

DO THE POLLS AFFECT ELECTIONS?

Some 1980 Evidence

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This paper finds that the relatively favorable standing of Ronald Reagan in the preelection polls helped to generate a bandwagon effect in the 1980 presidential election. The models tested here suggest that this effect was most pronounced among voters who had the weakest prior political opinions and hence were most susceptible to suggestion through the media. While the bandwagon effect that is generated is modest, after controlling for an array of other political biases, it is substantial enough to warrant further attention as the dissemination of poll results becomes an increasingly attractive news "event."

How do we know what we know about politics? Aside from those who have access to high ranking public officials or other inside information, most people must rely upon the media. For a great majority of citizens this means network television for information about national or international events and local television and newspapers for coverage of events closer to home. Information about current events is more readily available than ever before, yet scholars and social commentators, some from within the media establishment itself, doubt whether we as a people are really any more knowledgeable. This seems quite apt as it pertains to elections.

The role of the media in influencing election outcomes was long thought to be minimal (see, for example, Berelson, Lazarsfeld, and McPhee, 1954). More and more, however, this role has come to be seen as increasingly pivotal as changes in technology and election rules promote a media oriented campaign. This has been especially true of the nomination process for presidential candidates where the focus of the television media has been on the horse race; that is, who is ahead at any given moment (Patterson, 1980; Polsby, 1983). In public opinion polls, the media have found a perfect vehicle to quantify and dramatize the horse race.

Polls have been around for quite some time. It is only recently, however, that they have proliferated as a news event (Broh, 1983; Stoval and

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Solomon, 1984). Table 1 shows the growth in the number of polls reported by the networks during presidential years. In an eight year period, including three presidential elections, the number of polls increased by slightly more than 100%. While a majority of these network poll stories are broadcast during the nomination process, the extension of horse race journalism to the postconvention period meant that in 1980, 75 poll stories were run between August 15 and election day (Broh, 1983).

Poll stories are qualitatively different from other news stories. They present the viewer with quantitative information about the preferences or judgments of one's peers. Often the presentation of this information takes place with minimal equivocation as the many possible sources of error go unreported save the usual statement about sampling variance (Sudman, 1983). Even when this caveat is reported, however, it is unclear what the public makes of it. By presenting poll stories, the network news organizations have found a way to make definitive statements about which candidate is ahead or moving up without having to make judgments. For it is not the news organizations' opinions that are being broadcast but rather those of the public.

The question arises as to whether the information presented in poll stories by the networks has any measurable impact on the voter. There is reason to believe that it should. Over 30 years ago, David Riesman (1950) pointed to the rise of the other-directed personality; that is, an individual who seeks behavioral cues from his peers. In a society dominated by such individuals, Riesman suggests that the mass media are an important means of defining socially acceptable and desirable behavior. More recently, Latane (1981) has developed a theory of "social impact." Briefly, Latane's work suggests that one's attitudes and behaviors will be influenced by the action of others. This effect will become more pronounced the larger the increase in the strength, immediacy, and number of people who are the source of the influence. A hypothesis that polls will effect voters is also subsumable, as is nearly everything, under a Downsian (Downs, 1957) framework of rational choice because using poll results as a vote cue is a means of further reducing information costs. In short, I am postulating that polls, *ceteris paribus*, help provide a bandwagon effect for the leading candidate.

TABLE 1. Growth in the Number of Poll Stories^a

	ABC	NBC	CBS	Total
1972	32	37	30	99
1976	41	47	59	147
1980	54	70	76	200

^a From Broh (1983).

