11

Party Competition and Media Messages in U.S. Presidential Elections

ANDREW GELMAN
GARY KING

THE PARADOX

At one point during the 1988 campaign, Michael Dukakis was ahead in the public opinion polls by 17 percentage points, but he eventually lost the election by 8 percent. Walter Mondale was ahead in the polls by 4 percent during the 1984 campaign but lost the election in a landslide. During June and July of 1992, Clinton, Bush, and Perot each had turns in the public opinion poll lead.

What explains all this poll variation? Why do so many citizens change their minds so quickly about presidential choices?

But wait. The story gets more complicated.

It turns out that political scientists can actually predict the outcome of the election with information available at the start of the general election campaign. That may seem odd, and perhaps a well-kept secret from the general public, but predicting presidential elections is a relatively straightforward problem that has largely been solved. Predicting primaries and many other elections is a lot harder, but general elections for president have been successfully predicted four to five months ahead of time, to an accuracy of a few percentage points, for at least the past half-dozen elections.

So now we really have a paradox: Polls vary widely, academic political scientists can predict the election outcome before the campaign begins, and strategists on all sides spend hundreds of millions of dollars trying to influence an outcome that was predicted before they spent anything! What's a political analyst to make of all this? We provide some answers to these questions here.

By looking at day-to-day swings in the polls but ignoring systematic forecasting efforts, journalists and pundits are in part responsible for the relatively issue-free, or "horse race," aspect of presidential campaign media coverage, which at its most extreme finds journalists interpreting the race by deconstructing the claims of competing "spin doctors." If the early forecasts are at all accurate, the news organizations could save a lot of effort and money now devoted to tracking polls, and maybe they could spend some time doing what they claim they want—reporting substantive positions held by the candidates instead of the current array of scandals, gaffes, and strategic campaign maneuvers.

We focus on the 1988 election, in which the news media focused more than ever before on political advertising, sound bites, and trends in tracking polls.

Obviously, the news media report the details of campaign strategies because of their assumed relevance to the outcome of the election, with Bush's election credited in part to recent innovations such as professional spin doctors and focus group polls. Thoughtful news analysts such as Jack Germond and Jules Witcover decry the superficial "sound-bite" coverage of election campaigns, which they claim allowed Bush (and Dukakis too) to avoid serious discussion of the issues.

As citizens, we agree that the empty nature of recent TV election campaigns is undesirable, and perhaps even a threat to our democratic society. However, we do *not* think Bush won in 1988 because of his superior, media-savvy campaign, nor did he lose in 1992 because of campaign strategy.

As political scientists, we try to accept and reject theories based on empirical evidence. Three pieces of evidence justify the claim of many journalists that Bush outcampaigned Dukakis in 1988. First, Bush won, in a come-from-behind victory. Second, Bush advanced in the opinion polls following his campaign's attack strategy in late summer. Third, Bush's campaign was resourceful and unscrupulous, using the latest innovations in media manipulation.

In this essay, we question the logic of all three of these arguments. First, knowledgeable academic observers expected Bush to win all along—even before the campaign began—so his come-from-behind victory proves nothing; second, early polls move in response to just about any campaign event, so Bush's improvement in the polls was just evidence that early opinions were not well-formed; and third, had Bush lost in 1988, his campaign could easily have been seen as a desperate, floundering effort.

POLITICAL SCIENCE FORECASTS

Rosenstone's forecasting model is one of the most developed and successful of the recent contributions to political science, and it is the empirical results of this model on which we focus (Rosenstone, 1983). His model is based on measurable economic and political variables that were discovered and analyzed by numerous researchers over many decades, and not on trial heat polls. Even if one were to disagree with the particulars of Rosenstone's model, it would be hard to deny that past presidential elections have been forecast fairly accurately using these methods.[1]

Rosenstone summarizes his considerable success at forecasting presidential elections through 1980. Perhaps even stronger evidence is that his model has continued to forecast very well in the two elections since the publication of his book, as recounted by Rosenstone (1990).[2] In both 1984 and 1988, Rosenstone's forecasts fell within 1 percent of the nationwide popular vote and forecasted only a few states incorrectly, an excellent performance considering that the forecasts were performed months before the election. Table 11.1 summarizes the performance of Rosenstone's model, along with our forecasts for 1992 (see further on), by comparing forecasts made at the start of the general election campaign with those from the national polls, media prognoses, and judgments by political strategists taken at the same time.

Other forecasting models, also based on economic and political variables measured before the start of the campaign, have performed well, and often better, in recent years.[3] By contrast, public opinion polls at this time gave relatively useless forecasts of the election outcome. The predictions of media experts and political strategists were not much better.

To cover the 1992 election and poll results, we wanted to once again compare Rosenstone's forecasts to those of the pundits and pollsters. Unfortunately, as the November election approached, we could not track down any official Rosenstone forecasts, so we decided to make our own, even though several other forecasts were made.[4] Our purpose was not to perform the most accurate forecasts or to optimally select variables for prediction, but rather to combine the elements of existing forecasting methods in the political science literature and to accurately assess the uncertainty in our forecast. We started with what we viewed as the best currently available forecasting model, that of Campbell (1992), which predicts the Democratic share of the two-party vote for president in each state. We accounted for uncertainty in the model's forecasts in three ways: by including the forecasting error in the existing prediction model, by considering alternative sets of explanatory variables, and by modeling the variation in the nationwide vote from year to year, as distinct from the variation between states. According to our calculations, Clinton had a 0.85 probability of winning the election, with an expected total of 53.1 percent of the two-party popular vote and 368 (of 535) electoral votes.[5]

TABLE 11.1
Presidential Election Forecasting Errors

	Errors
1984 forecasts	
National popular vote	
Rosenstone	0.3%
National polls (average miss)	5.3%
National electoral vote	
Rosenstone	48 electoral votes
Media prognoses (average miss)	129 electoral votes
Political strategists (average miss)	115 electoral votes
1988 forecasts	
National popular vote	
Rosenstone	0.2%
National polls (average miss)	2.8%
National electoral vote	
Rosenstone	82 electoral votes
Media prognoses (average miss)	131 electoral votes
1992 forecasts	
National popular vote	
Gelman and King	0.3%
National polls, early September (average miss)	2.8%
National polls, mid-October (average miss)	5.4%
National electoral vote	
Gelman and King	5.6 electoral votes
State polls, September	59 electoral votes

Note: All popular-vote forecasts are expressed in terms of the Democratic candidate's share of the two-party vote. The 1984 forecasts were made in mid-July; the 1988 forecasts were made in early September; the 1992 forecasts were performed in early October but only used information available in early September. When the media declared states as toss-ups, the electoral votes were divided evenly between the two major parties, and states were counted as half a miss.

Source: For 1984 and 1988 forecasts, Rosenstone (1990:Tables 1 and 2); for 1992 forecasts, the authors.

NATIONWIDE PUBLIC OPINION POLLS

For comparison, we also provide a more detailed presentation of aggregate public opinion poll results over the previous eleven presidential election campaigns. Our data for this inquiry, and for the rest of this essay, include the Republican proportion of two-party support reported in surveys over these eleven elections. The data before 1988 are from Gallup; 1988 and 1992 also include all other polling organizations from which we could obtain data.[6] Our data include the aggregate information reported in Figure 11.1 and individual-level survey data from forty-nine cross-sectional polls during the 1988 campaign.[7] In total, the 1988 data include surveys of 67,492 people, 69 percent of whom were willing to state their candidate preference. The appendix describes these data in more detail.[8]

Figure 11.1 summarizes these data for each election since 1952. The triangle on the right side of each graph reports the actual election outcome, and the line traces out the changes in the Republican proportion of the two-party candidate support figures over the campaign.[9]

The graphs in Figure 11.1 show that, in most years, early public opinion polls give fairly miserable forecasts of the actual election outcome. The situation is somewhat better after the second party convention, but through almost the entire campaign it would not be wise to use polls to forecast the election outcome. Additionally, in virtually every presidential election in the past forty years, the polls converge to a point near the actual election outcome shortly before election day.

POLITICAL SCIENCE MODELS

Most existing political science forecasting models are based on state-level or national-level aggregates, derived from the same ideas and underlying variables as the models of individual-voter choice favored by political scientists. Being aggregate results, though, these election predictions cannot truly confirm the individual-level models. To understand individual-level behavior, political scientists have turned to numerous studies based on public opinion data.

Political scientists have developed numerous models of voter decisionmaking, mostly in the context of studies of presidential campaigns. In the broadest terms, we have the sociological models dominated by the Columbia School, the social-psychological models connected with the Michigan School, and the rational choice models developed by the Rochester School. These models, their descendants, and numerous others are derived from diverse perspectives of voter choice. For the purposes of this study, though, these models do not differ among each other as much as they differ as a whole from the models implied by journalists in their coverage of presidential campaigns.

Although much debate still exists over proper models of voter decisionmaking in political science, these models all seem to agree on some aspects of the same general picture: Voters take the decision about whom to vote for relatively seriously. They might not be able to recite the reasons for their vote for president to a survey researcher (indeed, they might not even know these reasons), but voters at least base their decisions on relatively known and measurable variables. These *fundamental variables* measure their (or their group's) interests and include economic conditions, party identification, proximity of the voter's ideology and issue preferences to those of the candidates, and so on. Political scientists' theoretical

