

INFORMATION AND OPINION CHANGE ON BALLOT PROPOSITIONS

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This paper examines mobilization and conversion perspectives of opinion change during election campaigns. We demonstrate that opinion volatility during ballot proposition contests often reflects mobilization of awareness more than conversion of opinions. Furthermore, we find little support for the hypothesis that media spending affects opinions on the propositions examined here. An examination of other information sources suggests that many voters are able to use cues other than advertising when making decisions.

In this paper we examine the extent and sources of opinion change on ballot propositions. The paper is divided into two broad sections. The first section addresses the likely extent of opinion conversion on ballot propositions. We argue that differential rates of opinion mobilization within the electorate are an important factor in understanding aggregate level opinion change over the course of a campaign. The argument is tested with data from two propositions where opinion change was suggested to take place. The second section examines differences between groups of the electorate regarding the use of campaign information. We establish that different voters rely upon different sources of information to form opinions. This, in turn, affects the likely impact of money in ballot proposition contests.

We begin by placing the issue of opinion change on ballot propositions within the wider context of voter volatility.

VOTER VOLATILITY

Questions about voter volatility tap issues of normative democratic theory since a democratic system is predicated on the assumption that some

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individuals have changeable opinions (Granberg and Holmberg, 1990). Thus, individual change (be it in opinions, turnout and/or voting) has been studied between elections across time (Key 1959; Campbell et al., 1960) as well as within elections across time (Lazersfeld et al., 1945; Converse, 1962; Tedin and Murray, 1981; Zaller, 1989; Bowler et al., 1992).

In general these studies have sought to identify "switchers," those voters who change party identification over time or switch vote intentions during the course of a campaign. Converse (1962) found that opinions of the most and least attentive voters were more stable over a campaign, since they are least likely to be affected by new political information. The former group is more partisan, and thus less susceptible to conversion, and the latter group is less likely to receive information that might convert opinion. Voters with intermediate levels of interest thus should be more likely to be affected by campaign information (Converse, 1962).

Other studies identify an inverse, linear relationship between political sophistication and volatility. Berelson (1952) found irony in the fact that most "switchers" were not ideal, attentive democratic citizens. Switchers are typically described as those voters most ill-informed and least interested in political issues (Berelson et al., 1954; Dreyer, 1971).

Most of this research has emphasized voter volatility in national contests, particularly American presidential general elections. In a typical presidential election, 80% of voters have decided on their candidate choice 30 days prior to the election (Tedin and Murray, 1981). A small body of work documents opinion change in lower-level elections and primaries, suggesting that opinions are far more volatile in these contests (Bartels, 1988; Tedin and Murray, 1981; Jacobson, 1975). These works suggest that lower salience races tend to exhibit greater instability of opinions. Tedin and Murray's (1981) panel study of the 1978 Texas elections found that only 53% of voters had stable candidate preferences for Attorney General, and only 50% had stable preferences for Governor.

Although limited attention has been given to opinion volatility in state races, less attention has been directed at opinion change in ballot proposition contests. In comparing candidate contests to referenda contests, Magleby concluded that "voters on propositions are less sure of their voting intentions, less knowledgeable about proposition contests, and probably more susceptible to campaign appeals" (1989, p. 110-111).

Neither party label nor incumbency are relevant cues in direct democracy contests. Scholars have therefore suggested that such contests are particularly ripe for opinion conversion on a fairly large scale. Many voters have little information about these issues and opinions they have about issues can be rather soft. Thus, voters in favor of a proposition at an early stage of a campaign might be converted by campaign information into ac-

cepting the "no" position at the campaign's conclusion. This effect is expected to be most pronounced on issues where voters have no "standing" opinions. Thus, campaigns that disseminate information about propositions have been given credit for producing "opinion reversals" that defeat propositions (Magleby, 1989). Others note that opinion conversion should be evident when large sums of money are spent on electronic media purchases against ballot measures. Studies of high-expenditure issue contests often describe opinion reversals attributed to the effects of spending by the propositions' opponents (Shockley, 1980; Zisk, 1987; Cronin, 1989).

