



DECLINE OF U.S. VOTER TURNOUT Structural Explanations

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This article explores structural causes of the decline in turnout in American elections. One-quarter of the 10 percentage point decline in presidential turnout since 1964 is explained by a changing age distribution. America's population is growing in just those young and old age groups that vote in low rates. A second structural cause is an expanding election calendar across federal, state, and local governments. A disaggregation of elections has increased the number of times electors are called to the polls, which has contributed to declining turnout in individual elections. Finally, tracing individual voter histories across a series of elections provides evidence of a core electorate, which is large as a proportion of the registered electorate and which votes at a reasonably high and equal level. The evidence for these voter histories is drawn from the CPS Voter Validation Study and from a sample of registered voters in a Connecticut town.

The decline in voting turnout in the United States is disquieting. Since 1960, turnout has fallen each presidential year: from 62.8% in 1960, to 61.9 in 1964, to 60.9 in 1968, to 55.4 in 1972, to 54.4 in 1976. Quite literally, the decline represents millions of votes lost to the candidates. If the 1972 electorate had simply voted at the 1968 rate, over seven million additional citizens would have gone

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to the polls. Mobilized, tiny fractions of these nonvoters could have easily altered any number of our recent presidential contests. For every vote separating Nixon and Kennedy in 1960, 343 people did not vote. For every vote separating Nixon and Humphrey in 1968, 58 people did not vote.¹

High rates of abstention also raise grave doubts about the balance of preferences among nonparticipants. In U.S. presidential elections, nonvoters will invariably exceed those voting for the winning candidate. In close elections of low turnout, this fact is particularly striking. In 1968, nonvoters exceeded those voting for the victorious Nixon by over 15 million. In 1976, nonvoters outnumbered Carter voters by 28 million.

Such evidence of declining turnout justifies a close examination of a number of possible causes. The results of this analysis are fortunately optimistic. I will make three arguments, each of which offers some reassurance that falling turnout does not necessarily reflect a growing popular estrangement from politics. Rather, there are structural causes that explain a significant proportion of the decline. An analysis of these structural features yields these hypotheses:

- (1) A changing age distribution explains one-quarter of the decline in presidential turnout since 1964.
- (2) Changes in the pattern of election calendars among federal, state, and local governments have sharply increased the number of times electors are called to the polls, which has, in turn, contributed to declining turnout in individual elections.
- (3) Individual voter histories suggest there is a core electorate, which is large as a proportion of the registered electorate and which votes at a reasonably high and equal level.

The evidence adduced in support of these hypotheses is suggestive rather than definitive. There are no data that are conclusive on many of the points under contention. In particular, there is no concrete evidence of a direct link between the expanding election calendar and declining turnout. Even so, the hypotheses derive from an idea that is at least potentially important. Studies of turnout trends to date tend to ignore the

changing legal context of electoral participation: If aggregate turnout declines across a series of elections, we assume that individuals as a group are voting less frequently. That is, we assume that the number of elections is fairly constant across time. If, on the other hand, the number of elections held over a fixed period of time is increasing, then people may be voting as frequently as ever, even though the turnout rate in individual elections is falling.

The goal of the article, then, is to stimulate research into two areas about which we know relatively little. The first is the *variety of election calendars*: What is the rate at which federal, state, and local elections are held? The second area is *individual voter histories*: How often do individuals typically vote in a given period? How high and how equal across individuals is that rate? What is the impact of election calendars on individual participation?

SECULAR PATTERNS IN PRESIDENTIAL TURNOUT

A link between turnout rates and structural features of twentieth century presidential elections is suggested by historical trends. Three systematic or secular trends dominate the series: 1900-1920, 1920-1960, and 1960-1976. Three regression lines drawn through the actual data points nicely measure these secular trends.² From 1900 through 1920, turnout falls at the rate of 2.9 percentage points each election year. This particular trend is sufficiently interesting to have attracted a substantial body of research. Explanations by Schattschneider (1956), Burnham (1965, 1974), and Price (1971) emphasize the decline of national two-party competition following the realignment of 1896. Converse (1972) and Rusk (1970) argue the importance of changes in election laws designed ostensibly to limit voter fraud, including the abolition of alien suffrage and the adoption of such devices as literacy tests and personal voter registration. Prindle (1979) offers evidence of the truth of both positions.

From the twentieth century low in 1920 through 1960, we see a shift toward increasing turnout. Across a four-decade period,

turnout rises at a rate of 1.7 percentage points each election, a pattern interrupted only by the war and postwar elections of 1944 and 1948. Since 1960, turnout has been falling at a rate of 2.2 percentage points per election. The regularity of falling turnout since 1960, then, is of a piece with historical patterns. These patterns serve to focus our attention on forces affecting an entire series of elections in a systematic way.