FIGURE 11.1

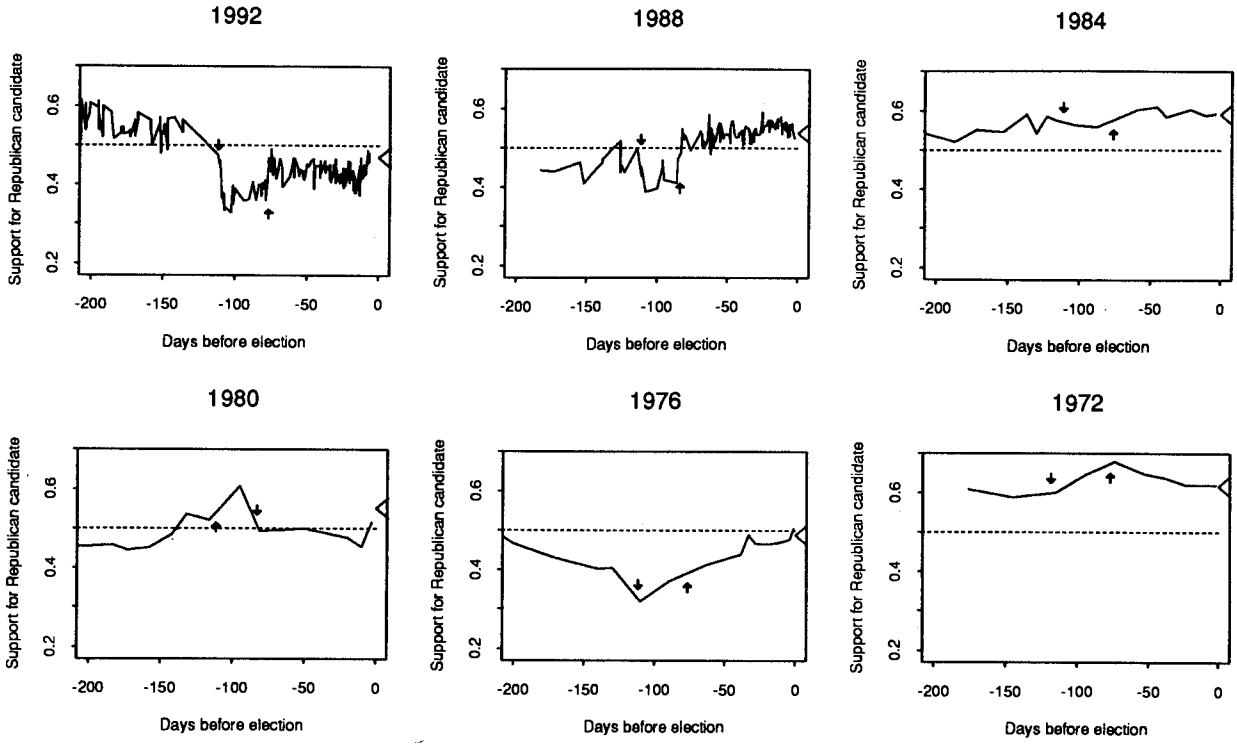
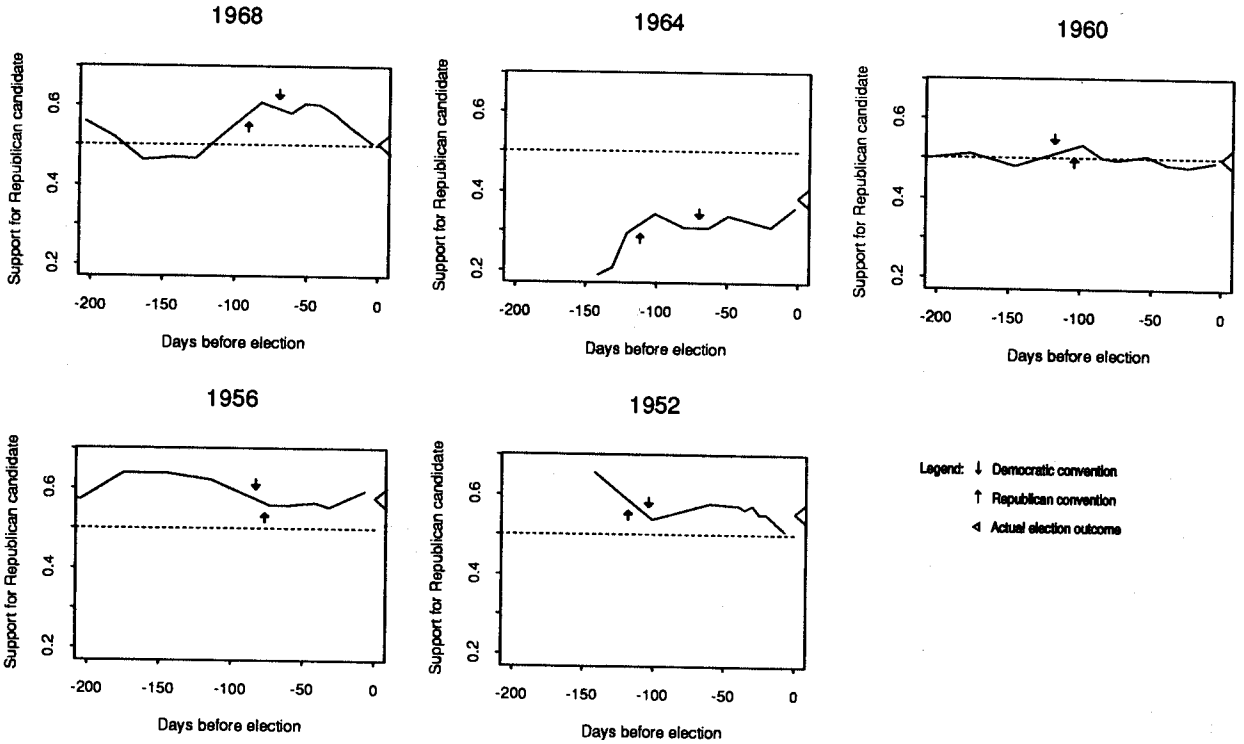


FIGURE 11.1 (*continued*)



Presidential campaign polls: Republican share of the two-party preference. The solid line in each plot is the proportion of the survey respondents who would vote for the Republican candidate for president, among those who report a preference for the Democratic or Republican candidates. The 1988 graph includes data from all available nationwide polls; plots for the other years are from the Gallup Report.

models are consistent with their forecasting methods; as discussed by Rosenstone (1983; 1990) and Lewis-Beck and Rice (1992), all the serious forecasting methods try to predict the election result using some versions of the same fundamental variables to measure economic well-being, party identification, candidate quality, and so forth.

WHY ARE SOME ELECTIONS HARDER TO PREDICT THAN OTHERS?

First, and most obviously, close elections such as 1960 and 1976 will always be hard to predict, since in these cases the best possible forecast would be statistically indistinguishable from 50 percent. We consider a forecast successful if it closely predicts the vote, even if the forecast is 49 percent and the outcome is 51 percent.

More interesting, in primaries, low-visibility elections, and uneven campaigns, we would not expect forecasting based on fundamental variables measured before the campaign to work. The fast-paced events during a primary campaign (such as verbal slips, gaffes, debates, particularly good photo opportunities, rhetorical victories, specific policy proposals, previous primary results, etc.) can make an important difference because they can affect voters' perceptions of the candidates' positions on fundamental issues. Also, primary election candidates often stand so close on fundamental issues that voters are more likely to base their decisions on the minor issues that do separate the candidates. In addition, the inherent instability of a multicandidate race heightens the importance of concerns such as electability that have little to do with positions on fundamental issues.

In a low-visibility election, if all a voter knows about a candidate is a few statements about reducing defense spending, say, then these statements may be very important in gauging a candidate's ideology. Thus, the voter might not have the opportunity to learn later whether early statements accurately reflect the candidate's ideology.

The outcome of elections in which one side's campaign is much stronger than the other's would also be hard to predict based on fundamental variables alone. After all, it is well known that financial resources are an important influence on the outcomes of uneven congressional races and ballot referenda, an effect that could be explained by the ability of the candidate with greater media resources to better manipulate many voters' perceptions of the candidates' positions on fundamental issues.

However, in the general election campaign for president, and in other high-information campaigns in which the two sides have roughly equal resources, the consensus in the political science literature is that these events are largely ephemeral, having little effect on the eventual outcome. They can have important effects for short periods and on different localities (see Kessel, 1988), but the overall result is little affected. The length of the general election campaign and the ample resources on both sides allow early candidate mistakes and early voter misperceptions (perhaps based on these mistakes) to be corrected. By election day, voters are able to vote based largely on accurate measures of their fundamental variables. The argument here is that although presidential campaigns have an important effect, what is relevant is their *existence;* we expect the *details* of a competently run campaign to have a small effect on the election outcome. This is a similar argument to that of Markus.[10]

For example, among the first systematic studies of voting behavior was a six-wave panel survey of the 1940 presidential election designed to show what the authors thought were huge campaign effects (Lazarsfeld, Berleson, and Gaudet, 1944). In fact, they found very few campaign-specific effects of any kind. The considerable systematic research over the next half-century did little to change this basic conclusion (Bartels, in press). Even those scholars who focus on the endogenous effect of the campaign (or expected votes) on fundamental variables like party identification emphasize that these endogenous effects are minimal, especially in the short run.[11]

THE IMPLIED MODEL OF JOURNALISTS

Journalists have no similar tradition of detailing models of voter decision-making. However, we can discern their implicit model by looking at the focus of media attention during election campaigns and at some explicit statements from newspapers, magazines, and television. Of course, there are about as many opinions among journalists as among political scientists, but at least a "mainstream model" can be identified. According to this model, voters base their intended votes partly on fundamental variables, but considerably more on the day-to-day events of the presidential campaign. Voters are assumed to have very short memories, disproportionately relying for their decisions on the most recent campaign events and last piece of information they ran across. Candidates are thought to be able to easily "fool" voters by changing their policy stance during the campaign or causing the opposing candidate to say or do something foolish. For example, the *San Francisco Chronicle* reported (on September 13, 1988) that "the survey [of Bush leading 49 percent to 41 percent] is the latest evidence that the vice-president's tough attacks on Dukakis are working. ... The Pledge of Allegiance in public schools has been particularly effective, with voters expressing disapproval of the Democrat's action by a

2–1 ratio." Similarly, the *Dallas Times Herald* reported (on August 9, 1988) that "if the race is indeed narrowing, it is an indication that this strategy [of Bush actively attacking Dukakis] is working."

Also according to the journalists' model, voters do not take their role in the process very seriously, have very little information or knowledge of the campaign and the issues, and frequently do not vote on the basis of their own self-interest. For example, *Profiles* magazine (December 1991:21) approvingly quoted a top consultant who indicated that "people vote for character traits, not policies or issues." The typical advice of journalists to their colleagues is "Don't assume any voter knowledge. ... In other words, the press must occasionally bore itself in order to inform the public" (*Newsweek*, October 4, 1991:29).

Journalists justify their model (or stance) by interpreting public opinion polls. They do no formal studies, and so they cannot be very confident of these interpretations, but the causal inferences seem clear to them on the basis of their detailed knowledge of the campaign ant their close observations. For example, George Bush was gaining in the polls in 1988 just at the time when he was on the strong offensive against Dukakis, and Dukakis at the same time was avoiding getting into the fray. Dukakis lost a few point in the polls when he looked a bit foolish riding on a tank. Four days of the national media focusing on a candidate during a party convention certainly does seem to influence people to increase their support in the polls for that candidate. According to the journalists, Bush won because of these events, the Willie Horton TV ads (and especially the media coverage of these ads), his opposition to flag burning, and other campaign events. Campaign strategies and tricks play a central role in journalists' interpretation of poll results. For example: "It was beyond brilliance the way Michael Dukakis handled Jesse Jackson"; "Dukakis seemed to be stalled and passive"; "Dukakis is a sourpuss compared to this amazing new Bush person."[12]

A more-sophisticated news media analysis argues that character matters rather than campaign tricks: "The Democrats ... lost for a variety of reasons, but principal among them was that they presented a candidate whose virtues did not include plausibility as a president or, often, even an apparent feeling for the nature of the job" (Editorial, *Washington Post*, October 14–20, 1991). This explanation does not, however, specify where the independent judgments of the candidates' characters come from.

It is interesting that during the 1992 campaign, the messages of political science seemed to reach the journalists: There was more mention of the state of the economy and even of individual forecasters such as Lewis-Beck and Campbell amidst the usual saturation coverage of ephemeral campaign events.

FLAWED EXPLANATIONS

If political scientists can forecast the election outcome reasonably well on the basis of fundamental variables measured before the campaign, why do the polls vary so much? To put it another way, if the journalists' model is correct, then how can political scientists, or anyone else, accurately forecast the outcome? Alternatively, if the political science model is correct, why do polls vary at all, and why do they respond to specific campaign events such as conventions and advertising campaigns?

In this section, we raise several hypotheses that could explain this apparent paradox. Only some of these are competing hypotheses; many are complementary. We also provide, in most cases, sufficient evidence to discard each. We retain some features of some of the partially flawed explanations for later use. In most cases, we focus on the 1988 campaign, since our best data are from that contest.

We discuss flawed hypotheses for two reasons: First, they are plausible explanations, and many have been advanced by respected journalists and scholars. As such, they demand a hearing, and this work would be incomplete if it did not take them seriously. Second, exploring the implications of the various hypotheses gives us insight into the relation between political theories and electoral and poll data. By seeing how the data can refute certain ideas, we learn how to pose more sophisticated alternatives that are consistent with our observations.