Much of this literature might be characterized as having a view of opinion change that is not rigorously defined. In narrow terms we can define opinions as whether voters are either for or against a given proposition. One view of opinion change sees voters as having some sort of underlying policy preferences that relate to the specific proposition at hand. If voters have policy preferences but are uncertain about how the propositions act as a means of achieving policy goals, then campaigns can be seen as mobilizing opinion by supplying information about policy. For example, some voters in the November 1993 campaigns over California's Prop 174 (school vouchers) could have had general preferences favoring the use of state funds to increase the number of schools that parents and students might select from, yet were uncertain about specific details of the proposition. As the campaign progressed and the voters information set became more complete, uncertain voucher supporters might become aware of the actual policy in the proposition and thus form concrete opinions later in the campaign. This explanation of opinion change is similar to Gelman and King's (1993:431) model of rational actors working with incomplete information.¹ Mobilization of opinion would then reflect a process where uncertain individuals gradually form stable opinions on propositions that are consistent with their underlying preferences.

Another view of opinion change is based on the idea that voters have no firm policy preferences and that volatility and uncertainty dominate direct democracy. Here, voters might be willing to offer opinions about propositions at any stage of the campaign, however, these opinions would not be based on underlying policy preferences. Campaigns could then have a great ability to sway and convert voters. Weakly held (or undefined) opinions might be converted from yes to no on a proposition (or *vice versa*), depending upon how malleable preferences are. This alternative view is more analogous to social-psychological models of voting, yet here, voters do not have party identification to structure uncertain decisions.

Empirical demonstrations of opinion reversals in proposition contests typically rely on mapping shifts in aggregate opinions over time. Such evidence, however, does not necessarily mean that voter preferences are in-

herently malleable, nor does it mean that opinions at an individual level are switching from support to opposition. If mobilization effects dominate campaigns, individual voters need not reverse their positions on propositions for aggregate electorates to display large-scale shifts in opinion. This is the case particularly if opinions of different voters are mobilized at different times, or by different types of information.

An explanation of opinion volatility that we favor draws from models of opinion change that assume many voters have underlying policy preferences. From this perspective, the mobilization of opinions associated with the campaign is a crucial factor for understanding the dynamics of proposition contests. Aggregate shifts in opinion can be produced either by individual opinion switching (conversion), by individuals forming firm opinions at different times (mobilization), or by both processes. If the dynamic process of opinion formation is dominated at the individual level by campaign information reducing uncertainty and mobilizing opinions around underlying preferences, opinion "change" should reflect changes from relative uncertainty ("don't know" opinions) to a preference for or against a proposition. Moreover, once formed, these opinions might not undergo any further change. Selective information search or the propensity for voters to act as cognitive misers can lead to rigidity in voters' positions on the propositions once they are formed.

A number of consequences follow from this distinction between conversion and mobilization. It suggests we look at the mobilizing aspects of campaigns and their impact upon issue awareness and opinions, rather assuming that aggregate shifts represent conversion effects. Furthermore, if it is true that campaigning does not reverse opinions once they form—an argument we have yet to demonstrate—then more specific questions follow. For example, how do voters arrive at opinions in the first place? What aspects of the campaign are most influential in providing information and opinions? It is conceivable that the answer to these questions vary across subgroups in the electorate. That is, voters might not respond homogeneously to the same campaign cues; some voters might be more responsive to some cues than others.

The distinct context of choice presented by direct democracy should also be considered. In candidate elections voters might not know much about a candidate, however they are generally likely to know ahead of time quite a lot about the nature of the choice itself. They are likely to know something about the office that is being contested and something about the rival parties. In proposition elections voters have to learn what policy issue the decision is associated with prior to figuring out which side of the issue they are on. Is it possible for voters to find cues which help shortcut or reduce such difficulties? Furthermore, once voters invest resources into figuring

out the nature of an issue and then decide upon an opinion on the issue, how likely are they to consider additional information that might convert that opinion? We assume that the proposition decision context is one of low information. Many voters simply have little pre-conceived information about specific propositions, and thus are not expected to be in a position to have established opinions converted. Tests of these expectations are offered below.

