounds on these levels. Sometimes, these are quite informative, but more often, they are too wide to be very informative about underlying behavior. Such is the case with recent Wisconsin data.

When considering returns from elections contested by both a Republican and a Democrat, it is convenient, for present purposes, to aggregate all votes cast for any other candidates and all blank ballots into a residual category, so that comparison of any two contests can be represented as a  $3 \times 3$  table. On the margins are the observable vote totals. The cell entries correspond to unknown frequencies (or proportions) of ballots in various straight or split combinations. An important definitional point is how to classify mixtures of partisan votes and votes for minor-party candidates or abstentions. As an example, consider the 2016 Wisconsin statewide results for US President (more precisely, slate of presidential electors pledged to support the relevant party's candidates for president and vice president) and for US Senator.

The table entries can be expressed as numbers or proportions (or percentages) of all ballots cast, and all are unknown from returns alone.<sup>8</sup> Straight-ticket votes for major party candidates

<sup>8</sup>Note that there were 27,409 fewer votes cast for US Senator than for president. Above, those abstentions are added to the "all other" column. With data on total ballots cast, over- and under-votes, one could, likewise, revise the values to include the (few) ballots lacking a valid choice in either contest.

2016 Senate Vote				
	Johnson (R)	Feingold (D)	all other	
Trump (R)	$p_{RR}$	$p_{RD}$	$p_{RO}$	47.2%
Clinton (D)	$p_{DR}$	$p_{DD}$	$p_{DO}$	46.5 %
all other	$p_{OR}$	$p_{OD}$	$p_{OO}$	6.3 %
	49.7 %	46.4 %	3.9 %	2,976,150 ballots

	Johnson (R)	Feingold (D)	all other	
Trump (R)	0,47.2	0,46.4	0,3.9	47.2%
Clinton (D)	0,46.5	0,46.4	0,3.9	46.5 %
all other	0,6.3	0,6.3	0,3.9	6.3 %
	49.7 %	46.4 %	3.9 %	

Table 4: Logical Bounds on Vote Combinations, Senate and President in Wisconsin, 2016

are  $p_{RR} + p_{DD}$ . Major-party splits are  $p_{DR} + p_{RD}$ . There is some ambiguity about how to classify remaining cases, which include incomplete partisan votes, due to abstention, some number of straight minor tickets (there were Libertarian candidates in both contest), and combinations of abstention and support for minor-party candidates. I will focus on the major-party, straight-ticket vote.

The Fréchet bounds for the frequency in row  $i$ , column  $j$ ,  $n_{ij}$ , are:

$$\min(n_{i+}, n_{+j}) \geq n_{ij} \geq \max(n_{i+} + n_{+j} - n, 0),$$

where  $n_{i+}$  represents the sum for row  $i$  across all columns, and so on. Applying these, we know the maximum and minimum possible values for each cell, shown in the table.

In this instance, where the final outcomes were so similar, minima are uninformative—all of the cells could have 0 counts, logically. Because the major-party straight and split rates are sums of cells not sharing a row or column, the extrema are simple sums. Hence, the minimum and maximum values of straight-major-party voting here are 0% and 93.6%. The former corresponds to an implausible 92.9 % major-split level and the latter to zero major-party ticket-splitting. These logical possibilities are only a very small improvement on the data-free logical bounds of 0 and 100 percent in this case. But there is more information when the races being compared are less similar in outcome.

For example, in Wards 1 and 2 in the village of Whitefish Bay, in the 23rd Assembly district, the presidential and senatorial races differed more, with presidential votes totaling, roughly, 56% Democratic, 34% Republican, 10% other, and senatorial votes adding up to 44% Democrat, 54% Republican, 2 % other. Those totals imply a lower bound very near 0% again, but an upper bound of about 78% on straight-ticket voting. Meanwhile, in a ward in Germantown, Juneau county, in the 50th Assembly district, Donald Trump won nearly 66% of the vote while the Republican Senate candidate Ron Johnson took about 55%, and the implied upper bound on two-way, straight-ticket voting was about 87%. The larger the discrepancies between outcomes for different contests, the more one can be sure that some minimal level of splitting took place.