This regularity of secular trends in turnout is interesting in light of the remarkable variability of the contests within any of these series: from landslides to cliffhangers, from races between candidates with similar policy views to those that offered genuine policy choices and distinctive leadership styles. Although we might have expected these differences to cause turnout to fluctuate substantially over the short run, the three secular trends appear to have fixed boundaries within which elections in an entire series varied.

The existence of these secular trends has implications for the character of our theories. For example, spatial models of turnout usually ignore secular trends. Indeed, a spatial model by itself would be hard pressed to explain a secular trend, since changes in the rate of indifference and alienation that are basic to such models (e.g., Brody and Page, 1973) rise and fall with each electoral contest and would not likely conform to the steadiness of a secular trend. These three secular trends suggest that the decision to vote is made in a context: a context of laws that encourage or inhibit voting; a context of norms that place a high or a low value on the obligation to vote as a social duty; a context of party politics that may give parties during realignment periods an aura of historic mission, but leave them with diminished ideological definition during subsequent periods of normal politics. Taking the existence of secular trends as a cue, this article will focus on the political context of American politics. We will consider two possible causes of the present decline in voting participation: America's age distribution and its changing electoral calendars.

Demographers remind us of what political scientists are apt to forget: the rise and fall of birth rates, as gradual as these changes may seem, have great impact on the electorate even over a short period of time. The present electorate is the literal child of the baby bust of the 1930s and the boom of the 1940s and 1950s. In the early part of this century, women in the childbearing years of 15-44 gave birth at a rate of about 125 babies per thousand women annually (U.S. Bureau of the Census, 1975: 49). In 1936, in the depths of the Depression, this rate fell to a twentieth century low of 75, or about 60% of its former level. The birth rate remained at this low level throughout the hard times of the 1930s. As a consequence, the Depression cohort—those who were roughly 35-44 years of age in 1976—was 3.3 percentage points smaller as a proportion of the electorate in 1976 than in 1950.

With the conclusion of World War II, the birth rate surged again, increasing 15 births per thousand women between 1945 and 1946 alone. This boom continued into the 1950s, until the peak in 1957 equalled again the high rate of the turn of the century. The 1972 election highlights the impact of the postwar baby boom. Of the 136 million persons of voting age, 13.5 million had turned 21 since the 1968 election. An additional 11 million had been enfranchised by the twenty-sixth Amendment; in all, 18% of the population were eligible to cast their first presidential vote (U.S. Bureau of the Census, 1973a). In the meantime, the large cohort of citizens born before World War I had reached the age at which voting rates stabilize and ultimately decline. Thus, changing birth rates have now produced an electorate that is both younger and older than in 1950. During the 1960s and 1970s, our population has been increasing in just those age groups in which voting is low.

The lesson is that trends in voting rates should be standardized for changing age distributions. A standardized rate maintains the actual turnout rates of each age cohort across a series of elections, but adjusts these age specific rates to hold the age distribution constant across the time series. In 1964, the Current Population

TABLE 1
Standardized Turnout Rates, United States, 1974-1976

	1964	1968	1972	1976
<u>Turnout Rates</u>				
Standardized on 1964	69.3	68.4	64.8	61.9
Unstandardized rate	69.3	67.8	63.0	59.2
<u>Percentage Point Change Since 1964</u>				
Standardized on 1964		-.09	-4.5	-7.4
Unstandardized rate		-1.5	-6.3	-10.1

SOURCE: Computed by the author from age-specific voting rates found in U.S. Bureau of the Census, *Current Population Reports*, Series P-20, Numbers 143, 192, 253, 322.

Survey of the Bureau of the Census inaugurated its postelection surveys of voter turnout. As Table 1 shows, from 1964 to 1976, turnout reported to its interviewers fell 10.1 percentage points. Standardizing these voting rates on the 1964 population distribution reduces this decline to 7.4 percentage points. Thus, about 27% of the decline since 1964 can be attributed to the changing age distribution. This leaves 73% of the secular decline since 1964 that we still must explain, but America's changing demography has provided a significant first step.³

These standardized rates provide additionally a good estimate of the impact on participation of the Twenty-Sixth Amendment, which enfranchised 18-year-olds. Prior to 1972, only four states placed the age of eligibility at less than 21. These limits were 18 in Georgia and Kentucky, 19 in Alaska, and 20 in Hawaii. With the 1972 election, the 18-year-old vote became effective nationwide, with this being the principal change in the age distribution between 1968 and 1972. The unstandardized turnout decline

between 1968 and 1972 is 4.8 percentage points. Standardization reduces this decline to 3.6%, leaving 1.2 percentage points or roughly 25% of the decline between 1968 and 1972 as the estimated effect of the twenty-sixth Amendment. This is the same estimate reported by Wolfinger and Rosenstone (1980: 58). Thus, the twenty-sixth Amendment had a smaller impact on the declining turnout rate than other sources of the changing age distribution.