What is the evidence thus far? It is rather scanty and mixed. Many media studies point to the positive effects that news stories or political advertising can have on agenda setting or candidate recognition (Behr and Iyengar, 1985; Iyengar, Peters, and Kinder, 1982; Erbring, Goldenberg, and Miller, 1980; Atkin and Heald, 1976). Also documented is the effect that the polls can have on the behavior of candidates and party leaders (Polsby and Wildalvsky, 1980) as well as the perceptions of elites of the effect of the polls on mass publics (Brudney, 1982). Direct tests of the hypothesis that a favorable position in the polls positively effects voters have also produced mixed results. Ceci and Kain (1982) find some negative impact, "oppositional reactivity," in a study of college students. Crane (1982) also finds little support for a bandwagon hypothesis using the 1980 National Election Study pre- and postelection surveys. Instead, she focuses on the importance of projection effects; that is, the tendency to interpret the polls according to one's prior attitudes. Neither of these studies, however, provide a definitive test. The problems with Ceci and Kain's sample aside, they do not control for other political differences among their groups. These differences may be sources of psychological projection. And while Crane does employ a rather extensive set of control variables, she does so in a bivariate context. This makes it impossible to assess the relative effects of many of the variables.

More recently, Marsh (1985) has found evidence that poll results will produce something of a bandwagon effect. She defines a bandwagon effect as "a situation when information about majority opinion itself causes some people to adopt the majority view for whatever reason." Marsh draws this conclusion from an experimental study focusing on the abortion question. She found that variation of information about poll trends had a strong and significant effect on a respondent's own views.

In the remainder of this paper I will attempt to estimate the effect of poll watching on electoral behavior using a multivariate approach with data from the 1980 American National Election Study's panel survey. The 1980 panel survey was conducted between January and November of that year. The original sample included about 900 respondents, though there was some attrition during the four waves (P1-P4) of interviewing. Interviewing and sampling were conducted by the Center of Political Studies at the University of Michigan.

METHODS

In order to assess the effect of polls on vote choice, one must be careful to select control variables to partial out projection effects. Otherwise the model will be misspecified and one will be left with a spurious relationship

(Bartels, 1985). Three variables seem important here: party identification, ideology, and personal preference for the candidate. Party identification is a five-point scale ranging from (1) strong democrat to (5) strong republican, personal preference is the difference between the respondent's feeling thermometer scores for Reagan and Carter, and ideology is approximated by using the CPS Defense Spending Scale and the Services and Spending Scale. Each of these final two are seven point scales. Both of these, no doubt, are not pure measures of ideology but also contain a component representing current issue concerns. For the purpose here, however, this is not only acceptable, it is desirable. Both of these issues were of major importance in the 1980 campaign and so could be a source of psychological projection as such. All of these variables are taken from the P1 (January) wave of the panel in order to make them as exogenous to the process as possible given the limitations of the data.

Poll effects are to be estimated by a dummy variable coded 1 if the respondent has been following the polls and 0 if not. Both this variable and an indicator of television news watching habits were taken from the P3 (early September) survey. The television news viewing variable was recoded as follows: (5) every evening, (4) three or four times per week, (3) once or twice per week, (2) less often, and (1) never. While this does not constitute a true interval scale, the closeness of the approximation to the interval level in addition to the ease of interpretation and savings in degrees of freedom seems to justify the recoding scheme. Besides, I am not really interested in estimating this coefficient for prediction but rather to partial out its effect so as to distinguish poll effects from any general media biases.

At this point, a slight digression seems in order to discuss the test variable—following the polls. Although asking someone whether or not they have been following the polls seems like a relatively unambiguous question, it is not. What counts as a poll? Of course there are the horse race polls in which the candidates are pitted against one another in a mock election, but there are others as well. Often the candidates are directly compared on their ability to solve problems or on some personal characteristic. And for the president there is the ever present approval rating question. This is a wide variety of potential stimuli. Tables 2–5 present some of the frequencies for various questions asked by the network polls in 1980. While the results of the horse race polls are close, especially in the case of the CBS/New York Times poll, Reagan's lead over Carter on most of the other measures is quite consistent and substantial. Hence we would expect a poll watcher, all other things being equal, to be more likely to favor Reagan over Carter.

TABLE 2. Postconvention Horse Race Polls^a

	<i>NBC-Associated Press</i>		
	Reagan	Carter	Anderson
Aug. 15-18	46%	38%	15%
Sep. 22-24	48%	38%	15%
Oct. 8-10	49%	40%	11%
Oct. 22-24	48%	41%	11%
	<i>ABC-Lou Harris Assoc.</i>		
Aug. 14-18	44%	38%	18%
Oct. 3-6	45%	41%	15%
Oct. 22-30	47%	42%	11%
Oct. 22-Nov. 2	48%	43%	9%
	<i>CBS-New York Times</i>		
Sep. 10-14	40%	44%	16%
Sep. 23-25	48%	42%	11%
Oct. 16-20	44%	46%	11%
Oct. 30-Nov. 1	46%	45%	8%

^a From *Public Opinion*, vol. 3, no. 6 (1980).