We divide the flawed explanations into four classes: *measurement theories*, which explain the poll results as artifacts of flawed survey methods; *journalists' theories*, which dismiss the forecasts; *political science theories*, which are consistent with the forecasts but do not explain the poll variation; and *rational actor theories*, which are consistent with some parts of the evidence but not all.

Measurement Theories

It is possible to resolve the paradox presented in the opening of this essay by simply dismissing the pre-election poll results. We list three hypotheses, in order of increasing plausibility, under which we would not trust the opinion polls.

The Polls Are Meaningless. The simplest hypothesis holds that public opinion polls have nothing to do with real observable political behavior and are as meaningless as candidates behind in the polls make them out to be. Evidence for this hypothesis is the high rate of nonresponse, and the perception that respondents do not take the survey seriously, giving insincere or poorly thought-out answers to most questions.

There is obviously some truth to this hypothesis, since early polls in most election years appear to have very little to do with the eventual out-

come of the general election. However, much evidence exists to conclude that survey responses are related to actual voting, notably the predictive accuracy of polls taken shortly before the election (see Figure 11.1). To some scholars, it was no great surprise that polls a few days before the election could forecast that election. However, this does confirm that the polls are connected in some important way to observable political behavior. These relationships hold even though as many as half of survey respondents refuse to state a presidential preference as late as the final week of pre-election polling.

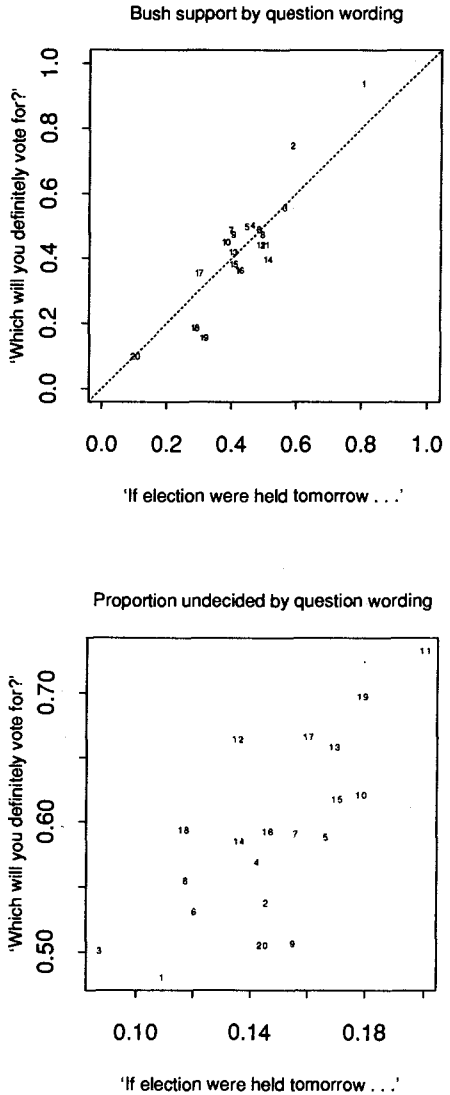
In addition, relationships among variables within virtually all polls are quite predictable and consistent with our theoretical understanding. For example, those who identify themselves as Democrats support the Democratic presidential candidate more frequently, Republicans more frequently describe themselves as conservatives, those who have higher levels of education tend to have higher levels of income, and so forth. There are numerous observable consequences of the thesis that the polls are meaningful, and indeed most of the evidence seems quite consistent with this idea. This does not explain why early polls do not forecast well, but it does provide some reason to dismiss this hypothesis.

A closely related hypothesis is that variation in the polls is due to sampling error. However, this cannot be true, since the observed variation in the polls is often 10 or 20 percent or more, as compared to typical sampling errors of about 4 percentage points (Buchanan, 1986).

Wording of Questions and Survey Organization Methodology Affect Outcome. Several versions of this hypothesis can be posed. One simple version is that variation in the polls largely derives from variations in question wording. We know from considerable research in public opinion that minor changes in the wording of survey questions can have large effects on poll results.

In order to study this hypothesis, we compared surveys taken at about the same time but with different question wordings and found that support for Bush versus Dukakis was not strongly related to the questions that were asked. An example of the evidence for this point is the first graph in Figure 11.2. For eighteen groups of voters (Democrats, independents, Republicans, low education, high education, liberals, etc.), this figure plots the proportion of respondents in each group who supported Bush according to responses to the usual survey question posed in June and according to responses to another June survey that had an unusual question wording.[13] Most groups (represented by numbers in Figure 11.1) fall on or close to the 45-degree line, indicating that question wording did not have much effect on the measured level of support for Bush. There is a minor systematic pattern in the responses, since the nonwhites and the liberals fall above the line, whereas the Republicans and the conservatives

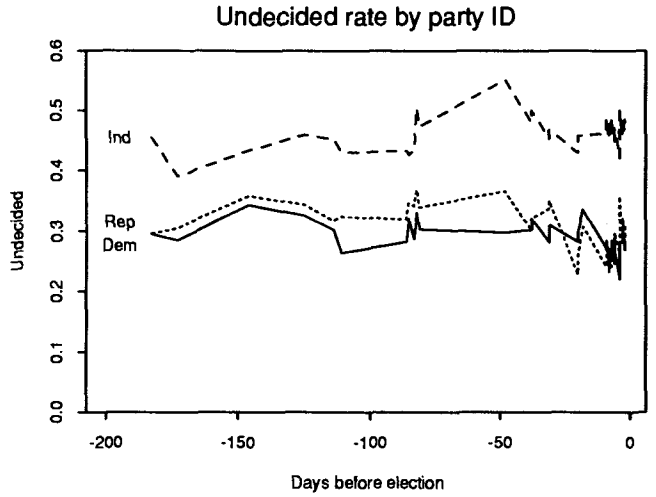
FIGURE 11.2

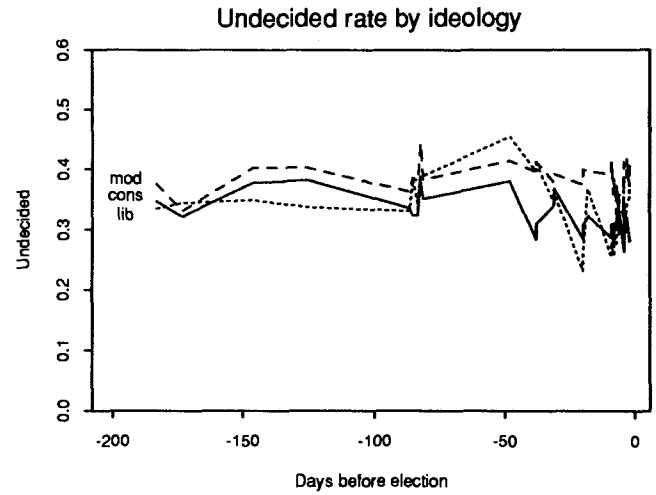


Question-wording effects. This figure shows how the wording of survey questions affected the proportion of respondents who supported Bush, among those who expressed a preference, based on two surveys held at about the same time in July 1988. Along the horizontal axis is the standard question wording: "If the 1988 presidential election were being held today, would you vote for George Bush for president and Dan Quayle for vice president, the Republican candidates, or for Michael Dukakis for president and Lloyd Bentsen for vice president, the Democratic candidates?" The alternative question is represented along the vertical axis: "(George Bush is the Republican nominee for president and Michael Dukakis is the Democratic nominee.) Which (1988) presidential candidate will you definitely vote for in this year's election?" Each number in these figures represents a group of survey respondents, coded according to the legend at the right side of the graph. (The groups in the legend are ordered in decreasing support for Bush.) For example, at the top of the upper graph, the number "1" indicates that about 80 percent of Republican respondents supported Bush when asked the standard question as compared to about 90 percent under the alternative wording. Since most groups fall on or near the 45-degree line, we conclude that the differences in question wording are not very important to our analysis. However, the bottom figure indicates that question wording can greatly affect the proportion of undecided voters.

Legend:
1 Republicans
2 conservatives
3 over $50,000/year income
4 whites
5 $25,000–$50,000/year income
6 college education
7 non-South
8 men
9 over thirty years old
10 women
11 independents
12 under thirty years old
13 no college education
14 South
15 moderates
16 $15,000–$25,000/year income
17 under $15,000/year income
18 liberals
19 non-whites
20 Democrats

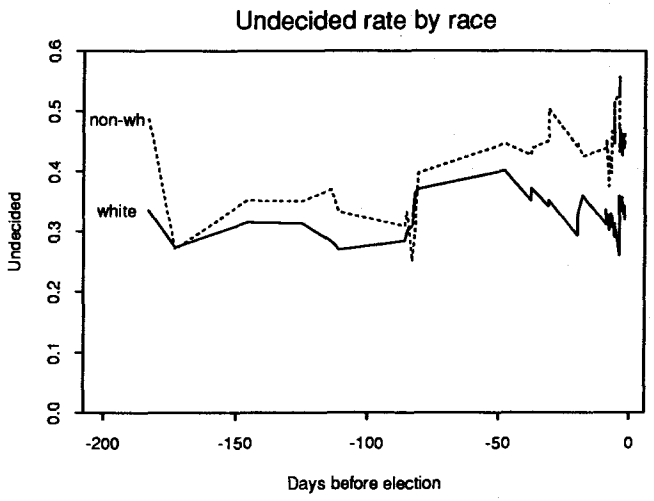
FIGURE 11.3





Trends in undecided respondents. This figure includes three time series plots of the proportion of survey respondents who reported being undecided as to their vote. Each line is a plot representing a different group of voters. The party identification graph tracks political independents ("Ind"), Republicans ("Rep"), and Democrats ("Dem"). The ideology graph tracks ideological moderates ("mod"), conservatives ("cons"), and liberals ("lib"). The final graph plots white and nonwhite respondents. In most cases, the lines representing different groups within each figure move in the same rather than opposite directions, which confirms that the proportion undecided did not vary by these groups.

FIGURE 11.3 (*continued*)



fall below it. This small effect appeared in a similar analysis, not shown here, of two September surveys. However, these patterns are much too small to account for significant parts of the main puzzle we seek to understand; moreover, they cancel out in the aggregate survey totals.

In similar analyses, we also rejected the related hypothesis that the different polling organizations produced systematically different results. We did extensive searches and explorations of this kind, finding only one systematic relationship: The proportion undecided or refusing to answer the survey question varied consistently and considerably with the question wording and polling organization. The bottom graph in Figure 11.2 demonstrates this by using the same two June polls. Groups of citizens in the two polls correlate moderately well; that is, since those groups more undecided on one question tend to be more undecided on the other, the groups fall roughly along a straight line. However, the average undecided rate differs substantially between the two surveys (about 15 percent undecided for the question on the horizontal axis and 60 percent for the question on the vertical axis), which, because of differing axes labels, can be seen in the figure by noting that 10 percent undecided on one poll does not predict 10 percent on the other. The unequal rate of undecided respondents is interesting but does not explain why support for the candidates varied so much over the course of the campaign.

Nonresponse Implies a Bias. Another hypothesis holds that survey respondents selectively refuse to answer, or say they will not vote, when

their candidate is not doing as well as the other candidate. In other words, under this assumption, voters are embarrassed to support the candidate that appears not to be doing well. For example, during one party's convention, when an eventual Republican voter is interviewed at home after watching four days of a Democratic party convention, he may feel more comfortable saying he does not plan to vote or is unsure of his candidate preference. If true, this would produce a systematic item nonresponse bias. Under this scenario, campaign events would have a big effect on reported support for the candidates but could have no effect on the eventual outcome.