Moreover, there are, of course, more elections to consider on most ballots. Every voter in Wisconsin in 2016 also had the chance to vote in a US House election (7 of 8 of which featured both a Republican and a Democratic candidate) and a Wisconsin Assembly election (51 of 99 of

which were contested by candidates from both major parties). Sixteen of the 33 state senate seats were also up for election, and eight of these were contested by both major parties. So without considering county-level offices, Wisconsin voters in 2016 were picking between Democrats and Republicans (and sometimes others) in 2, 3, 4, or 5 contests, depending on where they lived and on whether or not both major parties fielded candidates.<sup>9</sup> The five-way table analogous to the two-way version above has  $3^5 = 243$  cells and only 15 marginal sums (vote totals for the three categories for each of the 5 races). Calculation of logical bounds for straight- and/or split-ticket voting from only these “1-way” margins is more complicated than in the two-way case, but still possible (Fienberg 1999). A general expression for bounds in a  $k$ -way table, from known 1-dimensional marginals, where the tables can vary in size is:

$$\min(n_{i_1+\dots+}, n_{+i_2+\dots+}, \dots, n_{+\dots+i_k}) \geq n_{i_1 i_2 \dots i_k} \geq \max(n_{i_1+\dots+} + n_{+i_2+\dots+} + \dots + n_{+\dots+i_k} - n(k-1), 0)$$

where table entries are  $n_{i_1 i_2 \dots i_k}$ ,  $i_j = 1, 2, \dots, I_j$  for  $j = 1, 2, \dots, k$  and the “+” notation indicates aggregation to marginal totals. Here, by collapsing minor-party vote and abstention, one obtains  $3 \times 3 \times \dots \times 3$  tables, or  $3^k$  tables for  $k$  separate contests, each with known vote totals from a common electorate.

Figure 1 shows logical bounds on straight-ticket, major-party voting for about 6,500 wards in the 2016 election, according to how many of these 5 races were contested and whether or not there is a minimum bound (higher than zero). For most of the wards, the vote totals do not rule out no straight-party voting at all, as the right-hand panels illustrate.<sup>10</sup> With the exception of a few hundred wards having 2 or 3 contested races, the bounds are typically very wide, and consideration of voting across more contests brings the maximum possible straight-ticket levels down for only a small set of wards (those on the far left in the right-hand panels).

Mindful of the Florida examples cited above, it is entirely possible that straight-ticket voting for these contests in Wisconsin in 2016 was practiced by a minority of voters, with the balance splitting their tickets. However, the logical bounds also do not rule out very high levels.

<sup>9</sup>There is still an opportunity to split one’s ticket by declining to support an uncontested candidate, but I set aside such races as different in kind here.

<sup>10</sup>In the right-hand panels, where the minimum straight-ticket rate is always zero, the observations are sorted by maximum, yielding smooth curves. The left-hand panels are sorted by range (maximum minus minimum), resulting in slightly jagged curves.