THE IMPORTANCE OF CONSTITUTION AND ELECTION LAWS

Units of Government and the Long Ballot

In his discussion of nonvoting in *The Semisovereign People*, Schattschneider (1960: 113) reminds us that voting turnout in the United States is a very special case.

It has often been pointed out to us that the turnout in parliamentary elections outside of the United States is apt to be about 80 per cent, approximately 20 per cent higher than it is in the United States. However, American elections are not very much like British elections, to take a European example. An Englishman voting in a general election casts one vote for a single candidate for one office, using a ballot about the size of a government post card. American elections are, on the other hand, extremely complex. Not only do we elect about eight hundred thousand officials, but before the elections there are the primaries, and before the primaries, in many jurisdictions, comes periodic personal registration of voters. American voters must cope with fifty systems of election laws. Technical arguments about the exact size of the nonvoting public are not important. It is a large piece of cheese no matter how one slices it.

Schattschneider may have overestimated the number of elected officials, but his point still stands. The *1977 Census of Governments* (U.S. Bureau of the Census, 1979) lists the number of elected state and local officials as 490,265, or about 1 elected official for every 442 persons in that year. This ratio of ruler to ruled led Congressman Henry Reuss (1970: 41) to muse, "No-

where but in America have so few ever been governed by so many."⁴

The basis for this staggering total of elective offices is the aggregate number of our separate governmental units. Traditions of separation of powers dictate elections for legislative, executive, and often even judicial offices. Federalism adds an additional layer of state governments. Most important, however, is the distinctively American practice of elective school officials, and the widespread adoption of special administrative districts. As Richard Rose (1978: 5) comments, "In Europe such bodies almost invariably are appointed by the government of the day, or do not exist at all. For example, education is often a branch of central government; its officials are no more subject to direct election than would be military commanders." As school consolidation in the United States nears the end of a long phase, the total number of such school districts is in decline. This trend, however, is more than offset by the continued growth of special districts as a mode of government. As a consequence, in 1977 there was one governmental unit for every 2713 persons (U.S. Bureau of the Census, 1978).

The Disaggregation of Election Calendars

The burden of electing all of these officials is exacerbated by the success of a twentieth century reform movement aimed at insulating the effects of national, state, and local elections from one another. States have shifted their political calendars to congressional election years in order to avoid having state offices affected by the presidential contest. Consider in this light the evidence of Jewell and Olson (1978: 50). Since 1932-34, the number of states with two-year gubernatorial terms has fallen from 24 to 4. Elections for four-year terms are now scheduled predominately in congressional election years. Only 14 states now ever schedule gubernatorial elections in presidential election years. The bulk of these shifts away from presidential year elections has taken place since 1952-54, coinciding with the period of declining turnout that is our present concern. In over two-

thirds of the states, there is now assured a major statewide race in congressional election years, but no gubernatorial race to attract voters in presidential years.

Just as states have sought to insulate their elections from federal contests, so too have cities separated local elections from both state and national contests. Such a separation was a key goal of the municipal reform movement of the 1900s, and its success is widely realized. Karnig and Walter (1977) report the results of a 1975 survey of 97% of all U.S. municipalities larger than 25,000 in population. The large majority, (60%), hold municipal elections independent of all races other than for mayor and/or city council. An additional 23% hold municipal elections concurrently with other local contests such as school boards. Only the small remainder (17%) hold local elections concurrently with either state or national contests.

A major consequence of the separation of national, state, and local races is to diminish the political importance of the presidential year election. The presidential ballot has increasingly lacked for attractive state and local contests to draw voters to the polls. A recent and careful study by Rosenstone and Wolfinger (1978: 32) estimates that the addition of a gubernatorial race increases turnout in a typical state's presidential election by 1 to 2%.

In addition to the lack of politically attractive races on the same ballot, the separation of national, state, and local elections depresses turnout for a second reason. With state elections concentrated in congressional election years and local races predominating in odd-numbered years, Americans are constantly called to the polls: to a general election each year; to referenda on ordinances and bond issues; and, of course, increasingly to primary elections at all levels of government.

The Growth of State and National Primaries

Primaries are now the universal mode of nomination in state elections, a transformation that was largely accomplished by 1917. Since Connecticut's adoption of the challenge primary in

1955, no state has relied exclusively on the convention system. Only Delaware now permits a statewide candidate to be nominated by a convention.

If the trend to state primaries was early and predated the recent decline in turnout, the recent and rapid adoption of presidential primaries has roughly coincided with the current turnout trend. As in the case of state primaries, presidential primaries were also the child of the Progressive movement. By 1924, 26 states had adopted the presidential primary before the reform movement abated. From 1924 to 1968, a number of states dropped their presidential primaries, leaving only 15 in 1968. But as a consequence of a number of forces, including but not limited to the restrictive rules the McGovern Commission placed on convention systems, the number and importance of primaries have since sharply increased—from 15 in 1968 to 37 in 1980. Participation in presidential primaries (defined in terms of those electors legally eligible to vote in primary states) is also on the rise—from 29.3% in 1968 to 38.9% in 1972 to 41.2% in 1976 (Brace, 1977: 13). Just shy of 30 million persons voted in the 1976 primaries.