This is a theoretically satisfying explanation, essentially providing a completely self-consistent methodological answer to the question this essay addresses. Indeed, before we gathered our data, this explanation seemed plausible to us. Unfortunately, it is now clear to us that this nonresponse-bias hypothesis is false.

Figure 11.3 presents the evidence in the form of three time-series plots of the proportion undecided broken down by party identification, ideology, and race.[14] As can be plainly seen, the proportion undecided does not vary dramatically over the course of the campaign. But, more important for this hypothesis is that the groups vary *together*, whereas if the nonresponse-bias hypothesis were true, we would expect the opposite. Thus, it could not be that Republicans are more likely to report being undecided during the Democratic convention, and conversely. The same holds for race and for ideology.[15]

Journalists' Theories

An alternative way to resolve the paradox of volatile polls and accurate forecasts is to dismiss the forecasts, as in the first hypothesis, or to accommodate the forecasts to the journalists' interpretation of the polls, as in the second hypothesis.

The Forecasters Were Lucky Because Bush Ran a Good Campaign and Dukakis a Poor One. The simplest way to dismiss the pre-campaign forecasts of the political scientists and economists is to say they were just lucky and happened to coincide with Bush running a good campaign and Dukakis running poorly. Evidence for this hypothesis is that Bush's rapid gain in the polls coincided with what seemed to be his particularly adept campaigning.

The success of out-of-sample forecasts discussed earlier causes us to doubt this hypothesis. Moreover, as discussed by Lewis-Beck (1985), several other scholars have also produced relatively successful presidential election forecasts (for previous elections) based on different statistical models.[16] All these models do reasonably well in many election years, not

only 1988. The success of all these forecasts is clearly due to more than chance, and we feel that, at this point, the burden of proof lies with the critics who still believe the forecasters are merely lucky.

In addition, what seemed to the journalists to be Bush's adept campaigning might just be a justification in hindsight of what "explained" the polls. How can we test this alternative explanation of the media's interpretation? In other words, what can be done to avoid rationalization after the fact? One possibility is to use what journalists identified as the keys to success in previous campaigns and see how the Bush and Dukakis campaigns should be judged according to those rules.

This is easily resolved: In all recent presidential election campaigns before 1988, the main rule, according to the media, was which candidate was better at "acting presidential." Bush was the first candidate in modern times to directly attack his opponent, which clearly violates the rule. In recent previous campaigns, this task was taken up by the vice-presidential candidate, campaign commercials, or prominent supporters, but never by the presidential candidate.

Thus, from this media perspective, Dukakis actually looked better than Bush during the campaign, since he was acting more presidential. If the polls continued to favor Dukakis, and he won the election, we doubt the media would have changed their criteria for evaluation. It may be that Bush's strategy was effective, but in this case the 1988 election provides only a hypothesis, not also confirmation of it. Although resolving these points without careful studies of the effect of campaign media events is probably impossible, it does seem (almost!) undeniable at times that events in the campaign are influencing the poll results.

Candidates' Fortunes Fluctuated but with Predictable Convergence. Another hypothesis holds that the polls were accurate indicators of the candidates' fortunes throughout, varying because Dukakis was legitimately ahead at the start of the campaign and Bush ran a better campaign and won the election. Rather than claiming that the forecasters were lucky, this model assumes that the election result was successfully forecast because the convergence of the poll results to the general election outcome was predictable. Thus, according to this hypothesis, support for the candidates really did change over the campaign, but this change was successfully predicted by the forecasts.

This hypothesis mixes journalists' and political science theories in that it accepts the forecast but still follows the story of the polls to understand why Bush won. It accords with the methods, but not the theories, of political science.

This hypothesis has a reasonable construction and is internally consistent. However, it does not explain why any forecasts should predict that Bush would run a better campaign—especially since the forecasting mod-

els include nothing that measures the two candidates' skills as campaigners. Certainly few journalists had any idea this was going to happen. Moreover, if Dukakis's advisers could have predicted that they were going to run a poor campaign, they certainly would have changed their strategy—thus making the forecast incorrect.

The Voters Were Uninformed. A final explanation posed by journalists is at the level of the voter. According to this idea, many people, or at least enough to swing elections, vote on the basis of factors that political scientists would not call "fundamental," such as the personality of the candidates, gaffes, speaking style, campaign events, and the like. According to this explanation, the voters who decide this way may truly care about these factors or may just not know enough about the fundamental variables to make an informed decision. This model explains the swings in the pre-election polls but does not explain how pre-campaign forecasting methods predict so well given that the political science forecasts do not even try to account for personalities and campaign events.

Political Science Theories

In contrast, the political scientists' theories take as a starting point that the ability of economists and political scientists to accurately forecast election results months ahead of time is evidence that the election came out just as predicted. We present two flawed explanations here: The first is quite possibly true, but incomplete, as it does not address the relation between the campaign and the opinion polls. The second hypothesis is plausible but can be refuted by our individual-level poll data.

The Campaigns Were Balanced. Under this hypothesis, forecasting models worked in 1988 because the campaigns were balanced—that is, had roughly equal resources and expertise—and thus the election outcome occurred roughly as the forecaster and others had predicted on the basis of information available months before the election.

Although most journalists seem to deny this hypothesis, political scientists believe it to be almost certainly true. Unfortunately, even if true, it provides no solution to the key puzzle in the context of a model of voter decisionmaking. The 1988 presidential election, like all modern presidential elections in which no incumbent was running, pitted two major party campaigns that were roughly equal in strength, expertise, and resources. There are plenty of examples of astute political observers suggesting that a candidate could have done something better; but with equal funding and the best advisers each party has to offer, it would be surprising to see campaigns as unbalanced as are many voter referenda and numerous local elections. We suspect that if a presidential election happened to be severely unbalanced (beyond the predictable unbalance associated with incumbency), political science forecasting models would probably not perform well. We happen not to have observed any such instances in modern times.

The fact that modern presidential campaigns seem to be balanced, which is consistent with the political science model of voter decisionmaking, does not solve the puzzle of why the polls varied so much. The media wisdom about the 1988 election is that the outcome is explained by Dukakis running a poor campaign. Of course, this denies the hypothesis that the campaigns are balanced.

Thus, under the political science model, balanced campaigns cause no theoretical problems, but they say nothing about why the polls vary so much. Under the journalists' implicit model, in which the polls accurately indicate the candidates' strengths, balanced campaigns are inconsistent with the observation that the polls vary a lot. In neither case does this hypothesis explain the paradox.[17]

Partisans Return to the Fold. According to another hypothesis, in January there is a large mass of undecided voters, and over the course of the campaign, the number of those who report being undecided drop as different groups move toward their natural home. This is observationally similar to the nonresponse-bias hypothesis but is theoretically very different. An elaboration of this hypothesis is that the strong partisans come home to their party first, then the weak partisans. Different events bring in different groups of voters, but under the hypothesis being discussed here, the strong ones come home first, then subsequent events bring in others later. In this model, the campaign ratchets in new groups of voters, who, once they migrate to the "decided" category, tend to stay with their preference (perhaps due to psychological justification mechanisms).

The key evidence against this thesis is that the proportion of undecided voters does not drop over the course of the campaign (refer to Figure 11.3). It is especially noteworthy that the proportion undecided does not drop during times of massive shifts in the polls (as recorded in Figure 11.1). The elaboration of this hypothesis also seems wrong, since strong Republicans supported Bush from the start and did not move much over the course of the campaign. This can be seen in the first time-series plot of Figure 11.4, Bush support by party identification.[18] Moreover, support for Bush among the Democrats actually increased during the campaign, exactly opposite to what would be expected according to this hypothesis. Short-term changes in overall support for Bush (conceivably in response to specific campaign events) actually appear to occur for Democrats, Republicans, and independents equally: The three series move together. Indeed, the same appears true for Bush support broken down by the other variables in Figure 11.4. It thus appears quite clear that support for this hypothesis in these data is largely nonexistent.

We do believe that voters are coming home to their natural preferences, but not that they are following the *particular* pattern of returning to the fold by party identification.