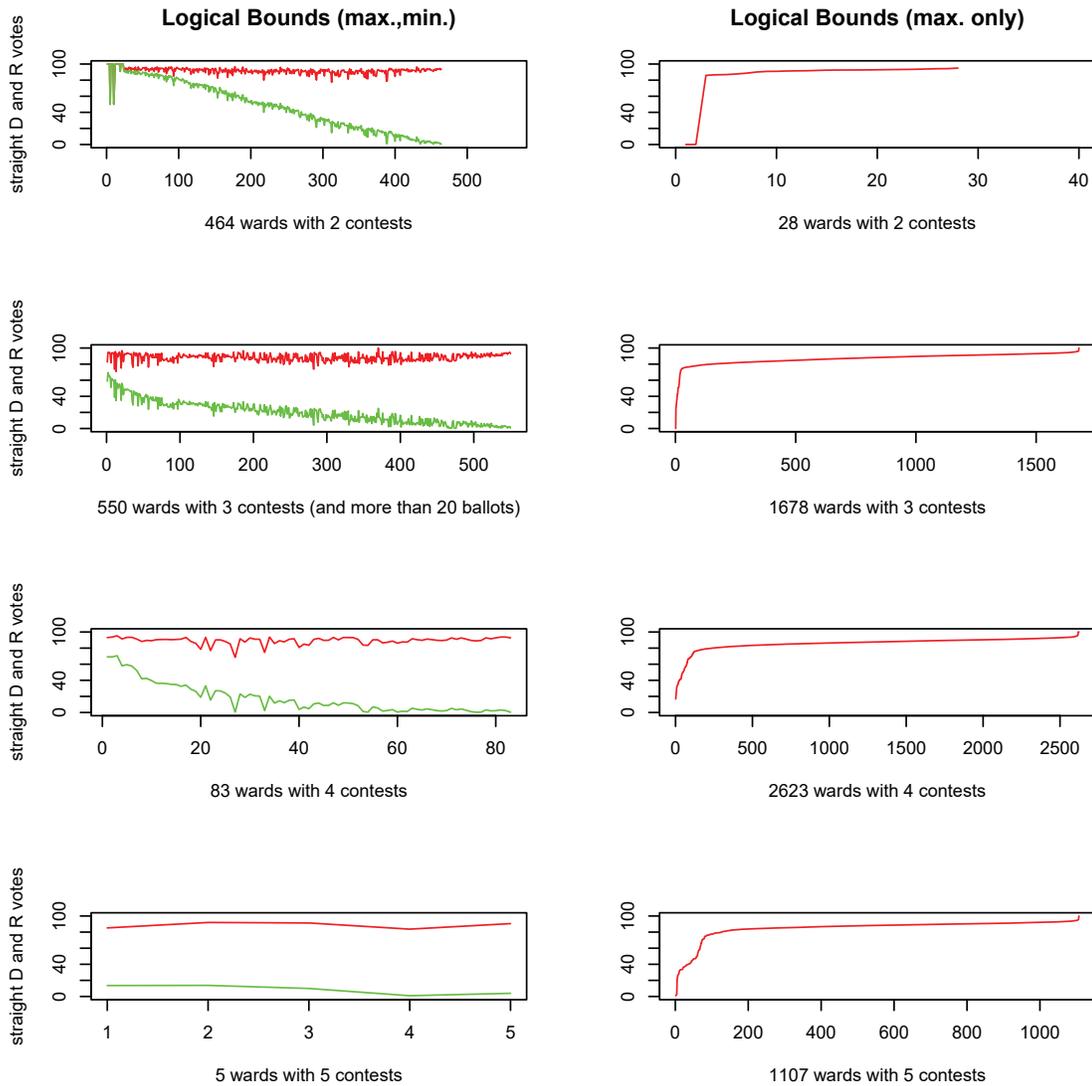


Figure 4. Logical Bounds on Straight-Ticket Voting in Wisconsin Wards in 2016

## 2 The Normal Vote

Detecting, from only aggregate vote totals, how many ballots feature votes for candidates from both major parties is difficult. Averaging is much easier, and is probably the preferred method of estimating “normal votes” for regions. It is common to describe such measures as “partisanship.” In the Expert Report of Professor Jowei Chen, for instance, various averages of election returns are repeatedly described as “measures of partisanship.” But because individual partisanship is

a bedrock concept of political behavior, employing the same term to describe the average partisan lean of a district in its voting over a short period of time is an unfortunate and potentially confusing practice. It is preferable to characterize such variables as estimates of the normal vote, originating, in part, in the partisanship of the electorates, but in a complicated, largely invisible and potentially dynamic way (Converse 1967). A normal vote split arises from the distribution of party identification, and also from variation across the categories of party identification in: turnout rates, participation rates, contest by contest, given turnout; and candidate choices, contest by contest. The average Republican (or Democratic) vote for distinct offices need not match, particularly when one compares top-of-the-ballot offices and down-ballot offices. Mixing together multiple contests does not cancel out candidate effects. As a theoretical construct, partisanship is quite distinct from votes cast, and observed vote for a contest or select contests, averaged, is, at best, a noisy measure of the range of partisan attachments—in direction and strength—of those legally entitled to cast those ballots. Unfortunately, even academic Political Science is rather sloppy in employing shorthand terminology that confuses election returns and the underlying forces that determine them.

