

Political Gerrymandering and the Courts

edited by

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Determining the Predictability of Partisan Voting Patterns in California Elections, 1978–1984

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Gerrymantering is intended to have the effect of creating unequal opportunities for racial or political groups to elect candidates of choice.¹ For example, Morrill (chapter 10) defines gerrymantering as "the intentional manipulation of territory toward some desired electoral outcome," while McDonald and Engstrom (chapter 8) define it as "the drawing of electoral districts so as to assign unequal voting weights to cognizable political groups." These definitions highlight two key aspects of the gerrymantering issue: the need to identify relevant cognizable groups and the need to identify the probable consequences for these groups of particular manipulations of district boundaries.

In this paper we shall focus on one important type of political group, the political party, and confine ourselves to one state, California. Moreover, we shall look only at the major parties in California, Democrats and Republicans. Before we can decide if there are manageable standards to detect and control partisan gerrymantering, we believe it is important to determine if the concept of partisan voting strength can be meaningfully defined for the units of political geography (ranging in size from census blocks or census tracts to whole cities or counties) that are the building blocks of state legislative or congressional districts. If this cannot be done, then the search for a measure of gerrymantering may be futile (see however, Wells, 1981; chapters 13 and 16, this volume, for other points of view).

It has been argued that the concept of partisan voting strength is

inherently nebulous because in a given year some voters may vote for candidates of different parties for different offices, and, over time, relatively few voters vote a straight-ticket in *all* elections (see chapter 11). This issue was confronted by the Supreme Court in *Davis v. Bandemer*. There, Justice White, speaking for the plurality, refused to rule out political parties as cognizable groups that could be protected under the Fourteenth Amendment: "That the characteristics of the complaining group are not immutable or that the group has not been subject to the same historical stigma may be relevant to the manner in which a case is adjudicated but these differences do not justify a refusal to entertain the case" (106 S. Ct. 2797, p. 2806 (1986)).

In our view, the question is simply whether or not (voters in) different areas of the state demonstrably differ in their relative propensities to support candidates of a given party. If so, then those who draw district lines can make sensible predictions about the likely political consequences of alternative districting plans—taking into account, of course, such additional relevant facts as the presence or absence of an incumbent of a given party. It is not necessary to wait until hindsight has established whether politicians were in fact able to predict perfectly the electoral tides of an entire decade. The issue is whether or not the plan is intended to treat the two parties unequally, and whether, based on existing vote patterns, it could reasonably be expected to "consistently degrade a voter's or a group of voters' influence on the political process as a whole" (*Bandemer*, p. 2810 (1986)).

When political consultants advise legislatures on redistricting they customarily provide legislators with evaluations of the political and demographic characteristics of the new districts as compared to the old. Often, this involves generating "hypothetical" outcomes of previous election contests in the new district boundaries. For example, Bruce Cain when serving as a reapportionment consultant to the California Assembly in the 1980s provided information of this type to its members (Cain, 1984). Such information would not be provided if the previous electoral history of the geography that goes to make up the new districts were not thought to be informative about its probable future voting behavior.

This commonsense view of how previous election returns can be used to support inferences about future electoral behavior has been endorsed by the Supreme Court:

The political profile of a state, its party registration and voting records are available precinct by precinct, ward by ward. These subdivisions may not be identical with census tracts, but, when overlaid on a census map, it

requires no special genius to recognize the political consequences of drawing a district line along one street rather than another. It is not only obvious, but absolutely unavoidable, that the location and shape of districts may well determine the political complexion of the area . . . They can well determine what district will be predominantly Democratic or predominantly Republican, or make a close race likely. (*Gaffney v. Cummings*, 412 U.S. 735, pp. 735-753 (1973))

In this brief note we make use of electoral data for California statewide elections and for elections to the U.S. Congress, and State Assembly in 1978, 1980, 1982, and 1984, aggregated to the census tract level. We look at the extent to which there are geographic patterns in the nature of Republican voting support at the census tract level. There are 5052 whole census tracts in the state. For one election in 1982 we have an N of only 4801 and for one election in 1984 we have an N of 4929 because of missing data. In all elections we look at Republican share of the two-party vote, and at Republican registration as a share of all registration.