FIGURE 11.4

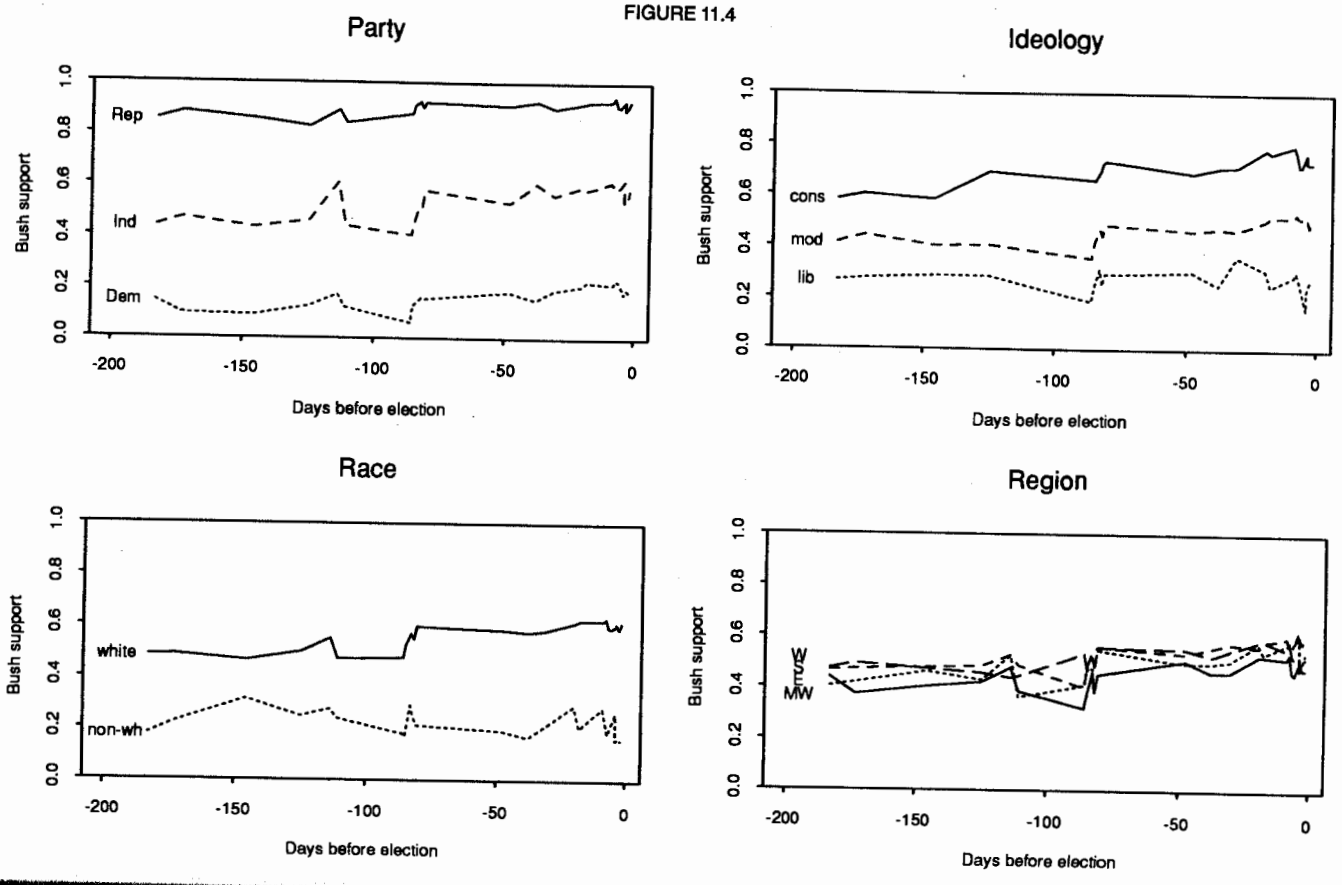
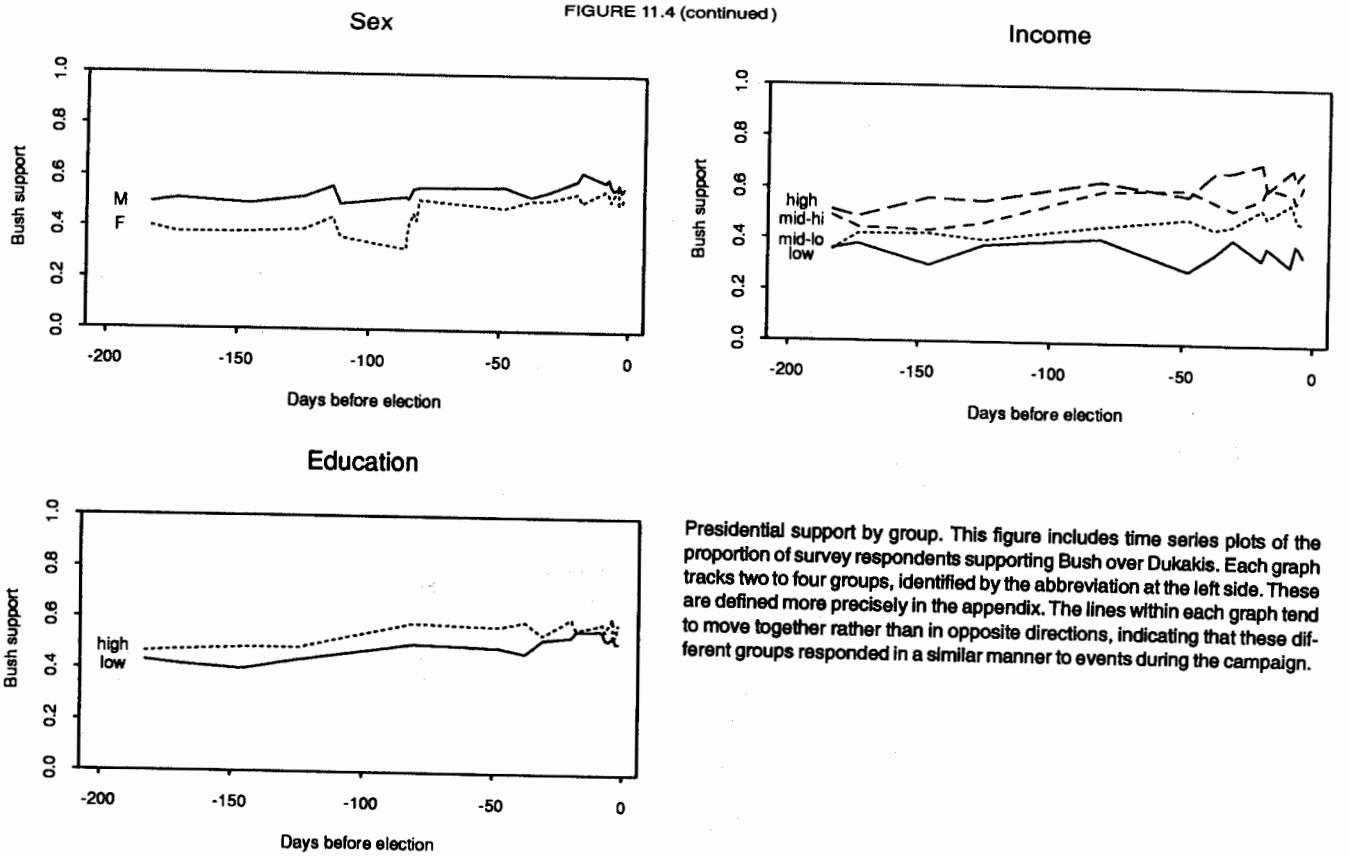


FIGURE 11.4 (continued)



Presidential support by group. This figure includes time series plots of the proportion of survey respondents supporting Bush over Dukakis. Each graph tracks two to four groups, identified by the abbreviation at the left side. These are defined more precisely in the appendix. The lines within each graph tend to move together rather than in opposite directions, indicating that these different groups responded in a similar manner to events during the campaign.

Rational Actor Theories

These theories are also political science theories, but they differ from those in the other categories because they are based on specific assumptions about individual voters. Because of the lack of any contrary evidence, we assume for each of the theories that voters answer survey questions about candidate support sincerely. This is consistent with theoretical evidence from two-candidate, winner-take-all races, where there is not much point in strategic voting. Moreover, the assumptions of rational actor theories do not differ dramatically from the voting situation, which, although somewhat more behavioral, is not more costly.

Voters Are Fully Informed. Consider first the extreme version of the rational actor model. According to this model, people (1) have full information throughout the campaign about their fundamental variables, (2) are using all the information they have at any time to form their survey response or voting decision, and (3) are rationally accounting for their uncertainty, in the sense of maximizing some expected utility. If this model were accurate, political scientists would still forecast accurately, but the trial heat polls would not change at all over the campaign. Since the polls obviously do change, this model can be rejected, but it will nevertheless be useful in clarifying related models, as well as our preferred explanation presented earlier.

Voters Have Incomplete Information. An incomplete-information model assumes, from the full-information model, that 1 is incorrect but 2 and 3 hold. That is, voters gather information over the campaign, use this information in making their decisions, and rationally account for their uncertainty. If this model were correct, political science forecasts would work, as they do. On average over the whole campaign, we would expect changes in polls to occur in the direction of the forecasts; that is, as voters gathered more information, they would gradually move in the direction of their fundamental variables. This, too, is consistent with the evidence.

However, the model implies that changes at any one time during the campaign would be relatively small because voters would appropriately judge their uncertainty, at all times estimating the values of their fundamental variables and candidate positions. Sharp short-term changes in the polls—deviations from a trend toward the forecast poll positions—would occur only when campaign events were *unexpected*, such as if a candidate did much better than expected in a debate or made a surprise change in his or her stand on an important issue.

This model is partly right, but since we find (and show further on) that the polls do respond to information that almost certainly was anticipated by voters, we reject this explanation.[19]

TOWARD AN EXPLANATION FOR POLL VARIATION

The previous section provided sufficient evidence to dismiss several hypotheses that give plausible explanations for the great variance in trial heat polls, a variance that exists even though we are able to accurately predict presidential election outcomes. We now turn to our preferred, but quite tentative, explanation, for which we present evidence in the next section.

Our working hypothesis is that voters cast their ballots in general election contests for president on the basis of their "enlightened preferences." As with the concept of enlightened preferences in the political philosophy literature (Dahl, 1989), we do not require that people be able to discuss these preferences intelligently or even to know what they are; we only require that they know enough that their decisions are based on the true values of the fundamental variables. The function of the campaign, then, is to inform voters about the fundamental variables and their appropriate weights, notably, the candidates' ideologies and their positions on major issues.

According to this explanation, only the second of the three assumptions under the full-information rational model is correct. That is, voters do not have full information and do not rationally judge or incorporate their uncertainty, but they do gather and use increasing amounts of information over the course of the campaign, with the largest increase occurring just before election day (see Popkin, 1991). We also assume that voters answer surveys about candidate support sincerely. We elaborate this model here.

At the start of the campaign, voters do not have the information necessary to make enlightened voting decisions. Gathering this information is costly, and most citizens have no particularly good reason to gather it in time for the pollster's visit, so long as it can be gathered when needed on election day.

Most polls ask whether the respondent intends to vote, and the question appears to be answered sincerely and relatively accurately. Likely voters with insufficient information at the time of the poll still report that they will cast a ballot on election day. Unfortunately, those who consider themselves voters are willing to report to pollsters their "likely" voting decisions even if they have not gathered sufficient information to make this report accurate. The reason is the quite general point, as much psychological research has shown, that human beings are very poor at estimating uncertainty and at making fully rational decisions based on uncertain or incomplete information (Kahneman, Slovic, and Tversky, 1982). People also make decisions based on these incorrect uncertainty judg-

ments, producing, in only this narrow sense, "irrational" decisions. Compounding the problem is the awkward situation of the survey interview: Imagine survey respondents who, when asked, indicate that they will vote; when later asked for the name of the candidate who will get their vote, they are embarrassed to reveal their ignorance or uncertainty, especially after already saying that they will vote.[20]

Thus, without sufficient knowledge of their fundamental variables, and when asked to give an opinion anyway, most respondents act as they will in the voting booth on election day: They use information at their disposal about their fundamental variables and report a "likely" vote to the pollster. We believe that this report to the pollster is sincere, but the survey response is still based on a different information set than will be available by the time of the election. It will therefore differ systematically from the eventual vote to the extent that the voter's information set improves over the course of the campaign. In relatively high-information, balanced campaigns, voters gradually improve their knowledge of their fundamental variables and generally have sufficient information by election day.

Thus, the campaign itself will confer no large unexpected advantages on one party or the other. This is why forecasting models, based on information available only at the start of the general election campaign, work well. However, this does not make the campaign irrelevant because without it election outcomes would be very different. Moreover, if one candidate were to slack off and not campaign as hard as usual, the campaigns would not be balanced and the election result would also be likely to change. Thus, presidential election campaigns play a central role making it possible for voters to become informed so that they can make decisions according to the equivalent of enlightened preferences when they get to the voting booth. This process then depends on the media to provide information, which they do throughout the campaign, and on the voters to pay attention, which they do disproportionately just before election day.

Note that we are *not* arguing that there exists an identifiable group of uninformed voters who gradually become more informed than other groups over the course of the campaign. Although it is undeniably true that knowledge varies considerably across citizens at any one time, we find that virtually *all* groups of eventual voters have their preferences gradually enlightened during the campaign by roughly the same amounts.

If this explanation for our central puzzle is correct, the only remaining question is not why the polls move in the direction they do; we already know that they move in the direction of the political scientists' forecasts. The relevant question is why they begin where they do. Our hypothesis is that the early position of the polls is a result of the information that is readily available at the start of the general election campaign. For example, Dukakis's race against only Jesse Jackson at the end of the Democratic nomination positioned him as quite conservative. In part as a result of this, Dukakis was seen at the start of the general election campaign as more conservative than he was (and at times even more conservative than Bush). As citizens learned more about the appropriate values of their fundamental variables, voter support for the candidates changed.

EVIDENCE FOR ENLIGHTENED PREFERENCES

As we indicated at the start of this essay, we have much more evidence proving many possible explanations wrong than proving one right. In particular, we are handicapped in our analysis here by having no direct measures of voter information over the campaign, or of some of the fundamental variables the forecasters use in their models.[21] Our strategy, then, is to extract whatever information is available in our data and leave it to future research to more firmly establish or refute this explanation.

We begin by providing evidence that preferences early in the campaign are relatively unenlightened. From one perspective, this should neither be difficult nor perhaps even necessary to show, since numerous scholarly studies have demonstrated the ignorance of Americans about most matters of policy and politics. However, we do not require citizens to be able to verbalize their motivations or detailed positions on their fundamental variables. The idea of making voting decisions on the basis of enlightened preferences only requires that voters cast their ballots in the same manner as if they had full information and time for complete consideration of all issues. Thus, survey questions about citizen knowledge would not directly deal with our concerns. For the same reasons, it would also not be a good strategy to ask survey respondents what their fundamental variables are. A measure of the "revealed preferences" of this group of citizens would be better, but one cannot observe individual-level political behavior in polling data.