A PRELIMINARY TEST

If the bandwagon hypothesis about polls is true one would expect to see a greater effect on vote measured at P4 (actual vote) than at P3 (vote choice in September). Why? Simply because at the time of the P3 survey the conventions had only recently concluded. Hence the attention of the media did not really begin to focus on the race between Carter and Reagan until after Labor Day. One can test for this differential impact by estimating probit equations for vote choice at both P3 and P4 as functions of the control variables and the test variable (poll awareness). Probit is appropriate here since the dependent variable, vote, is measured as a dichotomy: 1 = Reagan, 0 = otherwise. While OLS will tend to yield similar results, probit

TABLE 3. Who Inspires More Confidence?

	<i>ABC/Lou Harris</i>		
	Reagan	Carter	Anderson
Sep. 22	47%	32%	19%
Oct. 3-6	47%	34%	15%
Oct. 14-16	46%	39%	12%
Oct. 22-26	46%	38%	13%

TABLE 4. Who Can Best Solve Economic Problems?

	NBC/Assoc. Press		
	Reagan	Carter	Anderson
Sep. 22-24	43%	19%	11%
Oct. 8-10	46%	18%	15%
Oct. 22-24	41%	22%	11%

is to be preferred since the estimates of the coefficients will be efficient; that is, there will be minimum variance in the standard errors (Pindyck and Rubinfeld, 1981). As I am interested in hypothesis testing, minimizing standard errors is important for the associated tests of significance. In general, the probit equations in this paper will take the general form of:

$$P(Vn) = f(B_0 + B_1(\text{Poll}) + B_2(\text{Party}) + B_3(\text{Therm}) + B_4(\text{Defense}) + B_5(\text{Social}) + B_6(\text{TVnews}) + u$$

where "Poll" is the dichotomous poll variable, "Party" is party identification, "Therm" is the difference in feeling thermometer scores between Reagan and Carter, "Defense" is the defense spending scale, "Social" is the services and spending scale, "TVnews" is how often the respondent watches the network news, and u is a normally distributed error term. The dependent variable, Vn , is vote choice, where the n indicates whether this is measured at the P3 or P4 survey.

Throughout the rest of this paper, using the general form of the probit equation given above, I am interested in testing the hypothesis:

$$H_o : B_1 \leq 0$$

$$H_a : B_1 > 0$$

TABLE 5. Leadership Question: CBS/New York Times, Oct. 16-20^a

	Percent Responding "Yes"	
	Reagan	Carter
Understands complicated problems	51%	70%
Offers a vision to lead country	67%	48%
Has clear position on issues	49%	41%
Is a strong leader	62%	32%

^a From *Public Opinion*, vol. 3, no. 6 (1980).

that is, whether the coefficient for the poll variable, B_1 , is statistically different from zero. When using probit, the ratio of the estimated coefficient to the estimated standard error approximates the normal distribution for a large sample so that t -tests can be applied to test hypotheses (Pindyck and Rubinfeld, 1981). Ratios of the coefficient to the standard error that are greater than or equal to 1.96 are significant at the .05 level, two tail, while ratios on the magnitude of 2.33 are significant at the .01 level for one tail significance (Pindyck and Rubinfeld, 1981).