This brief survey of governmental and electoral institutions should challenge an image of the American as an apathetic citizen. On the contrary, a major reason why turnout in a single election may seem low may be the number of times in an electoral period in which some unit of government is holding an election. *The cost of voting in any particular election is low and declining. The cost of voting in a large proportion of them is high and probably increasing.*⁵

The Variety of U.S. Election Calendars

The century-long movement to separate national, state, and local elections is grounded in America's antiparty political culture. Because the goal of reformers has been to minimize the impact of one contest on another (to deny party organizations the advantage of straight ticket voting), states have also been disposed to schedule elections for different units of government that fall in the same calendar years for different months of the

year. This tendency is particularly evident in the widespread practice of scheduling separate dates for state and presidential primaries. Moreover, some states schedule an additional state runoff primary. Counting the general election, states can now hold up to four separate state and federal elections in presidential years. In 1976, 3 states scheduled all of the possible four elections. Seventeen more states scheduled three elections, and 30 scheduled two (U.S. Senate, 1976). Tongue in cheek, one can compare a typical election year to a National Football League season: four exhibitions preceding a 16-game schedule. Does one have to attend them all to call oneself a fan?

Moreover, the list of 1976 elections ignores the great source of complex election calendars—local elections for municipal offices, education posts, and special districts of all kinds. No one has yet compiled an election calendar that would include the full variety of U.S. elections, but a first step has been taken with the Election Administration Survey of the Center for Political Studies.

The Election Administration Survey

In 1977, the Center for Political Studies (CPS) sent its interviewers back into its sample precincts in order to check its respondents' turnout reports against official records. The CPS had previously conducted such a study in 1964 (Clausen, 1968), but the 1977 study promised to provide substantially greater information: it proposed to follow the official records of its sample respondents across a five-year period, including the presidential and congressional election years of 1972, 1974, and 1976. A principal component of this vote validation project is its Election Administration Survey, which was administered to the officials "responsible for the planning and administration associated with the electoral process in each place where respondents to the election study surveys resided" (Center for Political Studies, 1979: xlv). The election officials were asked the following question: "Could you please tell me the date for both primary and general elections that have been held for statewide, county,

and local offices here between January 1972 and November 2, 1976? We do not need information for elections held solely for special administrative districts, such as school or drainage districts."

Although the data are extraordinary in their richness, a few caveats attend their use:

1. Interviewers sometimes reported that uncooperative officials did not wish to look up the elections in the systematic way that would provide a complete calendar. Such missing federal and statewide elections were typically added by the coders at CPS; however, in such cases local elections are simply not included. Only by looking at the original interview schedules can one detect instances of missing local elections.

2. Because elections for special districts are excluded, the calendar is systematically understated.

3. In 31 states, the survey should not be used as a measure of the actual number of elections in which a particular respondent could have voted. In these states, election administration is a county function. The election official, asked to state all of the elections held in the five-year period in his county, would according to the instructions list all of the separate election dates on which any of the towns in the county held an election. In a given local election year, three elections might be listed on the calendar because three towns may have held those elections on separate dates, but the sample respondent could have voted in only one of these. How often this duplication of local election dates occurs in the data cannot be easily determined.⁶ For this reason, I have limited my analysis of the election calendars to those six states in the CPS sample for which election administration is a town rather than a county function. In these states, one can be reasonably certain that a resident would have been qualified by residence to vote in all of the elections listed. While these six states may not be entirely representative of the United States in terms of political culture, they are the complete set of states whose election laws permit the use of the Election Administration Survey to estimate election calendars.

TABLE 2
 Mean Number of National, State, and Local Elections
 Held in Selected Towns in Six States, 1972-1976

<u>State</u>	<u>Mean Number of Elections Per Town</u>	
Connecticut	7.3	N = 7
Maine	10.1	N = 9
Massachusetts	12.7	N = 13
Michigan	11.7	N = 20
Minnesota	9.4	N = 8
Wisconsin	15.0	N = 2
Mean, all towns In six states	11.0	N = 59

SOURCE: Center for Political Studies (1979) *The American National Election Series, 1972, 1974, 1976.*

These six states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, and Wisconsin. The towns in individual states that happen to fall into one of the national primary sampling units are not necessarily representative of the states as a whole, but there is sufficiently little in-state variation in the election calendars of the sample towns that one can have confidence in the results. Table 2 presents the average number of elections held in each state over the five-year period. *Overall, the average calendar included 11 elections during the period, or slightly over two per year.* Given that this average excludes elections for special districts and excludes as well elections and other public business conducted at town meetings, the election calendars of typical states would seem to impose a substantial burden on their citizens.