In addition to State Assembly and State Senate and U.S. congressional races, in 1978 there were contests for governor, lieutenant governor, secretary of state, controller, attorney general, and treasurer; in 1980 there were contests for U.S. Senate and president; in 1982 there were contests for governor and lieutenant governor, U.S. Senate, secretary of state, and attorney general; and in 1984 there was a presidential race but no statewide contests. We include data on all these elections except for State Senate contests. Because of problems in matching electoral and census boundaries for the Senate staggered elections held under different redistricting plans, we had to omit those elections from our analyses. We show in Tables 15.1 through 15.4 correlation matrices for all statewide contests from 1978 to 1984 except those for the State Senate.

In each year the correlations range from a low of roughly .7 to values above .95. All correlations are statistically significant at least at the .0001 level. The implication is clear. In California, in any given year the greater the Republican vote for any given office in some census tract, the more likely on average is that census tract to provide a high vote (relative to other census tracts) to Republican candidates for other offices. Of course, even census tracts that generally give very high votes to Republican candidates need not do so in every instance—other factors, such as incumbency, will be relevant. Also, even though the most Republican-leaning tracts can be identified, in some contests even these census tracts will not always deliver majorities to Republican candidates although they will be more pro-Repub-

TABLE 15.1. Election Matrix of California Correlations 1978

	Rep. Reg.	Assem- bly	Cong- ress	Gov.	Dem. Vote Lt. Gov.	Sec'y. State	Comp- troller	Treas- urer	Att'y. Gen
Rep. Reg.	1.00	.68	.80	.92	-.74	.94	.97	.96	.88
Assembly	.68	1.00	.65	.68	-.53	.68	.67	.69	.68
Congress	.80	.65	1.00	.77	-.60	.79	.79	.80	.75
Governor	.92	.68	.77	1.00	-.76	.93	.92	.92	.94
Dem. Vote Lt. Governor	-.74	-.53	-.60	-.76	1.00	-.73	-.74	-.74	-.75
Sec'y. State	.94	.68	.79	.93	-.73	1.00	.97	.94	.91
Comptroller	.97	.67	.79	.92	-.74	.97	1.00	.97	.89
Treasurer	.96	.69	.80	.92	-.74	.94	.97	1.00	.89
Att'ny. General	.88	.68	.75	.94	-.75	.91	.89	.89	1.00

TABLE 15.2. Matrix of California Election Correlations 1980

	Rep. Reg.	Assembly	Congress	President	U.S. Senate
Rep. Reg.	1.00	.74	.79	.91	.89
Assembly	.74	1.00	.67	.74	.70
Congress	.79	.67	1.00	.80	.78
President	.91	.74	.80	1.00	.96
U.S. Senate	.89	.70	.78	.96	1.00

TABLE 15.3. Matrix of California Election Correlations 1982

	Rep. Reg.	U.S. Senate	Lt. Gov.	Att'ny. Gen.	Sec'y. State	Congress	Assembly
Rep. Reg.	1.00	.89	.93	.94	.93	.90	.79
Gov.	.89	1.00	.98	.96	.95	.91	.73
U.S. Senate	.93	.98	1.00	.98	.97	.94	.77
Lt. Gov.	.94	.96	.98	1.00	.96	.93	.78
Att'ny. Gen.	.93	.95	.97	.96	1.00	.91	.76
Sec'y. State	.90	.91	.94	.93	.91	1.00	.77
Congress	.85	.81	.84	.83	.82	.84	.74
Assembly	.79	.73	.77	.78	.76	.77	1.00

TABLE 15.4. Matrix of California Election Correlation 1984

	Rep. Reg.	Assembly	U.S Congress	President
Rep. Reg.	1.00	.72	.83	.91
Assembly	.72	1.00	.77	.73
U.S. Congress	.83	.77	1.00	.84
President	.91	.73	.84	1.00

lican, on average, than other census tracts. Nonetheless, Tables 15.1 through 15.4 demonstrate rather conclusively that, at least in any given election year, we can identify areas of greater or lesser Republican voting strength at the census tract level. These levels of consistency in voting are directly comparable to those observed for racial polarization (see, e.g., *Gingles v. Edmisten*, 590 F. Supp. 345, p. 368 n. 30 (1984)).