Instead we look for systematic discrepancies between actual voter support and expected support, which we calculate on the basis of measured demographic and fundamental variables. We do this in four different ways in this section, each a different observable consequence of the same theory of poll variation described previously. We begin by demonstrating the "irrationality" of early poll movements. Next we show that the fundamental variables are of increasing importance over the campaign. We explore how voters weight the fundamental variables in decisionmaking in the next section and then demonstrate that changes in these weights, and not the values of the variables, are what account for poll fluctuations.

The "Irrationality" of Early Poll Movements

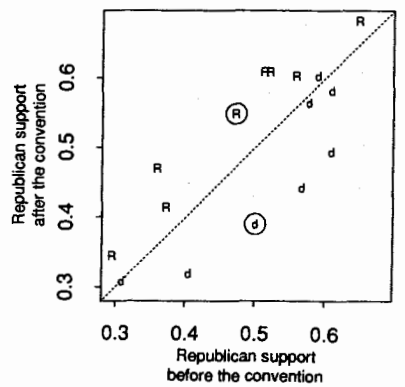
We first demonstrate that voters do not "rationally" account for uncertainty in using information to make decisions about supporting presidential candidates. We show this by focusing on predictable changes associated with totally expected campaign events, changes that should not occur if survey respondents are fully rational.

Figure 11.5 presents the proportion of supporters for each party over the course of the campaign, along with the times of the Democratic and Republican party conventions. In order to see more clearly the effects of these party conventions on support for the presidential candidates, we plot the proportion supporting the Republican candidate before and after each convention since 1964.[22] Republican conventions are marked "R" and Democratic conventions are marked "d." If a point appears above the 45-degree line, Republican support went up after the convention; if it is below the line, Republican support dropped. If these conventions had no effect on the level of support, the points would be scattered randomly on and about the 45-degree line. The results are unambiguous: Support for the Republican candidate increased after all Republican conventions and decreased after all but one Democratic convention. The 1988 conventions, which are circled, are fairly typical of the points on the graph, lending credence to our more detailed analysis of that election year.[23]

The clear results from Figure 11.5 are consistent with our earlier explanation, for if people were informed and reflective about their candidate preferences early on in the campaign, they would also be able to predict that their opinions would change after each party convention. In that case, they would realize that they should change these preferences immediately. Thus, if people were rationally incorporating their uncertainty about future events, we would not witness any *predictable* changes in support for the candidates. Recall that if the full- or incomplete-information rational models were correct, only *unexpected* information would change voter preferences. Yet, almost all aspects of modern political conventions have also been extremely predictable, from the nominee to most aspects of the platform, and even the "spontaneous demonstrations" on the convention floor for various candidates. We know that conventions produce, almost exclusively, expected information from merely watching the news on the days leading up to the conventions. Moreover, any voter who was aware during the convention four years earlier (or was reminded of this by the media) should not be surprised by anything that happened during any recent political convention.[24]

This logic also applies more generally if the political science forecasts can be believed. Since we can predict whom respondents will end up supporting on election day, if they were enlightened at the start or rationally incorporated their uncertainty all along, they would change their preferences only minimally throughout the campaign. Since they do change their preferences, and since convention and other changes are largely predictable, we conclude that many people are unenlightened at the beginning of the campaign and are not rationally incorporating uncertain information in their decisions.

FIGURE 11.5



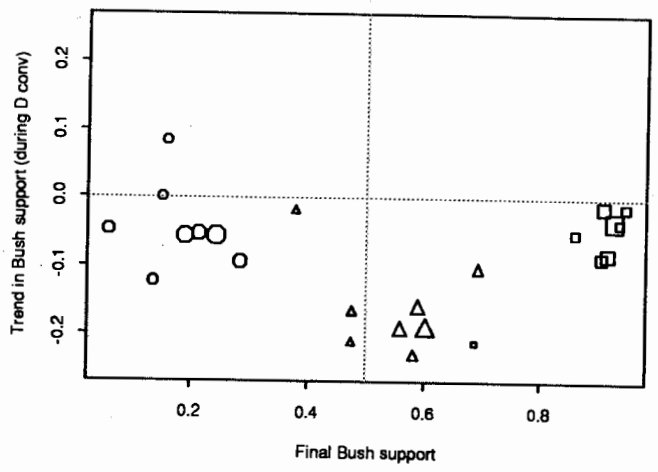
Effects of Republican and Democratic party conventions on presidential campaign polls, 1964–1992 (conventions in 1988 circled). This figure summarizes all the plots in Figure 11.1 before and after the party conventions. Each "R" refers to survey support for the Republicans before and after a Republican convention; each "d" indicates support before and after a Democratic convention. Symbols above the 45-degree line indicate that support for the Republican candidate increased during the convention, whereas symbols below the line indicate that support for Bush declined. Note that all R's appear above the line and almost all d's appear below the line. The 1988 conventions are circled and appear typical of public opinion swings during the conventions.

Another observable implication of the enlightenment hypothesis that we can evaluate is whether these changes are also predictable for subgroups of the electorate. Our data on groups include all two-way interactions among ideology, region, education, sex, income, party, and race—all the covariates on which we had information for a large number of our sample surveys (see the appendix). Two-way interactions include all combinations of groups such as nonwhite Democrats, highly educated southerners, lower-middle-income males, and conservative females.[25]

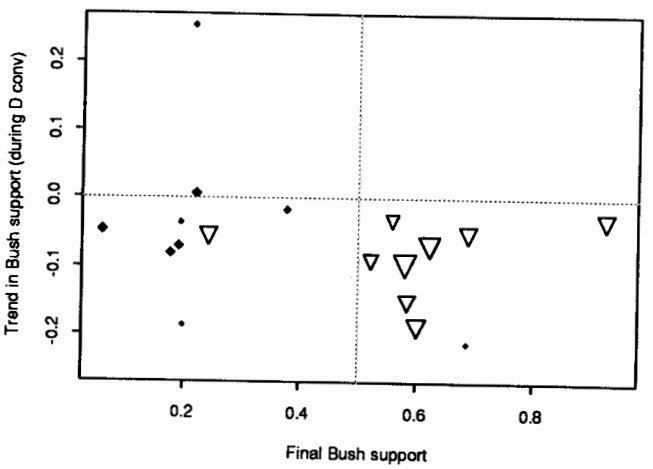
Figure 11.6 contains a particularly compact way of presenting a large subset of this group-level information. Consider first the party graph in Figure 11.6A. Each of the two-way groups that include party classification is plotted on this graph, with eventual Bush support on the horizontal axis and the trend in Bush support on the vertical axis. This trend in Bush support is calculated as the change from before to after the Democratic convention (11.6A), the Republican convention (11.6B), and the last forty days

FIGURE 11.6

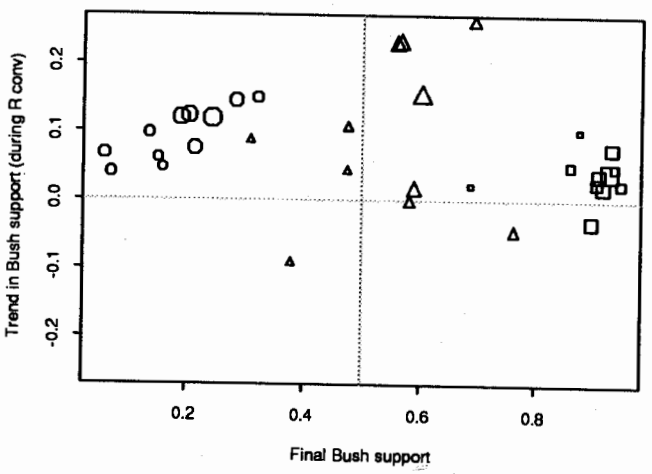
11.6A: Democrats, Independents, and Republicans



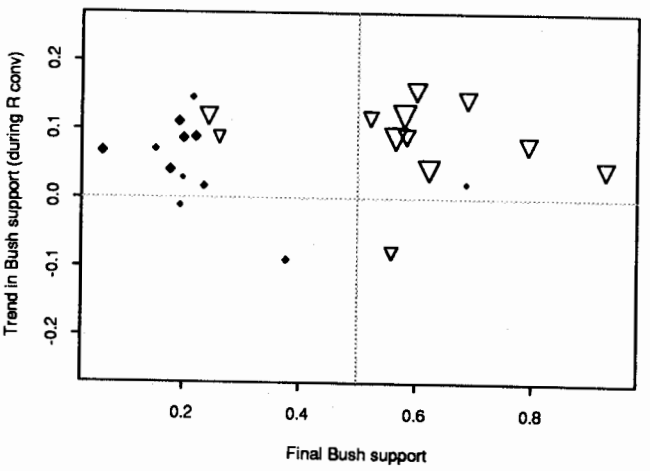
11.6D: Nonwhites and whites



11.6B: Democrats, Independents, and Republicans



11.6E: Nonwhites and whites



Legend: ○ Democrats
△ Independents
□ Republicans

of the campaign (11.6C). We define only the party of each group by the type of symbol drawn—circles for Democrats, triangles for independents, and squares for Republicans. The size of each symbol (as measured by the area of a circle drawn around it) plotted for each group is proportional to the number of respondents it includes. Figure 11.6A shows that all Republican groups eventually supported Bush very strongly (all the squares are to the right on this graph), with only one small group (the nonwhite Republicans) containing less than 80 percent of Bush supporters. All Democratic groups also ended up being Dukakis supporters, although their support has a lower mean and a higher variance. Independent groups end up nearer to the middle, although most did wind up giving Bush majority support.

Figure 11.6A also demonstrates that almost all of the many groups during the Democratic convention predictably increased their support for Dukakis (as shown in 11.6A by almost all the symbols being below the horizontal line drawn at zero change). Independents moved the most in this direction, but change among Democrats and Republicans was about the same. Figure 11.6B shows the same relationship for the Republican convention; and the results are a mirror image, with almost all groups increasing their support for the Republican party's nominee. Democrats appeared to change somewhat more than Republicans, and independents still changed the most; but the pattern is about the same.

Figure 11.6.C portrays the trend in support for the candidates over the last forty days of the campaign. In this period, the action was among the Democratic and independent groups, most of which steadily moved toward Bush. Most Republican groups changed very little from their already high level of Bush support.

In total, the three party graphs (11.6A, 11.6B, and 11.6C) provide additional, more detailed group-level evidence. They show that even among the many groups of voters studied here, party conventions do not consolidate support among one's own partisans but rather affect partisans of both types in similar and predictable ways. These graphs also show that independents, and in general groups near the middle, respond most extremely to the conventions. This is consistent with our hypothesis, not because these citizens are the least enlightened, but because these voters tend to be on the margin; thus, changes in knowledge of fundamental variables produced by the conventions produce larger shifts in the fraction of respondents supporting one candidate or the other than in other groups not so near the margin. The same is true of other party groups near the middle of the graphs. Thus, this evidence is consistent with the idea that all voter groups become enlightened by roughly the same amount over the course of the campaign, even though such enlightenment has different effects on voter support for the various groups.[26]

FIGURE 11.6 (*continued*)

11.6C: Democrats, Independents, and Republicans

11.6F: Nonwhites and whites

Changes in support for Bush by subgroup. This figure shows opinion changes for different groups of respondents during key periods in the campaign. Each of the three plots on the left (labeled 11.6A, 11.6B, and 11.6C) shows different subgroups classified by party identification; circles show subgroups of Democrats (such as liberal Democrats, white Democrats, rich Democrats, poor Democrats, etc.), triangles show Independent subgroups, and squares show Republican subgroups. The plots on the right (labeled 11.6D, 11.6E, and 11.6F) are divided into subgroups of nonwhites (shown by diamonds) and whites (triangles). The size of each symbol (as measured by the area of a circle that could be drawn around it) is proportional to the number of survey respondents in the subgroup. In each plot, the horizontal axis indicates, for each displayed subgroup, the proportion of respondents who supported Bush in the polls in the last days before the election, and the vertical axis indicates the change in support for Bush in the period shown by the plot, from before to after the Democratic convention for 11.6A, the Republican convention for 11.6B, and the last forty days of the campaign for 11.6C.