CHANGE IN INDIVIDUAL OPINIONS ON BALLOT PROPOSITIONS

We begin by focusing on two California proposition contests²; contests that have been identified in the literature as displaying conversion sufficient to produce “opinion reversals.” Previous research employed survey data to illustrate that in each contest as individuals changed voting intentions during the campaign, the side that had been ahead in the polls eventually lost (Magleby, 1989, p. 110). The first issue, Proposition 40 of 1984, involved the regulation of campaign spending. Over \$1.4 million was spent in the Prop. 40 campaign. The second measure, Proposition 61 of 1986, dealt with limiting the salaries of public officials. Nearly \$8 million dollars were spent during the Prop. 61 campaign, most all aimed at defeating the measure.

The Field Research Corporation conducted three (cross-sectional) surveys during each campaign. Table 1 illustrates changes in reported opinions through each wave of the surveys. Magleby identified that early polls indicated the “yes” position was ahead for each issue. In the Field/Califor-

TABLE 1. Opinions and Awareness of Ballot Propositions: California Propositions 40 (1984) and 61 (1986)

Opinions:	Vote intentions Prop. 40?			Vote intentions Prop. 61?			
	Yes	No	No op.	Yes	No	No op.	
Early Sept.	16% (168)	5 (53)	78 (800)	Early Aug.	21 (162)	16 (122)	62 (463)
Early Oct.	11 (111)	8 (86)	81 (825)	Early Oct.	9 (65)	24 (178)	67 (500)
Late Oct.	10 (105)	19 (195)	71 (722)	Late Oct.	17 (119)	42 (298)	40 (284)
Election result	35	65	—	Election result	34	66	—

Note: Cell entries are percentages. Number of respondents in parentheses. The no opinion category included respondents who have heard of the measure yet are undecided, and respondents who have not heard of the measure prior to the interviewer’s phone call.

Source: Various California Polls, 1984 and 1986.

nia Polls, voters reporting they had not heard of a proposition were asked follow-up questions after being given brief explanations of the measures. Responses to the follow-up questions (Magleby, 1989, p. 108) suggest that 59% of respondents supported Prop. 40 in early September of 1984, and that a 49% plurality favored Prop. 61 in August of 1986. A minority of respondents were opposed to each measure or were undecided.

In Table 1 we report the percentages of respondents claiming to have had opinions on these propositions *prior* to receiving the explanation from the telephone interviewer. Table 1 also accounts for respondents having no awareness/no opinion of the propositions by including them in the no opinion category. These results are consistent with our expectations. At the early stage of the campaigns, few voters have enough information to form an opinion without prompting by the interviewer. Most have not heard of the issues prior to the interviewer's call. Thus, there is little solid opinion that a campaign might convert.³ Even in the latest stage of the campaigns, a plurality of voters have no opinion on one of the issues.⁴ Analyses that rely on responses where questions prompt subjects with explanations of a measure thus might exaggerate the strength of the respondents opinion and the potential for conversion.

We assume that voters need to have at least heard about a ballot measure for them to have a tangible, measurable opinion. Specific opinions cannot exist, nor could they be converted, if the voter is unaware of the measure. We expect that voters become aware of propositions as the election approaches and relevant information becomes available. Moreover, we expect that awareness (and thus the capacity to have an opinion) will be greater among those who have the easiest time processing and obtaining information.

Lacking a better indicator of political information-processing abilities, we compare issue awareness by respondent's level of education. Highly educated voters are expected to access and utilize more information sources since the costs of doing so are lower for them (Sniderman et al., 1991, p. 170). Having more information, they should be more likely to be aware of issues.