One might argue that a system that requires such frequent voting would be ideal for inculcating norms of citizen duty. However, I would defend the converse: a system that holds elections as frequently as we do in the United States must expect that even citizens who are attentive to politics and its obligations will not be at the polls at every election. I would argue, then, that the frequency of elections in the United States is one explanation of the somewhat lower voting rate we experience in any given election compared to European countries. And, to the degree that elections have become more frequent in the twentieth century, as has been the case with the addition of primaries and the separation of federal, state, and local elections, this additional burden of participation may be a partial explanation for the falling turnout rate.

**Individual Voter Histories:
The Official Records Check**

The frequency of elections in the United States suggests an interesting hypothesis: while turnout in any particular election may be low, the voting rates of individuals across a series of elections may be high. The CPS Voter Validation Study, a component of which is the Election Administration Survey just discussed, includes an Official Records Check, which offers a good test of this possibility. The Records Check attempts to validate survey responses of registration and voting against official records among the respondents of the 1972-1974-1976 CPS Panel. Interviewers asked election administration officials to check whether the respondents' names appeared in the active or inactive files of registered voters, and whether registered voters did in fact vote in each of the general elections of 1972, 1974, and 1976. In addition, the officials were asked to "list by date all of the additional recorded instances of this person voting between January 1972, and November 2, 1976." The check cannot be used to calculate a proportion of all elections in which a respondent voted because it is not keyed to the Election Administration

Survey. However, the check does provide the numerator of such a proportion, for it permits a calculation of the total number of times each respondent voted during the four-year, and ten-month period, including elections for special districts.

Table 3 presents a frequency count of these individual voter histories. The column labeled "registered electors only" includes all respondents whose names appear in the active or the inactive files of registered electors in each of the 1972, 1974, and 1976 elections.⁷ This assures that all of these respondents were eligible by age and registration to vote for the entire period. The column "all panel respondents" includes both registered and unregistered members of the 1972, 1974, and 1976 panel, who, by virtue of age and continuity of residence, were at least potentially eligible to register to vote throughout the period and to have their votes recorded in official records.⁸

Table 3 is surprising in perhaps two respects. *First, by official records the mean registered elector voted 4.5 times during the period, or an average of about once per year.* Thirty-one percent voted at least six times. Only 5% never voted. When the nonregistered are included, the average respondent still voted 3.4 times during the period.

Second, the voter histories offer indirect evidence of the large number of elections on many calendars. Among the registered, 6% voted 10 times or more, and 3 respondents were recorded as having voted 16 times. Looking at the evidence in this light offers a very different perspective from the image of the American citizen as an apathetic nonvoter. There is great electoral activity in the United States even during this period of declining election-specific turnout.

TWO MODELS OF TURNOUT

This examination of election calendars suggests two models of the voting history of a typical citizen. One model is Campbell's (1966: 42) *core and periphery* electorate. The core electorate is defined as those who vote in nearly all elections, i.e., in what

TABLE 3
 Frequency Distribution of Validated Voting Records,
 United States, 1972-1976

<u>Number of Elections Voted</u>	<u>All Panel Respondents</u>	<u>Registered Electors Only</u>
0	23.7%	5.2%
1	11.3	8.2
2	9.9	12.7
3	12.7	15.8
4	8.6	13.2
5	9.7	13.5
6	7.6	10.2
7	5.2	7.0
8	3.8	4.8
9	3.2	3.8
10 16	4.2	5.6
	99.9%	100.0%
	N = 1201	N = 1524
	Mean = 3.4	Mean = 4.5

SOURCE: Center for Political Studies (1979) *The American National Election Series, 1972, 1974, 1976.*

Campbell terms both high and low stimulus elections. In contrast, the peripheral electorate votes, if at all, only in higher stimulus contests—those that offer exciting candidates or salient issues. From this perspective, short-term fluctuations in turnout are the consequence of the extent to which elections of varying excitement attract the peripheral electorate to the polls.

Our emphasis on the demands that a complex electoral calendar places on citizens suggests a second, opposing model of voting patterns, an *equal-likelihood* model. Given the number of elections in which even conscientious citizens must vote, one can construct a model in which everyone is equally likely to vote in any given election, but few would vote in them all. Turnout in any particular election reflects the attractiveness of the contest, but all citizens will vote in roughly the same proportions across a series of elections. This model focuses on the characteristics of elections

themselves, and diverts our attention away from a concern with a large and perhaps growing number of indifferent or alienated citizens that would comprise a peripheral electorate. In the egalitarian world of the equal-likelihood model, the turnout in any given election may be low, but the proportion of citizens who vote in a significant number of elections is high.