Finally, Figures 11.6A, 11.6B, and 11.6C demonstrate that the picture was somewhat asymmetric with respect to the parties during the period after the last convention, and even partially during the Republican convention. Since Republican groups supported Bush much more uniformly than Democrats supported Dukakis (as is evidenced in the figures by the relative dispersion of the squares as compared to the circles), this too is consistent with the idea that voter groups more divided in support will respond more to changes in fundamental variables. But this result can also be explained in a more direct, substantive way: Bush supporters were more unified in part because Bush was the candidate more known by the public. Dukakis was a more unknown quantity; it should be no surprise that early Democratic voter support was more spread out between the parties. And because more of these voters were closer to indifference about the two candidates, changes in knowledge of their fundamental variables would have more of an effect.[27] Thus, roughly the same change in enlightenment that occurs to all citizens has different effects depending on their earlier support for the candidates.

Figure 11.6 also contains analogous figures for racial groups (11.6D, 11.6E, and 11.6F, with nonwhites represented by solid diamonds and whites by open triangles), and the conclusions are largely the same. The Democratic party convention increased support for Dukakis and the Republican convention increased support for Bush among almost all groups of white and nonwhite voters. Exceptions in these graphs include a group of white liberals and white Democrats, each of which appears to act more like the nonwhite groups. There is also a small group of nonwhite Republicans that appears among the white groups. During the three periods, the white groups were somewhat more cohesive and less variable.

The Fundamental Variables' Increasing Importance During the Campaign

If voters are becoming enlightened, then the fundamental variables should be increasing in importance over the campaign. Figure 11.6 is consistent with this hypothesis, since individual groups are becoming more homogeneous, thus increasing heterogeneity across groups, even within parties. More generally, if voters are basing their survey responses more on the fundamental variables over the course of the campaign, as we hypothesize, then groups of voters (categorized by these variables) should become increasingly distinctive—homogeneous within and heterogeneous across the groups. The observable implication of this process, which we now evaluate, is the extent to which voter groups are more heterogeneous as the campaign progresses.

One confirmation of increasing homogeneity within individual groups, and consequently increasing heterogeneity across groups, is shown in Figure 11.7. This figure plots a measure of the *true* heterogeneity across subgroups within parties by measuring the observed variance in support for Bush across subgroups and subtracting out the expected sampling variance of this measure.[28]

We consider each party separately in Figure 11.7 so as to see fine detail; if groups in different parties were included, the variances would be so large as to dwarf the changes over time.

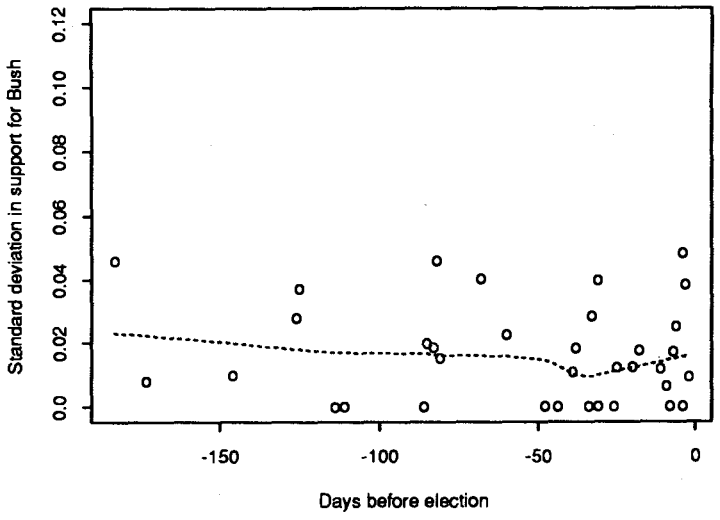
Each circle in Figure 11.7 plots our measure of the heterogeneity across groups for a specific time during the general election campaign. For help in viewing trends in this graph, we plot a nonparametric regression line on each (called "lowess").[29] Consistent with the idea that enlightenment occurs throughout the campaign, heterogeneity across groups is clearly increasing for the Democrats and independents throughout the entire campaign (i.e., partisans are sorting themselves out more clearly by subgroup). As would be expected, this enlightenment mostly occurs just before election day, when voters must pay attention if they are to vote on the basis of their fundamental variables. However, heterogeneity is not changing noticeably among Republican groups. This is consistent with the idea that enlightenment, occurring to all citizens at roughly the same degree and speed, has the largest effect on the voter preferences of groups—such as independents and those who are the eventual supporters of the more unknown candidate—that were more indifferent about the candidates. Although we had guessed that the line for the Republican graph would be increasing too, it should be no surprise that many fewer Republicans were indifferent early on about both a Republican incumbent president and a considerably less well known Democratic challenger.

How Respondents Weight Fundamental Variables

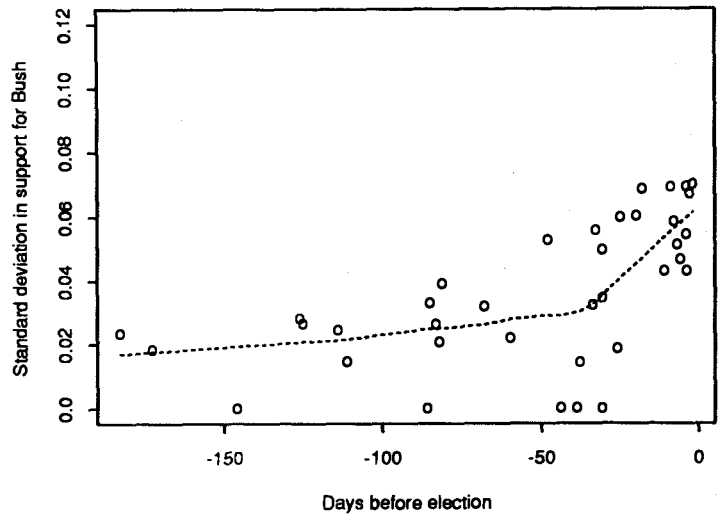
We can now more directly address the issue of the role of the fundamental variables and the weights given to them by survey respondents throughout the election campaign. We do this by using all available covariates to predict support for Bush or Dukakis with a logistic regression in each survey. These explanatory variables—party, ideology, race, sex, income, education, and region—are not perfect measures for what political science research has taught are the fundamental variables on which most citizens base their voter preferences, but they are the best we have available given what questions happened to be asked in the surveys. They are also the most important individual-level variables, since scholars have found that incumbency and economic variables in the United States affect the vote

FIGURE 11.7

11.7A



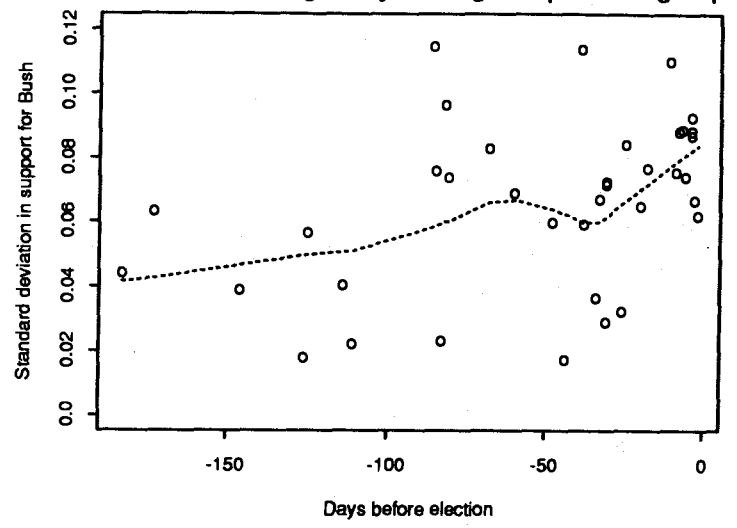
11.7B



Heterogeneity among party groups. Each circle in Figure 11.7A corresponds to a different national survey, with a measure of heterogeneity among subgroups of Republicans plotted versus the date of the survey. The heterogeneity measure is an estimate of the standard deviation in support for Bush across the subgroups, corrected for the sampling variability in the poll. The dotted line is a smooth curve designed to show the trend over time. Figures 11.7B and 11.7C similarly show heterogeneity across subgroups of Democrats and Independents, respectively. The increase in heterogeneity for two of these graphs indicate that survey respondents were sorting themselves out more clearly into their respective subgroups.

FIGURE 11.7 (*continued*)

11.7C



decision primarily through their true, and not perceived, values. Certainly party, ideology, and race are among the fundamental variables, and all are expected to have a strong effect on voting (or support) decisions. Sex should have a small effect, with women supporting the Democrats slightly more; income and region should have a somewhat larger effect; but conditional on the other variables, education should have almost no effect. The fact that we do not have measures in these surveys of all the variables the forecasters use in their models is a real limitation of this logistic regression analysis, and this is an important area for the focus of future research.[30] These hypotheses from previous research only suggest the weights of the fundamental variables in the final analysis, as election day nears. Our enlightenment hypothesis suggests that early on in the campaign the importance of these variables may be different, although exactly what that difference is, we do not predict. Using a logistic regression analysis, we found that the movement in the polls in the five months before the election is consistent with the hypothesis that as survey respondents become more enlightened in the late stages of the campaign, their preferences align with their fundamental variables as predicted months earlier. For most of these variables, the effect estimates vary considerably over the entire campaign. In 1988, race and ideology mattered less at the start of the campaign than at the end, whereas the effect of region among nonwhites and the effect of gender were much higher early on.[31]

CONCLUSION: THE ROLE OF THE MEDIA IN PRESIDENTIAL CAMPAIGNS

We see no reason that most of the patterns and forecasts discussed in this essay would be any less valid for many future presidential campaigns. If our tentative conclusions hold up to further empirical scrutiny, this will mean that voters learn over the campaign but do not rationally incorporate uncertainty. The campaigns will be relatively balanced, and we will be able to use political science models to forecast the outcome of the election accurately at the time the nominees are known. And early polls will not necessarily reflect the eventual outcome.

Our tentative conclusions would also lend support to the idea that presidential elections are one institution where voters use their enlightened preferences to make decisions.[32] Campaigns, as they have been run, are very important in producing this result. Underlying the puzzle explored in this essay is the following paradox: Because of their central and relatively balanced role, presidential general election campaigns produce no unexpected advantage for either political party and are not necessary for forecasting.