Table 2 illustrates that awareness of these propositions increased as the election approached. Furthermore, awareness increases monotonically with education. The highly educated (college graduates and above) are more likely to claim to have heard of the propositions than the least educated (high school grads and below). Although awareness increases until the weekend prior to the election, the highly educated are still significantly more likely to be aware of the propositions before entering the voting booth. Furthermore, a substantial proportion of the electorate have yet to hear about the issues by the final weekend of the campaign. This further

TABLE 2. Awareness of Propositions by Education

Awareness: Heard of Prop. 40?					Heard of Pro. 61?				
Early Sept.					Early Aug.				
	Level of education			N		Level of education			N
	Lo	Med	Hi			Lo	Med	Hi	
Yes	24%	29	32	(295)	Yes	31	40	52	(319)
No	76	71	67	(726)	No	68	59	47	(428)
Total cases: (1021)					Total cases: (747)				
$\chi^2 = 5.11, p < .08$					$\chi^2 = 20.1, p < .001$				
Early Oct.					Early Oct.				
	Level of education			N		Level of education			N
	Lo	Med	Hi			Lo	Med	Hi	
Yes	25	24	36	(278)	Yes	46	54	66	(367)
No	75	76	64	(744)	No	53	45	33	(291)
Total cases: (1022)					Total cases: (658)				
$\chi^2 = 14.13, p < .001$					$\chi^2 = 16.09, p < .001$				
Late Oct.					Late Oct.				
	Level of education			N		Level of education			N
	Lo	Med	Hi			Lo	Med	Hi	
Yes	43	51	51	(494)	Yes	70	79	84	(544)
No	57	49	48	(528)	No	30	21	15	(157)
Total cases: (1022)					Total cases: (701)				
$\chi^2 = 6.23, p < .05$					$\chi^2 = 12.02, p < .003$				

Note: Cell entries are percentages. Number of respondents in parentheses.
Source: California Polls, 1984 and 1986.

suggests that opinion volatility might not be a product of conversion, but the late mobilization of opinions of uncertain voters.

Panel data are, of course, the only way of saying for sure if individual opinions change or not. Lacking panel data, we use the Field/California Poll cross-sections and isolate several distinct demographic groups so that opinion change within these groups might be examined. We focus on changes in opinions about Prop. 61 of 1986, in part, because the Field organization also conducted a rare exit poll that year (also see note 3). This provides four time-points for analysis. We also isolate this proposition because a large amount of money was spent aimed at its defeat, thus making the issue more visible than most ballot propositions. If the campaign were converting voters from “yes” to “no” positions, we should see movement across these isolated demographic categories. Table 3 illustrates that little

TABLE 3. Change in Support for Proposition 61 Across Demographic Groups (August 2 Through Election Day)

		Survey date			
		Aug. 2	Oct. 6	Oct. 30	Exit poll
Union, Demo. Household	Yes	10	12	12	n/a
	No	19	38	59	
	No op.	71 (91)	50 (60)	29 (49)	
White women, Demo., age <45	Yes	11	5	15	28
	No	8	21	54	65
	No op.	81 (62)	74 (42)	32 (41)	7 (115)
White men, hi income, GOP conserv.	Yes	32	13	29	40
	No	25	26	64	58
	No op.	42 (43)	61 (23)	7 (28)	2 (62)
Black voters	Yes	17	16	18	36
	No	20	26	42	61
	No op.	63 (40)	58 (31)	39 (38)	3 (69)
GOP college graduates	Yes	29	14	29	43
	No	23	43	57	56
	No op.	48 (101)	43 (63)	14 (51)	1 (155)
All respondents	Yes	21	9	17	38
	No	16	24	42	58
	No op.	62 (747)	67 (658)	40 (701)	3 (1035)

Note: Cell entries are percentages. Number of respondents in parentheses.

Source: California Polls, 1986.

change from “yes” to “no” is evident, even when distinct demographic groups are isolated and tracked across time. The number of respondents in both the “yes” and “no” categories tends to grow as the number of “undecided” declines. If individual-level movement can be inferred from these data, it appears that volatility is the result of voters switching from “no opinion” to “no.” If such opinion change were to be attributed to the anti-Proposition 61 campaign effort, this would suggest that the campaign was mobilizing undecided/uncertain voters, rather than converting supporters of the measure.