The notion of “normal” is “expected Republican (or Democratic) vote in a *normal* election,” that is one where candidates are about equally appealing, campaigns about equally effective, and there is no cross-district “tide” assisting one party at the expense of the other. The underlying theory is that election results reflect a long-term factor (partisanship of the electorate) that changes slowly, plus contest-specific short-term forces (mostly originating in candidate traits) and short-term forces that are larger than local, such as regional or national swings or tides that favor one party and harm the other (Stokes 1968). Many of the explanations offered for ticket splitting relate to candidates’ abilities to attract voters who do not identify with their parties and so would not support them on the basis of partisanship alone. The study of candidate traits is another huge field in political science. Hereafter, I review only select examples briefly, to emphasize that there are many factors shaping election results beyond the partisanship of the electorate.

## 2.1 Candidate Traits and the “Personal Vote”

Candidates have many more traits than their party labels, and they appeal to or repel voters on the basis of a large catalog of qualities, including, but not limited to: familiarity, reputation for (or appearance of) being helpful to constituents, embroilment in scandal, issue positions, personality, campaign style, fixed demographic traits (e.g., sex, race or ethnicity, age), personal history, profession, etc. Broadly, we classify the net, positive candidate-specific factors as a “personal vote” (Cain, Ferejohn, and Fiorina 1987; Rivers and Fiorina 1989). A huge literature on American legislative elections (especially congressional races) has emphasized incumbency as a particularly important, albeit ambiguous, quality that has a consistent, systematic effect on election results.

### *Incumbency Advantage*

Incumbents have tended to out-perform challengers in legislative elections for decades, all else equal (analytically, it is a challenge to ensure that “all else” is equal in statistical comparison, but the findings are robust to many different approaches). Debate continues on why incumbents are better vote-getters. Critically, the point is not merely that they generally succeed in getting re-elected; partisanship alone could make it easy for candidates from a party to do well in a district whose voters tend to prefer that party. Rather, “incumbency advantage” properly understood, is a vote bonus accrued by office-holders net of whatever advantage their party label offers given their

electorate's partisanship. Erikson (1971) launched the study of incumbency advantage, which thereafter grew quickly. An appealingly simple measure is the "slurge" that combines sophomore surge and retirement slump. The former quantity compares how a given individual performs when running without incumbency status (in his or her initial run) and with it (in a second, sophomore race). The latter compares how a party does when its candidate is not an incumbent, as compared to the immediately prior contest in which that party's candidate was an incumbent. Greatly more complicated statistical models aim to control for the quality of both major-party candidates in each race, the possibility of inter-election swings affecting all candidates, campaign spending, and other factors (e.g. Gelman and King 1990, Krashinsky and Milne 1993, Levitt and Wolfram 1997, Gelman and Huang 2008). Unusually, even as authors broached new statistical models, their conclusions rarely differed. As Katz summarizes, "The incumbency advantage is one of the most widely studied phenomena in political science. In fact, it is one of the few quantities of interest in the field where there is relative agreement not only on its directionality, but also on its relative size" (2008). In a popular textbook on US House elections, Jacobson plots slurge alongside the Gelman-King measure for the period 1946 to 2010. While the precise estimates of the incumbents' vote bonus vary somewhat, both show a slow rise from the 1940s to the 1960s, then a sharper rise through the late 1980s, at which point it was in the range of 8 to 10 percentage points. Thereafter, it fell somewhat gradually, to roughly 5 percentage points. In the Gelman-King metric, it was lower still by 2016, about 2 percentage points (Fiorina 2018, p. 132). However, these are average values, and Gelman and Huang (2008) propose a model that permits incumbent-specific advantages. Their results suggest that the fall in the bonus from the 1980s to 2000 was smaller, and also accompanied by increasing variance across incumbents.

Several authors extended the study of incumbency advantage to state legislatures, with Ansolabehere, and Snyder (2002) having done so most comprehensively. Using data from state legislative elections, statewide races for 1972-2000, and US House elections for 1942-2000, they concluded, "...the incumbency advantage is as large in state elections as in U.S. House elections, and it grew in state elections as much as in U.S. House elections" (318-319). Their model, unlike Gelman and Huang's, does not produce member-specific estimates, and their data are now more than a decade old. So rather than emphasize a particular point-estimate for incumbency's value, I stress only that it is clear that American elections have, for a long stretch of time, exhibited the phenomenon of incumbents typically out-performing non-incumbents (their challengers and all open-seat candidates) by a non-negligible margin.