What specific role, then, do the campaign and the media have? The most important role, from this perspective, is to enlighten the voters—to give them sufficient information in a timely fashion so that they can make up their minds relatively easily. The media can continue to make the campaign relatively fair by giving both candidates a reasonable opportunity to express their views, thus continuing to help inform the voters. All this will help make voters aware of where the candidates stand and help them learn the values of their fundamental variables and their appropriate weights. Informing voters about candidates' positions on issues is therefore the most important role of the media, and it should hardly be controversial (or novel) to suggest that they spend more time on it. All of our forecasting models require that voters know where the candidates stand, so their being informed will also not change our ability to forecast. Moreover, even though more attention to informing voters by the media will probably not change the outcome of the election, it would not hurt to improve the level of "enlightened deliberation" during the campaign. Issues and proposed solutions do get raised and discussed, and increasing the level of explicit voter knowledge about these issues (which is presently quite low) could only improve the odds of reaching consensus among elected representatives.

Finally, journalists should realize that they can report the polls all they want and continue to make incorrect causal inferences about them, but they are not helping to predict or even influence the election.[33] Journalists play a critical role in enabling voters to make decisions based on the

equivalent of explicitly enlightened preferences. Unfortunately, by focusing more on the polls and meaningless campaign events, the media are spending more and more time on "news" that has less and less of an effect.

The public opinion horse race of the early general election is of tremendous popular interest, so one can hardly blame the media for focusing on it so much. Perhaps the research presented here might help the media, and eventually citizens, to realize that winning this early "race" is worth nothing: It does not help win the election; and it does not even help the candidates raise money (since general elections for president are now publicly funded). Because being ahead in the early polls is worth almost nothing, perhaps journalists and then the public will understand that the polls are also not worthy of as much attention as they get. Do we really need to spend so much public attention on which horse first gets into the starting booth?

APPENDIX

The forty-nine national public opinion polls we used are listed in Table 11.2 with the polling organization, the number of days before the election on which the survey took place, and the sample size. We used all these surveys at different times in the analysis, but some analyses used only a subset of surveys (primarily CBS and ABC) due to the frequency with which various survey questions were asked. In all analyses, we weighted respondents by the survey weights supplied by the respective polling organizations.

For the figures in the essay, we used the following coding schemes for individual-level responses. For *Vote*, we used the respondent's preference for the Democratic or Republican ticket when available and otherwise for the Democratic or Republican presidential candidate. The most typical question wording can be found in Note 9. Those who reported leaning toward one party or another are not included. (Including or excluding "leaners" had little effect on our results.)

For *Education*, "low" refers to a respondent with no college, and "high" to one with some college experience (including those who fail to graduate). For *Race*, we used white versus nonwhite for the two-way graphs. *Party* is coded in three categories for the two-way graphs: Republican, Democratic, and a third category consisting of independents, no answer, and those who prefer minor parties.

Region of the country is coded as Northeast, Midwest, South, and West, and the logistic regression differences are South versus non-South. *Ideology* for graphs with two-way groups is coded in three categories: (1) very

TABLE 11.2
Individual-Level Presidential Campaign Polls in 1988

Days	Org.	n	Days	Org.	n	Days	Org.	n
183	CBS	1,382	81	CBS	1,689	19	Gallup	1,013
178	Roper	1,962	68	Harris	1,889	18	Gallup	1,009
173	ABC	1,508	63	AP	1,125	18	CBS	1,827
146	ABC	1,012	61	Roper	1,003	14	Yank	1,475
139	AP	1,223	60	LAT	1,418	11	Harris	1,899
126	CBS	1,177	48	CBS	1,195	10	Roper	1,976
126	LAT	2,277	44	ABC	1,307	9	CBS	1,650
125	ABC	1,539	39	Yank	1,008	8	CBS	1,690
122	Roper	1,968	38	CBS	1,530	7	CBS	1,862
114	ABC	603	34	ABC	1,392	6	CBS	1,977
111	ABC	622	33	Harris	1,999	4	CBS	704
110	Gallup	948	31	LAT	607	4	CBS	1,505
86	ABC	605	31	LAT	543	4	Yank	1,006
85	ABC	1,021	31	CBS	1,518	3	CBS	2,188
83	ABC	791	26	ABC	1,369	2	CBS	2,227
82	ABC	812	25	Harris	1,995			
82	Gallup	1,000	20	CBS	1,447			

Note: "Days" refers to the number of days before the 1988 Presidential election, "Org." is the polling organization (Harris, Yankelovich, CBS/*New York Times*, ABC/*Washington Post*, *LA Times*, Associated Press/Media General, Roper, or Gallup), and "n" is the sample size, including undecided voters. For reference, the Democratic convention began at 114 days and ended at 111 days, and the Republican convention ran from 86 days to 82 days.

conservative, conservative, moderate-conservative; (2) moderate, others, no answer; (3) moderate-liberal, liberal, very liberal.

Income for the graphs with two-way groups is broken into four categories: less than $15,000, $10,000–$25,000, $20,000–$50,000, and more than $50,000. The categories overlap slightly because of discrete reporting.

NOTES

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1. Lewis-Beck (1985) and Lewis-Beck and Rice (1992) review many other statistical forecasting models. Lichtman and DeCell (1990) and Forsythe, Nelson, Neumann, and Wright (1991) present some nonstatistical approaches to forecasting presidential elections. Social scientists have been explaining and forecasting individual votes and aggregate election outcomes almost since the start of the discipline. The first quantitative article published in a political science journal (about political science) was on voting behavior (Ogburn and Goltra, 1919), and voting, particularly in presidential elections, has almost always remained a lively area of research.

2. In *Forecasting Presidential Elections* (1983:122), Rosenstone also reports sending letters on October 14, 1980, to twenty scholars with his forecasts of the November 1980 election.

3. See, for example, Budge and Farlie (1977); Tufte (1978); Fair (1978, 1982, 1988); Campbell (1992); Lewis-Beck and Rice (1992).

4. See Beck (1992, 1993); Greene (1993).

5. We presented these forecasts several weeks before the election in public lectures at Harvard University and the University of California, Berkeley, as well as in communications with several others.

6. Our extensive analyses, some of which are reported in this essay, indicate that one can safely merge the data from the different polling organizations in order to study trends in candidate support but not percent undecided or not responding.

7. We chose the 1988 election because it was the most recent when we began our analyses. We completed all but the final draft of this essay before the 1992 election.

8. These polls are a vast and relatively untapped data source for election studies. As the appendix describes, most of the surveys also include a number of useful explanatory variables. Although each poll does not always include the exact question we would prefer, these polls do contain a considerable amount of data—considerably more interviews from 1988 alone than the sum total of all the interviews from every presidential National Election Survey since 1952. See Asher (1988b) for a general review of polls and the public.

9. The survey question asked most often was, "If the 1988 Presidential election were being held today, would you vote for George Bush for President and Dan Quayle for Vice President, the Republican candidates, or for Michael Dukakis for President and Lloyd Bentsen for Vice-President, the Democratic candidates?" Analogous questions were asked in the other years. We confront potential problems of question wording further on in the essay.

10. For a similar argument, see Markus (1988).

11. See Franklin and Jackson (1983). We can distinguish between two kinds of fundamental variables: (1) characteristics of the voters and their situations, including their positions on issues, party identification, ideology, economic conditions, and so on; and (2) voter's perceived characteristics of the candidates, such as the candidates' ideology and positions on issues. There are also variables such as incumbency that modulate the effect of the second category of fundamental variable: If you run a stronger campaign, you are more likely to convey a positive message about yourself relative to the other candidate. Variables in the first category change very little over the campaign; variables in the second are directly influenced by the campaign.

12. Lesley Stahl, CBS News broadcast, July 22, 1988, during the Democratic convention; *Newsweek*, September 5, 1988; *Newsweek*, September 19, 1988.

13. The standard question wording is in Note 9 and the unusual question wording in this June poll is, "(George Bush is the Republican nominee for president and Michael Dukakis is the Democratic nominee.) Which (1988) presidential candidate will you definitely vote for in this year's election?"

14. These proportions are corrected for differences due to varying survey methodologies across the different survey organizations.

15. Other variables also give similar results. We show in the appendix that party identification and ideology are largely exogenous variables, not responding much to changes in voter preferences or anything else that changes during the campaign.

16. See, for example, Fair (1978) and updates.

17. The two models are also inconsistent with one another about the evidence they provide on who ran a better campaign in 1988. Contrary to the journalists' claims (and even Dukakis himself), most political science models showed Dukakis doing well or even better than expected, perhaps because Dukakis's vice-president selection was better (from an electoral perspective) than Bush's.

18. The appendix shows that party identification and ideology in the population are roughly constant during the campaign.

19. According to Condorcet's "jury theorem," if some voters have incomplete information, then, under certain conditions, a majority-rule electoral system will produce outcomes equivalent to the situation if all voters are informed. This is obviously relevant to our inquiry except that the assumptions required to prove this theorem are far too restrictive. Scholars have recently been quite successful at dropping some of these restrictive assumptions, so perhaps in the near future the two lines of research will converge. (See Miller, 1986; Ladha, 1992.)

20. Designing surveys so as to reduce this embarrassment, making it easy to report "no opinion," would not necessarily improve the forecasting ability of the polls, since those voters who express a "certain" opinion seem to mirror the survey population as a whole; see the discussion of question wording in the essay and Figure 11.2. A very useful future research project would be to design a survey or experiment to encourage voters to account rationally for their uncertainty (perhaps by giving them more time or financial incentives to give the "right" answer) and see if it makes a difference in their answer.

21. Some of the most important variables forecasters use do not change over the course of the campaign, such as incumbency status and some other national variables. That we have no information on these does not affect our inferences because they are effectively controlled by being held constant. The remaining variables that might have some effect include perceived economic well-being and perceived ideological distances between voters and candidates, both of which might change over the campaign.

22. We omit 1952–1960 from Figure 11.5 because Gallup did not list polls between the two conventions for those years.

23. Campbell, Cherry, and Wink (in press) also discuss poll movements during conventions.

24. A small amount of uncertainty is reduced by the conventions, but this could not account for the systematically predictable shifts in voter support in Figures 11.1 and 11.5.

25. We also tried the following analyses with all three-way interactions and obtained similar results except that the many groups with small numbers of voters increased sampling error and thus made the results much more variable and more difficult to interpret.

26. We have conducted extensive analyses, not presented here, searching for identifiable groups of respondents who become relatively more "informed" or "enlightened" as the campaign progresses. Even using education and many other variables, we have found no clear evidence for differences across groups in the speed with which they learn during the campaign.

27. Indeed, this concept should be useful for predicting changes in group support over the campaign. In general, groups that are more divided at the start of the campaign will move the most as the campaign progresses.

28. For an explanation of how this was derived, see the discussion of Figure 7 in the longer version of this essay in the *British Journal of Political Science*.

29. Each point on the lowess curve is calculated by weighted least squares, with the points in closest proximity on the horizontal axis given the highest weights. See Cleveland (1979); Becker, Chambers, and Wilks (1988).

30. In fact, we do have many additional survey questions aside from those we analyze, but these were not asked in as many polls. Thus far, our auxiliary studies of these questions do not suggest any changes in the conclusions presented in this essay.

31. See the discussion of Figures 8 and 9 in the longer version of this article in the *British Journal of Political Science*.

32. Of course, we have shown only that voters base their decisions on the variables that political scientists call "fundamental." However, these are not trivial variables from a normative perspective, such as the candidates' personalities or good looks; they are at least a good portion of the variables on which voters "should" base their decisions in order to fulfill general notions of democratic citizenship.

33. Reporting the polls does not seem to influence the outcome, since there is no evidence of a "halo effect"—the winner in the early polls does not inevitably win the election—although it may work strongly in primaries.