A Test of the Two Models

The CPS Voter Validation Study is not an ideal data base for testing these two models. The number of elections in which its respondents can vote varies substantially across the sample, depending on their county and state of residence. Moreover, even if one were content to norm these different numbers by calculating a proportion of elections in which individual respondents voted, the Election Administration Survey, as noted in note 6, does not provide a reliable denominator for such a proportion.

As a test of the feasibility of collecting reliable voter histories, I drew a sample of 248 electors from a 1974 list of registered voters in Middlefield, Connecticut. Connecticut's election laws make it a good state for collecting voter histories. It has a permanent registration law that limits removal from the voting list to reasons of death, nonresidence, or the commission of certain felonies. One cannot be removed from the list for nonvoting. Thus, Connecticut's election laws minimize a bias toward the exclusion of habitual nonvoters from its registration lists. Accurate voter histories also require frequent purges of registration lists to insure that those who have departed from either a town or this world are not mistakenly recorded as nonvoters. Connecticut's mandatory annual canvass of all residences tends to maintain its registration lists in a very clean state, particularly so in smaller towns. In the Middlefield sample, 189 electors remained on the list for the five-year period of the test; 59 of the original 248 were removed for one of the three reasons above.

Middlefield, itself, was chosen for two reasons: convenience and the knowledge that its annual canvass is in actual practice

TABLE 4
 Predicted and Observed Models of Turnout, Middlefield

Model:	Number of Elections in which Electors Voted						
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
Observed	8	13	7	13	20	60	68
Core-Periphery ^a	6.9	13.2	10.9	8.8	23.3	59.6	66.4
Equal-Probability ^b	0.3	3.9	18.0	44.5	62.0	46.1	14.3

a. Chi-square = 4.05. Parameters: Cs = 153 or 81%; C = 87%; P = 24%.

b. Chi-square = 454.41. Parameters: Cs = 189 or 100%; C = 65%.

systematically performed. Appendix A presents a statistical profile of the town and the sample. Except for the fact that it is a small town with a tiny proportion of Black residents, the town is ethnically and economically representative of the state as a whole. Middlefield is also a presidential bellweather. It has voted with the national presidential victor in every post-World War II election except 1968.

I traced the voting history of each elector across seven elections during a five-year period. Although there were numerous town meetings during this period passing town budgets and electing citizens to a variety of town commissions, the seven elections represent the complete set. The set includes the 1974 congressional election, a 1975 town election, a 1976 town referendum, the 1976 presidential election, a 1977 town election, and the 1978 congressional election. State as well as federal offices were on the ballot during the congressional and presidential years. The mean turnout of registered voters in these six elections was 70.7%. Under Connecticut's challenge primary law, there was a Democratic primary for a state legislative seat in 1974, which attracted 22% of the Democrats. Because Republicans and Independents were not eligible to vote in the 1974 primary, it was dropped from the rest of the analysis.

In Table 4, the first low labeled "Observed" presents the distribution of actual votes. It reveals a remarkably high level of electoral participation. Of the 189 electors, 68 (36%) voted in all

six elections. An additional 60 (32%) voted in at least five. Only 8 electors (4%) never voted. In view of the fact that the aged, the senile, and the institutionalized infirm remain on the list, this is a notably small proportion of nonvoters.

Yet, the observed rates make it also unlikely that all electors have the same probability of voting. The distribution would appear to derive from two quite distinct groups: a large core group of 161 electors who voted in at least three elections, and a small periphery group of 18 electors who voted in two or fewer elections. This observation suggests the following model of turnout.

A Core-Periphery Model of Turnout

Assume that there is a core group of size C_s and a periphery group, P_s , which is the remainder ($189 - C_s$). Allow individuals within the core group to vote in any election with a probability of C and individuals within the periphery group to vote in any election with a probability of P . If each group has a binomial distribution, the probability that a core elector would vote in a specific sequence of r elections out of a total of N possible elections is $C^r (1 - C)^{N-r}$. The same probability for a periphery group member is $P^r (1 - P)^{N-r}$. These terms, which apply to any specific sequence of r elections, must be multiplied by the number of people in each group (C_s and P_s) as well as by the number of possible sequences of r elections. The number of possible sequences is

$$\binom{N}{r} = \frac{N!}{r!(N-r)!} \quad [1]$$

Thus, the seven equations that predict the number of electors who will vote in exactly 0 (E_0), 1 (E_1), . . . and 6 (E_6) elections have the general form

$$E_r = C_s \binom{N}{r} C^r (1 - C)^{N-r} + P_s \binom{N}{r} P^r (1 - P)^{N-r} \quad [2]$$

Equation [2], the core-periphery model, is nonlinear and contains three unknowns: C_s , the number of core electors in the total sample; C , the probability of voting within the core group; and P , the probability of voting within the periphery group. Its egalitarian alternative, the equal probability model, can now be seen as just a special case of the core-periphery model in which all electors are in the core group and the term for periphery electors is zero. The equal-probability model is nonlinear and contains only one unknown, C , the rate at which core electors vote.