Even if there were no other signs that voters cast ballots taking account of individual candidate traits, the existence of incumbency advantage complicates both the measurement of normal vote and the practice of forecasting outcomes from estimates of normal vote. Generally, averages of past results that do not adjust for incumbency effects are prone to error. And predictions that a normal vote in excess of 50% is highly likely to generate a victory can go wrong if incumbency (and other candidate effects) offset the advantage. In turn, incumbency can, to some degree, "lock in" a party's majority status even without a strong accompanying normal-vote advantage.

#### *Other Candidate Traits*

Some studies estimate the effects of other candidates from "observational" data, that is using actual candidacies of women, members of ethnic groups, and so on. Others rely on survey data and respondent reports of hypothetical votes based on comparison of particular kinds of candidates. The latter design allows for clearer separation of distinct qualities, but can be criticized as focused on mere talk, and not actual, real-world behavior. In any case, very large literatures have

demonstrated that the features of candidates matter for how elections turn out.

#### *Race*

Despite some mixed evidence, multiple studies suggest that minority voters are likely to vote for a candidate because he or she shares their race or ethnicity, even if doing so requires crossing parties. Barreto (2007), for instance, found that when viable Latino candidates run for office, Latino voters turn out to vote in higher numbers and tend to support these co-ethnic candidates, regardless of candidate partisan affiliation. In each of five major U.S. cities—New York, Los Angeles, San Francisco, Houston, and Denver—Barreto compares voter turnout in a mayoral election that featured a Latino candidate to the turnout in the citys immediately preceding mayoral election, in which no Latino candidate was running. The units of analysis are the precincts in each city, and each city analysis includes two mayoral elections (one with a Latino candidate and one without), and all data are precinct-level (vote totals, candidate percentages, and demographic characteristics of each precinct). For all five cities, precincts with larger proportions of Latino registered voters had higher turnout levels when a Latino candidate was running for office, compared to elections without a co-ethnic candidate. Furthermore, heavily Latino precincts were statistically more likely to vote for the Latino candidate. Importantly, ethnicity appears to have a direct effect on vote choice, independent of the candidates party.

Manzano and Sanchez (2010) find that Latinos with a strong sense of ethnic identity are likely to support a co-ethnic candidate, even when he or she is less qualified than a non-Latino opponent. Thus their study tests the limits of voters ethnic attachments by incorporating another variable that usually affects vote choice, candidate quality. Using data from the 2004 National Survey of Latinos, a representative random sample, they asked respondents to indicate agreement or disagreement with: “I am more likely to vote for a Hispanic/Latino candidate instead of a non-Hispanic/Latino running for the same office if they have the same qualifications”; and “I will usually pick a Hispanic/Latino candidate even if there is a better-qualified non-Hispanic/Latino running for the same office.” Given the choice of two equally matched or qualified candidates, 63 percent of respondents indicated that they were more likely to vote for a Latino candidate, but only 22 percent said that they would be likely to vote for a Latino candidate in a race against a non-Latino candidate who was better qualified. Group consciousness and ethnic attachment are the variables most strongly associated with voting for Latino candidates. The predicted probability of supporting a less-qualified co-ethnic candidate is still 0.60 when all ethnic attachment variables (racial group identification, perception of discrimination, orientation toward collective action, and Spanish language usage) are set at their highest values. Like most voters, Latinos are clearly less supportive of less-qualified candidates, and ethnic attachments have their limits. But for some Latino voters, these feelings of attachment are the most salient consideration in their voting decisions.

The impact of racial cues can vary according to the mix of candidates in the contest. Adida, Davenport, and McClendon (2016) report that blacks respond more positively to racial cueing than Latinos, and differences in perceived levels of discrimination may be relevant: in their sample, larger percentage of black respondents than Latino respondents (80% to 66%) said that discrimination against their group is a major problem. Often, racial identities and partisan preferences align, but they do not always do so, and when these two forces collide, some voters use race rather than party as their guide.