Equations (1) and (2) show the estimated probit functions that serve to test the hypothesis that following the polls has an effect on vote choice in the postconvention period:

$$\begin{aligned}
 P(V3) = & f(-2.430 + .223(\text{Poll}_{t3}) + .423(\text{Party}_{t1}) + .021(\text{Therm}_{t1}) \\
 & \qquad \qquad \qquad (1.01) \qquad \qquad \qquad (4.87) \qquad \qquad \qquad (5.81) \\
 & + .159(\text{Defense}_{t1}) - .064(\text{Social}_{t1}) + .127(\text{TVnews}_{t3}) \\
 & \qquad \qquad \qquad (2.36) \qquad \qquad \qquad (-1.18) \qquad \qquad \qquad (1.64) \\
 & \text{d.f.} = 271 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (1)
 \end{aligned}$$

$$\begin{aligned}
 P(V4) = & f(-1.935 + .305(\text{Poll}_{t3}) + .509(\text{Party}_{t1}) + .022(\text{Therm}_{t1}) \\
 & \qquad \qquad \qquad (1.19) \qquad \qquad \qquad (4.97) \qquad \qquad \qquad (5.48) \\
 & + .205(\text{Defense}_{t1}) - .120(\text{Social}_{t1}) + .003(\text{TVnews}_{t3}) \\
 & \qquad \qquad \qquad (2.68) \qquad \qquad \qquad (-1.89) \qquad \qquad \qquad (0.48) \\
 & \text{d.f.} = 228 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (2)
 \end{aligned}$$

where all variables are as defined above, d.f. = degrees of freedom, the subscripts indicate the wave of the panel study from which the variable was drawn, and the numbers in parentheses are the ratios of the coefficients to the standard errors (interpreted as t -ratios).

These results provide little evidence for the hypothesis that poll watching was ultimately important in vote choice. In equation (1), all coefficients are significant at the .05 level except for the services and spending scale (Social), the network news variable, and the poll variable which does not begin to approach significance. Equation (2), however, does show somewhat different results. Here vote choice, this time on election day rather than in September, is not at all related to watching the network television news (nearly significant in the first equation) while, the poll coefficient, .305, begins to approach significance. This lends some credence to my earlier assertion that as the news coverage focused more and more on the race between Reagan and Carter, the polls used to dramatize this race would become an important vote cue. Unfortunately, we cannot reject the null hypothesis that $B_1 \leq 0$ at this time.

While it is important to distinguish poll effects from general media effects

by including indicators of both in the model, it is difficult theoretically to separate the two entirely. That is to say, it is quite possible that the effect of the polls is dependent upon the amount of stimulus received by the voter. This suggests an interaction of following the polls and the tendency to watch the network news may be a significant influence on vote choice (hence part of the reason for the earlier coding of TVN). This is tested in equation (3):

$$\begin{aligned}
 P(V4) = & f(-.717 - 1.35(\text{Poll}_{t3}) - .294(\text{TVnews}_{t3}) \\
 & \quad \quad \quad (-1.59) \quad \quad \quad (-1.54) \\
 & + .450(\text{Poll*TVnews}) + .526(\text{Party}_{t1}) + .026(\text{Therm}_{t1}) \\
 & \quad \quad \quad (2.02) \quad \quad \quad (5.06) \quad \quad \quad (5.60) \\
 & + .197(\text{Defense}_{t1}) - .114(\text{Social}_{t1}) \\
 & \quad \quad \quad (2.55) \quad \quad \quad (-1.79) \\
 \text{d.f.} = & 227
 \end{aligned} \tag{3}$$

where everything is defined as above except that Poll*TVnews represents an interaction between following the polls and the proclivity to watch the network news. This model presents significant evidence that polls will effect vote choice. Here the coefficient of the interaction variable, .450, is significant just beyond the .05 level for a two tail test. Hence we can reject the null hypothesis and conclude that, given the constraints of this model, an interaction of watching the evening news and paying attention to the polls contributed significantly to preferring Reagan over Carter in 1980. This same relationship is not true for only watching the network news and holds even after controlling for significant sources of prior biases such as party identification or personal preference. The negative coefficients for Poll and TVnews, the main effects variables, are produced by their collinearity with the interaction variable. Without the presence of the interaction term in equation (3), these variables produce positive but very insignificant coefficients (see equation 2).