Using a chi-square test of goodness of fit, I tested all possible values of C_s , C , and P in increments of one. The values that minimize the chi-square differences between the observed voting histories and the predictions of the two models are presented in Table 4. The equal-probability model can be quickly dismissed. The best-fitting value of C is .65. This model greatly overestimates the number voting in two to four elections and underestimates the number who always vote and who never vote. The null hypothesis for this model is that electors vote in any election with a probability of .65. With seven categories of elections and one unknown, there are six degrees of freedom for this test. Any chi-square value larger than 16.81 would require the rejection of the null hypothesis, since such a value would occur by chance with a probability smaller than .01. With an actual chi-square value of 454, the equal-probability model may be rejected summarily.

In contrast, the core-periphery model fits the data remarkably well. The best-fitting parameters for this model result in a null hypothesis that a core group comprising 81% of the electors votes 87% of the time, and a periphery group of 19% votes 24% of the time. With three unknowns, and thus four degrees of freedom, the small observed departures from this model could occur by chance with a probability as large as .5. Thus, the core-periphery model easily withstands the attempt to reject it. The confidence intervals for these parameters are reasonably narrow. Good results can be obtained with parameters that vary in the following ranges: $\pm 5\%$ for C_s and P and $\pm 2\%$ for C . Beyond these ranges, the core-periphery model goes quickly awry.

This binomial formulation of the core-periphery turnout theory has a number of features that commend it. First, it fits the Middlefield data well, with accurate predictions of the distribution of voting histories and with parameters varying within reasonably narrow ranges. Second, the model is parsimonious. It describes only two types of electors, each with uniform propensities to vote. Consideration of more complex models is not in this case necessary. Third, the model can be easily generalized to other populations voting in any number of elections. The form of the model does not depend directly on the aggregate turnout rates in the elections, although the specific values of the parameters would change with the balance of high and low stimulus contests. Fourth, the model shares in a continuity with existing theory and evidence. The division of voters into core and periphery groups follows directly from Campbell's (1966) original theory, and it is consistent with a wealth of survey evidence showing that political interest and voting participation are unequally distributed across the population. Fifth, in normative terms the actual parameters of the model as fit to the Middlefield data should console the egalitarian democrat. To be sure, the equal-probability model had to be rejected in favor of a theory of two distinct classes of electors. Yet, 81% are in the core group, and this large majority votes with a probability of 87%. A skeptic might demur that the Middlefield data is drawn from a sampling frame which excludes those citizens so apathetic as to be unregistered. With a registration rate close to 90%, however, this is a small bias, and it is partially offset by the inclusion of those aged and infirm electors who cannot really be expected to vote.

CONCLUSION

This article looks optimistically on levels of turnout in the United States.

First, the baby bust of the 1930s and the boom of the 1940s and 1950s has increased the proportions of young and old in our

present population. Since these age groups are typically high in nonvoters, the changing age distribution is a significant cause of declining turnout since 1964. Turnout within age groups has fallen much less than the total decline in turnout rate would suggest.

Second, the United States has a highly participatory political culture, reinforced by a system of election laws that seek to involve citizens in the nomination and the lawmaking processes no less than in the general elections that are the typical mode of participation in other Western democracies. Important for the system of electoral laws is a series of changes that have greatly expanded the number of elections held during any given period of time. Chief among these changes are the growth of presidential primaries and the dissociation of federal, state, and local election calendars. With so many separate elections in which to vote, citizens' electoral activity may be high even though turnout in individual elections may seem dispiritingly low.

Third, both the CPS Voter Validation Study and the Middlefield, Connecticut sample are evidence of a large core electorate that votes with reasonably frequency. In the 1972-1976 CPS study, the average registered elector voted 4.5 times, about once a year across this period. Including the nonregistered lowers the average turnout only to 3.4 times. A comparative sample of Middlefield electors showed that 68% of those registered voted in at least five of the six elections conducted between 1974 and 1978. The CPS and Middlefield samples are evidence of the potential richness of longitudinal voter histories as supplements to the more conventional cross-sectional studies of individual voters.

None of this argument is intended to refute attitudinal or psychological explanations of declining turnout. It is surely true that feelings of disaffection toward the political system and many of its governmental policies have contributed to declining

turnout. For example, it is not simply that turnout in presidential elections is in decline; registration rates are apparently falling as well. If the survey evidence of the Census is correct, the proportion of the unregistered among the total voting age population increased by 10 percentage points between 1968 and 1976—from roughly 23% to 33% (Tarrance, 1978: 79). Structural theories of calendar effects such as those presented in this essay would be hard pressed to account for a decline in registration. Moreover, the decline in registration occurs within all age groups and is not simply a function of America's changing age distribution.

Rather, the argument is that structural theories supplement attitudinal theories, not substitute for them. Even within the ranks of the registered, participation still declined in the 1972 presidential election from the 1968 level and declined in the 1974 congressional election from the 1970 level.⁹ Without discounting the importance of theories of registration, there remains variation in turnout that structural theories can explain.