#### *Gender*

What factors lead to voter support for women candidates? Dolan (2010) finds that individual attitudes toward women’s representation in government and the desire for greater descriptive

representation are shaped by gender stereotypes about the abilities and traits of men and women in politics. Majorities of survey respondents see women candidates as better able to handle the issues of education and health care and see men as more competent at handling the issue of terrorism. These stereotypes about gender are strongly related to respondents' preferences for and willingness to support women candidates, even when controlling for respondent gender and partisanship. Dolan concludes that those respondents "who see women as competent to deal with things like the economy and terrorism are dramatically more likely to voice a willingness to support them for office and a desire for greater gender balance in government" (p. 85). Again, more generally, gender can reinforce or undercut party as a factor driving vote choices, depending on the mix of candidates.

#### *Religion*

McDermott (2009) analyzes the impact of candidates religious affiliations on voter behavior, and argues that candidate religion serves as a heuristic, working through stereotypes. In an experiment with a nationally representative sample of adults, respondents rated hypothetical candidates assigned random religious labels on competence, trustworthiness, responsiveness, favorability, and ideology. Respondents (both liberals and conservatives) rated evangelical candidates as significantly more conservative and trustworthy than Protestant candidates and candidates with no religious label. Self-identified conservatives were more likely, and liberals less likely, to support them. Respondents partisanship and personal religious affiliations were not statistically significant variables in the analysis, suggesting that stereotypes about religious groups can displace party loyalties when voters assess candidates.

#### *Physical Appearance*

Barrett and Barrington (2005) assess whether different newspaper photographs (flattering versus unflattering) of candidates affect voters perceptions. They presented 264 undergraduate students with a newspaper article about a political candidate. One group got a story with no photo, another group, the identical story, plus an unflattering photo, and a third group, the same story, accompanied by a flattering photo. The favorable/flattering photo depicted the candidate smiling and shaking hands with supporters while standing next to his wife. In the unfavorable photo, shot from a high angle, the candidate is taking questions from a surrounding crowd of reporters, looking annoyed. Subjects in the negative-photo condition rate the candidate more negatively, have a less favorable overall impression of him, and reported a much lower likelihood of voting for the candidate. For example, twenty percent of those who viewed the unfavorable photo indicated that they would be likely to vote for him. That number rose to 32 percent among those who saw no photo, and to 46 percent among those in the favorable-photo condition.

Atkinson, Enos, and Hill (2009) create measures of candidate facial competence (based on surveys in which participants were exposed to pairs of candidate faces for less than one second and then asked to choose which face appeared more competent). They obtained "face scores" for all House candidates in 2004 and Senate candidates from 1990 to 2006. Incumbents facial competence did not have a significant effect in either House or Senate races, but increased facial competence among challengers was negatively associated with voting for incumbents.

Lenz and Lawson (2011) also show that voters judge candidates based on appearance, and this effect is pronounced among those who are relatively uninformed about politics. Using data from gubernatorial and senatorial elections in 2006, they show that voters who are poorly informed but also watch a lot of television base their voting decisions largely on how the candidates look. This relationship is robust across different types of races and different model specifications. It holds

when controlling for other characteristics of the candidates (incumbency, experience, etc.) and of the respondents (party identification, presidential approval).

Attractiveness is subjective, and careful study of its importance in voting is in its infancy. But it appears to be another quality that can assist a candidate in winning over select voters who might otherwise resist an appeal for support.

#### *Leadership and Quality*

Buttice and Stone (2012) focus on two dimensions of vote choice in U.S. House elections: ideological differences between the candidates and differences in their quality as leaders. In their study, candidate quality refers to the “characteristics, abilities, and traits such as integrity and skills in governing that voters value intrinsically in their elected officeholders” (p. 871). They address whether and how these quality differences affect voters choices, independent of incumbency, ideological and partisan congruence. The relationship appears to be conditional: as the ideological contrast between the two candidates in a district increases, the effect of the quality differential on vote choice decreases. Thus, it appears that candidate quality differences have the strongest impact when the competing candidates have adopted fairly similar ideological positions.