This high degree of multicollinearity presents an estimation problem. When two variables such as Poll and Poll*TVnews are as highly correlated as they are in equation (3), it is not possible to interpret the coefficients in the usual manner; that is, the value of one is so dependent upon the value of the other that the idea of a "partial" slope coefficient becomes nearly meaningless. Unfortunately, this is often a problem when using interaction terms with nonexperimental data. In this case it seems the most prudent course of action would be to delete the variable Poll and replace it with a substitute that makes reasonable theoretical sense. This is done in equation (4) where the variable "Interest" has been substituted for "Poll." This new variable is a measure of the voter's interest in the presidential campaign as measured at the third wave of the panel. It is coded 0 if the respondent

expressed little or no interest in the campaign, 1 if he expressed some interest, and 2 if the respondent claimed to be very interested in the race between Carter and Reagan. In this way one can separate the effects of general media biases from poll effects since the tendency to watch the news is still included in the model while having increased confidence that the significance of the interaction term is not merely another manifestation of general political interest but really represents the proclivity to follow the polls:

$$\begin{aligned}
 P(V4) = & -2.47 + .133(\text{Poll} * \text{TVnews}_{t3}) - .100(\text{TVnews}_{t3}) \\
 & \qquad \qquad \qquad (1.79) \qquad \qquad \qquad (-0.79) \\
 & + .115(\text{Interest}_{t3}) + .504(\text{Party}_{t1}) + .022(\text{Therm}_{t1}) \\
 & \qquad \qquad \qquad (0.94) \qquad \qquad \qquad (4.78) \qquad \qquad \qquad (5.07) \\
 & + .153(\text{Defense}_{t1}) - .117(\text{Social}_{t1}) + e \\
 & \qquad \qquad \qquad (1.95) \qquad \qquad \qquad (-1.80) \\
 \text{d.f.} = & 211 \qquad \qquad \qquad (4)
 \end{aligned}$$

As one can see, this new specification has slightly diminished the significance of the interaction of watching the news and following the polls. The approximate *t*-ratio, which was 2.02 in equation (3), is now 1.79 in equation (4). Thus one may conclude with "only" about 93% confidence that the true coefficient of the interaction term is not equal to zero (the degree of confidence would be greater if one were to apply a one tail test that the coefficient is greater than 0). Still based on these data alone one could make a good argument for the case that the results of the television polls in 1980 helped to provide some impetus for Reagan's presidential bid.

A MORE DYNAMIC MODEL

It is quite likely that one might object to the model presented in equation (3) by arguing that using control variables measured at P1 to represent projection effects, the model in equation (3) misses important voting cues which become important as these variables evolve over the course of the ten month period between the first and fourth panel survey. Since I want to keep these long term attitudes out of the process as much as possible, I will leave them defined as is but add a new independent variable, vote intent at P3 (September), to the model presented in equation (4). The vote intent variable is a dummy variable coded as (1) if the respondent favored Reagan for president at the September interview and (0) otherwise. In this way, "Vote Intent" will serve as a sort of instrumental variable accounting for the sum total of candidate preference at time P3 while still allowing the model to assess the effects of the other long term political attitudes. It also allows

us to get around the problem of multidirectional causality if all variables were measured at P4. This is a very powerful control variable and provides a very stringent test of the effects of the interaction of polls and television news on vote choice.

It is also possible that the addition of this variable may produce a better specification of the theoretical process under consideration. By adding a measure of vote choice in September to equation (4), one may better isolate those voters who were undecided late in campaign and hence would be good candidates for persuasion through media polls. This new model is estimated in equation (5):

$$\begin{aligned}
 P(V4) = & -2.36 + .255(\text{Poll} * \text{TVnews}_{t3}) - .276(\text{TVnews}_{t3}) \\
 & \quad (2.33) \qquad \qquad \qquad (-1.58) \\
 & + .132(\text{Interest}_{t3}) + .475(\text{Party}_{t1}) + .015(\text{Therm}_{t1}) \\
 & \quad (0.73) \qquad \qquad \quad (2.86) \qquad \quad (2.56) \\
 & + 2.33(\text{Vote Intent}_{t3}) + .014(\text{Defense}_{t1}) - .094(\text{Social}_{t1}) + e \\
 & \quad (5.80) \qquad \qquad \quad (0.14) \qquad \quad (-1.01) \\
 \text{d.f.} = & 191 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (5)
 \end{aligned}$$

This model presents strong evidence that in 1980 the message of the polls transmitted through the media had an effect on the voters' choice of candidate. The coefficient for the interaction term, $\text{Poll} * \text{TVnews}$, is significant at approximately the .01 level for a two-tailed test. The variable most strongly related to actual vote is, of course, candidate preference (Vote Intent) in September. Also related to vote choice in this model are long term party identification (Party), and the difference is the original feeling thermometer scores (Therm). The two measures of ideology/issue preferences, Defense and Social , are in this model no longer significant.