In sum, the authors of American election laws have made a choice, consciously or unconsciously, to expand both the number of elective offices and the frequency of elections. It is a choice consistent with the Whig tradition of the long ballot and of the belief that "where annual elections end, tyranny begins." Compared to other countries, the United States offers manifold opportunities to participate in the electoral process. A price of this tradition is a heavy civic burden on citizens. But that burden may contain an important benefit: If it is true that the rates of participation of citizens across elections are reasonably equal (i.e., that political influence does not fall disproportionately to a small class of citizens), then a somewhat diminished turnout rate in individual elections may be a price we should willingly pay for the enhanced opportunities for involvement it offers.

APPENDIX A
Representativeness of the Sample and of the Town
of Middlefield to the State of Connecticut

<u>Criteria</u>	<u>State</u>	<u>Middlefield</u>	<u>Sample</u>
Population, 1970	3,031,079	4,132	248/189*
Median Age	29.1	27.3	---
Median school year completed	12.2	12.2	---
Median income	11,811	12,595	---
Families below poverty level (%)	5.3	2.8	---
Families above \$15,000 (%)	31.1	32.4	---
Negro and other races (%)	6.5	0.4	---
Foreign born (%)	8.6	4.0	---
Registered citizens over 21, 1970 (%)	77.1	88.0	100.0
Turnout Registered Electors			
1974 General	72.0	80.3	78.2
1975 Town	---	73.9	75.0
1976 Referendum	---	44.7	44.6
1976 General	84.0	83.5	86.3
1977 Town	---	69.7	75.2
1978 General	66.8	72.3	75.3

SOURCE: U.S. Bureau of the Census (1973b).

*A sample of 248 was drawn from the 1974 list of registered electors. 189 remained on the list through the 1978 election. 248 is the base for the sample percentages in this appendix. 189 is the base for the voting histories in the analysis.

NOTES

1. These calculations and those immediately below are based on the voting and turnout figures of Johnson (1980).

2. The idea of computing regression lines through each series derives from Brody (1978), who calculated such a trend line for the years 1920-1960. The three regression lines computed here are the following: For 1900-1920, $Y = 63.9 - 2.9\%$ per election, $R^2 \text{ adj.} = .34$. For 1920-1960, $Y = 45.7 + 1.7\%$ per election, $R^2 \text{ adj.} = .69$. For 1960-1976, $Y = 63.7 - 2.2\%$ per election, $R^2 \text{ adj.} = .86$. The data source for 1920-1976 is Johnson (1980: 22). This series includes aliens in the eligible electorate. To maintain a data series with a consistent definition of the eligible electorate, I added the data points for the years 1900-1916 by using estimates of males of voting age for 1900, 1910, and 1920 found in the Statistical Abstracts of 1902, 1915, and 1923 (U.S. Department of Treasury, 1903; U.S. Department of Commerce, 1916 and 1924). I then made straight line interpolations for the eligible electorate for particular election years. Using this method, the turnout figures for the years 1900-1916 are, respectively, 65.5, 57.3, 57.5, 53.9, and 62.5.

3. See Cavanagh (1981) for a complementary analysis of these data.

4. This quotation also appears in an informative book by Berkley and Fox (1978: 134).
5. The relationship of turnout to voting costs is the special concern of social choice theory. See, for example, Downs (1957), Riker and Ordeshook (1968), and Barry (1970).
6. The interviewer of the election official for Alameda County, California, did in fact write on the interview schedule the names of the separate towns holding elections on specific dates. This schedule provides an extreme case of the problem of confusing the number of elections held in the county with the number of elections in which a resident of a particular town was eligible to participate. Twenty federal, state, and local elections are coded for the county. Of these twenty, however, the residents of the town of Piedmont could have voted in only nine.
7. The 1972-1974-1976 CPS election study is a complex design including both cross-section and panel respondents. Replication requires full disclosure. Specifically, the frequency count of registered electors includes all respondents coded either 1 or 3 on each of the variables V5011, V5015, and V5019 of the Center of Political Studies codebook, *The American National Election Studies Series*, 1972, 1974, and 1976 (1979).
8. The frequency count of registered and unregistered panel members includes all respondents coded either 1 or 5 on V5002 and coded 1 on V4002. The restriction of the sample to panel members with complete voting validation checks reduces the likelihood that respondents with incomplete official records for some years of the period might be mistakenly classified as nonvoters. This restriction is the reason that the frequency base for all panel respondents is smaller than the base for the adjoining column of registered voters.
9. Inconsistent with this pattern is the fact that the turnout rate among registered voters increased from 1972 to 1976. This seems to reflect the fact that the registration rate fell twice as much as the turnout rate, leaving a very small pool of registered nonvoters.

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