Much work has demonstrated that perceptions of presidential candidates personal attributes (e.g., leadership, empathy, trustworthiness, etc.) influence voting behavior, but there was, until fairly recently, less evidence to suggest that these candidate attributes also play a direct role in congressional elections. However, Hayes (2010) and Fridkin and Kenney (2011) show that candidates perceived more positively in regard to such factors as intelligence, honesty, and caring appear to outperform otherwise similar candidates who score less well on these traits. Which candidates matter most, to which voters, seems to be difficult to specify a priori, and is probably subject to change over time.

For layman and academic specialist alike, there is really nothing surprising in the existence of a great many studies emphasizing that candidates’ individual qualities affect election outcomes alongside of party. Neither the voters nor the candidates in American elections are simply partisan robots. And with so many choices on American ballots, it would be startling to discover that who is representing the parties did not matter in some, if not most, contests, for many, if not most, voters. In turn, it is important to remember that normal-vote estimates constitute attempts to identify a baseline result, around which actual elections will vary, often quite considerably, according to factors other than the partisanship of the individual potential voters.

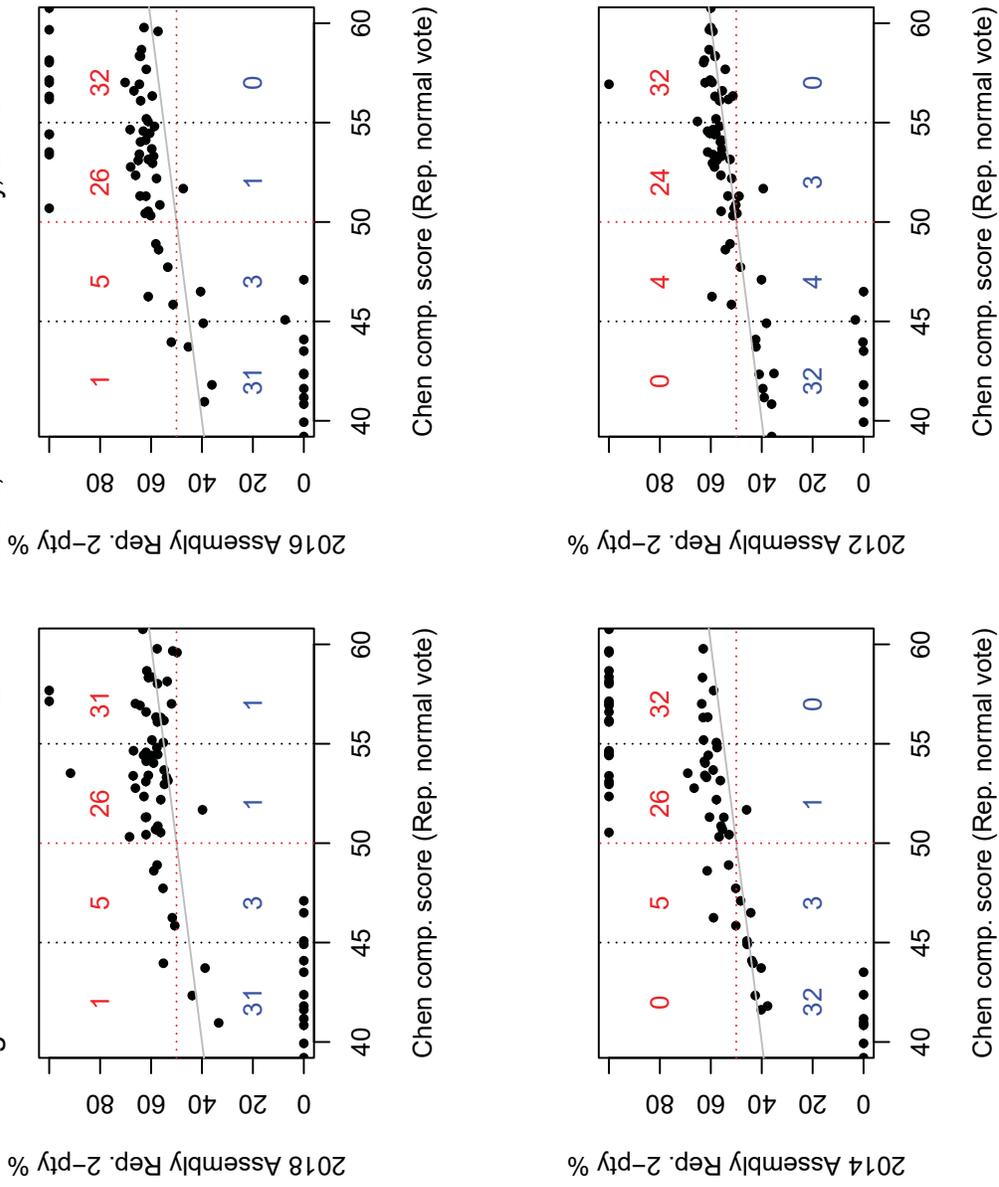
## **2.2 Wisconsin Assembly Elections 2012-2018**