Vote Intent in September is a very powerful control variable. Thus equation (5) presents a very stringent test of the hypothesis that poll results may have affected vote choice in the 1980 Presidential election. The fact that its introduction into the model strengthens rather than diminishes the effect of the interaction variable suggests that polls will have their greatest persuasive impact on undecided votes. Furthermore, by suggesting that the effect of poll reports is dependent upon the number of times that message is received on average, a mechanism for how bandwagon effects can be generated in a modern presidential campaign can be discerned. This mechanism seems highly plausible both in common sense terms and in terms of reference to the "social impact" theory of Latane. In a formal exposition of his work, Latane (1981) has suggested that the degree of impact, that is, the extent to which one is influenced by the actions of others, should be a multiplicative function of the strength, immediacy, and

the number of sources present. The significance of the interaction term employed in this study, $\text{Poll} * \text{TVnews}$, provides substantial support for this thesis. With immediacy of polls represented by a respondent's reported attention to them and the strength and number of sources approximated by one's proclivity to watch the network news, this study provides significant quasi-experimental evidence for the veracity of social impact.

While this paper has generally not been concerned with measures of goodness of fit, I believe that they are worth mentioning at this point. When equation (5) is run using OLS, this yields an R^2 of .74. Given the incongruency between OLS assumptions and the distribution of a dichotomous dependent variable, we can reasonably expect the R^2 for the probit equations would be even higher. This is a very high degree of association for survey based voting studies and further increases the theoretical confidence in the model as it seems unlikely that the model is misspecified due to possible omission of important independent variables.

Nonetheless, one may still have reservations about the final model's specification. Specifically one may be concerned that the tendency to follow the polls and to watch the network news is highly collinear with education. It may be possible that the significance of the interaction term is spurious. Since the conclusions rest upon survey results from one specific election, there may be important variables that are unique to it alone. For instance, one could argue that the Iran crisis was a unique determinant in the erosion of support for President Carter. To address these concerns, two variables were added to the final model, equation (5). These were level of education and one's degree of support for the President's handling of the hostage situation in Iran (measured, as were the other control variables, during the first wave of the panel study). Of the two, the only one that even approached significance was support for the President's Iranian policy with a coefficient to error ratio of 1.35 in the probit equation. More importantly, the introduction of these variables did not diminish in any way the significance of the interaction of following the polls and watching the network news (in fact it was strengthened, but to a minute degree).

THE SUBSTANTIVE IMPACT

One can conclude that in the 1980 presidential election Reagan's relatively favorable standing in the polls helped to contribute to his electoral margin of victory. But to what degree? The equations presented in this paper are of little help in answering this question since probit coefficients have no straightforward substantive interpretation. However, by estimating the probit equations for the full and reduced models (where the reduced model sets the coefficient of the variable of interest to zero),

transforming the fitted values of the dependent variable into probabilities, subtracting each full model probability from that of the reduced model and aggregating the differences, an average change in probability can be calculated. In this case, that number will represent the average change in the voters' tendency to vote for Reagan that is attributable to following the polls as modelled in this study.

Using this procedure one finds that the interaction of following the polls and watching the network television news, as specified in equation (5), increases the average probability of voting for Reagan by 9.2%. This is quite a sizable impact, given that the model controls for earlier candidate preference, party identification, feeling thermometer difference, some measure of ideology, and political interest. And although it is impossible to infer from this result to the actions of any individual voter, clearly in a situation such as a presidential election, the effect of the polls will have had a noticeable part in determining the final outcome. The probability of voting for Reagan increased by as much as 30% for a few of the voters in this sample: surely this cannot be discounted or taken lightly.