Now we look to see whether census tracts exhibit consistency in their Republican leanings over time. If so, then the claim that previous election results can be used to predict election tendencies in future elections is further supported.

Table 15.5 shows interyear correlations of Republican share of the two-party voter for five levels of office, State Assembly, governor, secretary of state, attorney general, and Congress, at the census tract level. While correlations for a given office across election years do not average quite as high as correlations between different levels of office within a single year, they are still remarkably high—in the .5 to .8 range. All the correlations are statistically significant at least at the .001 level. Indeed, (bivariate) correlations that high are quite rare within the social sciences (*Gingles v. Edmisten*, 590 F. Supp. 345, p. 368 n. 30 (1984)). The highest correlations occur for the statewide offices. For other offices the highest correlations, as expected, in general occur between years in which the districting plans have not been changed. Differences between plans make it more likely that census geography with a Democratic incumbent in one year may have a Republican incumbent in another year and vice versa. Such incumbency effects will usually reduce the magnitude of the bivariate correlations.

However, if we were to make use of multivariate models, we could significantly improve our ability to ascertain the probable political leanings of any given piece of census geography. Voting in any given election has both long-run and short-run components. The long-run component can often better be estimated by some composite of elec-

TABLE 15.5. Matrix of Interyear Correlations for California Elections
1978-1984

		State Assembly			
		78	80	82	84
Assembly	78	1.00	.70	.52	.61
Assembly	80	.70	1.00	.64	.58
Assembly	82	.52	.64	1.00	.66
Assembly	84	.67	.58	.66	1.00
		Governor			
		78	82		
Governor	78	1.00	.82		
Governor	82	.82	1.00		
		Secretary of State			
		78	82		
Sec'y. State	78	1.00	.86		
Sec'y. State	82	.86	1.00		
		Attorney General			
		78	82		
Attn'y. Gen.	78	1.00	.76		
Attn'y. Gen.	82	.76	1.00		
		U.S. Congress			
		78	80	82	84
Congress	78	1.00	.84	.68	.74
Congress	80	.84	1.00	.77	.81
Congress	82	.68	.77	1.00	.81
Congress	84	.74	.81	.81	1.00

tion outcomes than by any single election, even a previous one for that same office. In addition to registration data for the two major parties,² two key short-run factors, are the presence or absence of an incumbent and the party affiliation of that incumbent (Cain, 1985a). Also, in California there are two minor parties whose registration figures are potentially informative of a given area's political leanings (Cain, 1985a). Finally, demographic variables such as racial and income data may also be informative about both partisan leanings and

probable rates of turnout in different types of contests. The issues of multivariate prediction equations must be left to subsequent research. Here, our task has simply been to demonstrate that the idea of partisan leanings can be operationalized at the census tract level.

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NOTES

1. Clearly "equal opportunity to elect candidates of choice" does not translate as "identical outcomes." The ability of a cognizable political group to elect candidates of its choice obviously will be a function of its size and (in a system that makes use of districts) of its geographic dispersion. Regardless of districting plan, some groups may be too small or too dispersed to have any realistic opportunity to elect candidates of choice.
2. In California, Republican registration is highly correlated with Republican voting strength, but Republican voting strength in a district will, in general, considerably exceed the Republican share of party registration. For example, in 1978 over 70% of all census tracts had a majority of registered Democrats. The same was true in 1984. If Republican registration equaled Republican voting strength, Republicans would never be elected to statewide office in California. Of course, in reality the state is generally competitive at the statewide level and has repeatedly elected Republican governors and U.S. senators in the 1980s. In California, if we regress Republican vote share for some given office on Republican registration, the slope of the bivariate regression will in general be greater than one. This is not surprising. As Jewell and Olson (1986, p. 43) note, Party registration figures for a state are a poor measure of existing or potential competition or of the strength of the respective parties, even though politicians and journalists frequently refer to these figures as if they were meaningful indicators.