In light of the foregoing, consider how well normal vote predicts election results in recent Wisconsin Assembly races. The figure below shows the Chen “composite measure” of normal vote plotted against actual Assembly election outcomes for the last four election cycles, fought on a common map. (Each panel has a truncated horizontal axis, to omit the comparatively uninteresting stretches with relatively extreme values of normal vote, 0-40 and 60-100.) An emphasis on district traits might begin with the distributional skew, noting that the 35 districts in the competitive 45% to 55% Republican-normal-vote range skew to 27 with an expected Republican share above 50, and only 8 with a share below. That contrast remains, though is less extreme, if one removes the ad hoc 1.8 % uniform swing that Chen applied to his actual normal-vote estimate, based on averaging multiple statewide contests from prior years. Without the swing, there are 38 districts in the 45-55 % Republican range, 12 of which are in the 45-50 zone and 26 in the 50-55 zone.

It would be a mistake to regard these estimates as error-free, and with many districts in the 47-53 zone (27) or the 48-52 zone (19), exactly how skewed is the true normal-vote distribution is unclear. Not only are the Chen estimates based on somewhat old results, from 2004-2010, but those election results were surely determined not solely by partisanship of the electorates, but also by candidate traits, which are ignored in the averaging. For instance, the 13 statewide elections held between 2004 and 2010 featured 7 races with Democratic incumbents (2004 US Senate race, 2006 races for US Senate, Governor, Secretary of State, and Treasurer, 2010 races for Secretary of State and Treasurer) but only 2 with Republican incumbents (2004 race for US President, 2010 race for Attorney General). Given Ansolabehere and Snyder's findings on substantial incumbency advantage in statewide races, not removing those effects should result in some distortion or bias in the estimates. Likewise, combining different years in the averages is not guaranteed to remove inter-election swings, and thus generate a correct estimate for a normal year. In individual districts, some degree of a home-county bonus for individual candidates is yet another plausible distortion.

While it is thus wise to regard the normal vote estimates as noisy, at least as interesting and arresting as their skewed distribution is the parties' performance, over these elections, within categories. The grey diagonal lines show the expected outcome in terms of the estimated normal vote. Most dots fall above the lines in all panels, reflecting that the Republican candidates consistently outperform their districts' "normal" vote breakdown. In 2012, Republicans won half (4) of the 8 districts in the pro-Democratic 45-50 % range. In each of the next three elections, they did even better, taking 5 of the 8. If the Democrats had matched the Republicans in their poaching prowess, by winning 14-17 of the 27 races in the 50-55% region in 2018, they would be in control of the chamber. That Republican candidates out-performed this measure of normal vote could indicate that it is biased downward. However, the fact that Republican Assembly candidates nearly swept the contests in the 50-55 % Chen-measure range also means that shifting the entire distribution to the left would not greatly alter the contrast. Republican candidates for the state Assembly seem to have outperformed expectations, consistently, even in years when their counterparts at the statewide level fared much less well. Some of their edge is probably a simple function of incumbency advantage, as there were more Republican incumbents than Democratic incumbents in each panel. But there are also many other ways that these candidates could be superior to their Democratic rivals, permitting them to outperform other Republican candidates for office on the same ballots by virtue of personal-vote-induced ticket-splitting. The normal vote alone is not a strongly reliable predictor of who will win Assembly contests.

Figure 5. Normal Vote and Election Results, Wisconsin Assembly, 2012-18



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