LIMITATIONS

Model specification entails more than just selection of variables. It also raises questions about how variables are measured and what are the appropriate statistical tools to test hypotheses once the variables have been selected. This study begs a question. I have used the term "projection" to refer to the tendency to interpret politics according to one's previously held beliefs and prejudices. This implies two-way simultaneous causation. Yet the statistical procedures used to test whether or not poll results can have an impact upon candidate choice are recursive (one-way). The basic reason for this is that although simultaneous nonrecursive modelling techniques are very appealing theoretically, statistically they are very stringent in their assumptions. Specifically, for each endogenous variable in the model one must be able to identify and measure at least one exogenous variable that is causally prior to each of the endogenous variables alone. To do this with survey data almost always means making some unwarranted assumptions. Therefore, some compromises had to be made.

Many of the control variables this study, except for vote intention in September, political interest, and media habits, were measured at the time of the first panel wave in January. In this way they are exogenous to the process explored here, the effect of polls on voting. However, this means incurring two research costs. The first is in terms of the size of the sample. The original sample size was around 900. As all nonvoters are excluded from the analysis and measurements were made across all four waves of the

panel, only about 200 respondents were left for estimating the final models. The second cost is in terms of the notion of statistical control. If all variables were measured at the last interview, there is no doubt that the significance of the control variables would be more pronounced. But this raises a question. Is this because they are acting as exogenous control variables or is it because they have themselves been influenced by poll effects or even the act of voting itself? Thus a compromise was made. The final model included as a control variable vote intention in September. This is the single most highly correlated variable with actual vote. Since the prior expectation was that the effects of polls would become most pronounced later in the campaign, use of this variable in these types of models can be justified as providing a very stringent test in terms of statistical control while remaining relatively exogenous from the process of final vote choice.

There is one final limitation to this study. All hypotheses have been tested and all results discussed in terms of the effect of network television polls on vote choice. This was again a constraint imposed by the data. I have no prior reason to suspect that newspaper polls or that polls broadcast by local television stations have no effect on a person's perceptions of the candidates. In fact, they probably do. Unfortunately, since the model produces significant results only when an interaction term is used, good measures should be available about the amount of each respondent's exposure to the various media. But at the time in the survey when the respondents were queried about whether or not they followed the polls, only level of exposure to the network news was available to be used as a viable interaction term. Hence the emphasis throughout the paper on network television polls.

CONCLUSIONS

The results of the foregoing analysis demonstrate rather convincingly that the widespread broadcasting of poll results by news organizations has an independent and positive effect on vote choice. That is, there is some bandwagon effect generated for the leading candidate. The results also suggest that this tendency is at least somewhat dependent upon the amount of stimuli received as evidenced by the high significance of the interaction variable (following the polls * number of evenings per week one watches the network news). This is consistent with the writings of Riesman (1950) about the effects of the media in mass society and very closely parallels the work of Latane on "social impact" theory.

This is not to say that the projection of prior political attitudes when interpreting the events of a political campaign is unimportant. The purpose here has not been to downplay the importance of projection effects, but

rather to show that even when significant sources of psychological projection are accounted for, there is still some independent effect attributable to polls. The reality of the situation is to some extent able to overcome psychological defenses to influence the voter. The evidence that the effect is dependent upon the amount of stimuli received and rather weak prior attitudes makes good, logical sense.

How generalizable are these results? The effect of polls is probably highly context specific. The independent effect of polls may become important only when a race is somewhat close, but not too close, since in this situation the stimuli available to the voter may be too ambiguous to matter. In a case where the candidates are too far apart, there may be too few undecided voters to be a significant influence. However, given the current distribution of partisanship in the U.S., the rise of the independent voter, and the proclivity of the networks to employ more and more polls as new events, the effect of polls on vote choice may become an increasingly important phenomenon. Advertisers have long appreciated the uses of polls and pseudo polls to help sell products. Broadcasting the opinions of others to the mass public may have a measurable impact on the democratic process. This raises several important ethical questions about the use of polls as news stories that are beyond the scope of the present inquiry.

Acknowledgments. I would like to thank C. Anthony Broh, Michael S. Lewis-Beck, and Arthur H. Miller for their help at various stages of this project.

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