Results presented thus far are consistent with our expectations about what opinion change would look like if campaigns mobilize voters’ opinions around their general underlying preferences. Few voters are aware of these

propositions early on and those aware of an issue appear relatively stable in their opinions once opinions are formed. Furthermore, voters facing the lowest costs of obtaining information about propositions tend to be the least uncertain/unaware of the propositions. The campaign thus might involve a dynamic process where the more educated voters utilize more information sources, become aware of specific details of propositions earlier, and develop fairly firm opinions earlier in the campaign. Conversely, less educated, more uncertain segments of the electorate might enter the final days of a campaign having utilized fewer (or different) information sources and thus have fewer established opinions about ballot issues.

INFORMATION AND INFORMATION SOURCES

This discussion of opinion volatility suggests that some differences in awareness and the timing of opinion formation may well be due to the type and amount of information that voters have access to. The highly educated become aware of these issues earlier perhaps because they utilize more information sources or because they simply use different information sources. They might, for example, utilize "hard" (objective, non-campaign, print) information sources that are available prior to the last weekend of the campaign. Hard sources might include newspaper editorials and the public ballot pamphlet. Less educated voters, on the other hand, might utilize fewer information sources and come to rely upon "easy" sources accessible at the close of a campaign. Easy sources might include TV advertising, TV editorials, and conversations with friends.

In late October of 1990, at the close of the state election campaign, the Field/California Poll asked respondents an open-ended question, "what information do you usually turn to help you make up your mind on how to vote on various statewide ballot propositions?" The poll recorded the nine sources mentioned most frequently. Most popular was the published ballot statements issued by the California Secretary of State's office.⁵ In Table 4, we examine the utilization of "hard" and "easy" information sources by voters having different levels of education. As expected, college graduates are significantly more likely than the less educated to use information from the ballot pamphlet. Furthermore, the well educated are more likely to use information from newspaper editorials as information.

Contrary to our expectations, utilization of "easy" broadcast information and direct information from campaign sources appears to occur independent of education. Less educated voters are only slightly more likely to acknowledge using TV ads as a source of information (Table 4, part C). Utilization of radio ads, direct mail, and newspaper ads occur at the same rates for each level of education (results not reported here). The least edu-

**TABLE 4. Differences in Utilization of Information Sources
(California Voters: October 30, 1990)**

	Level of education			Total	N
	Lo	Med	Hi		
A. Use ballot pamphlet as source					
Yes	50	51	62	54	(646)
No	50	49	38	45	(543)
$\chi^2 = 11.43, p < .004$					
B. Use newspaper editorials as source					
Yes	36	48	57	47	(565)
No	64	51	43	53	(624)
$\chi^2 = 31.30, p < .0001$					
C. Use T.V. ads as source					
Yes	23	21	18	21	(246)
No	77	79	82	79	(943)
$\chi^2 = 2.57, p < .28$					
D. Use friends and neighbors as source					
Yes	25	22	17	22	(259)
No	75	78	83	78	(930)
$\chi^2 = 6.51, p < .04$					

Source: California Poll, October 30, 1990.

cated, however, are significantly more likely to rely upon friends and neighbors as a source of information about ballot propositions. The least educated are also likely to mention that they use fewer sources of information (an average of 2.1 sources) than the highly educated (an average of 2.4 sources; *t*-test for difference between group means = 2.48, *p* < .01).

The analysis thus far suggests a causal process. Voters need information to be aware of propositions, and they need to be aware of propositions in order to have opinions. Put differently, information mobilizes awareness, which is a prerequisite for opinion. The quality and quantity of information a voter has access to has been shown here to be a function of education. The likelihood of being aware of a proposition has also been shown to be a function of education. We use two-stage, hierarchical models to test hypotheses about the nature of the causal process presented thus far. First, we test if education structures the propensity to utilize more information sources when other factors (age, gender, race, and strength of partisanship, and income) are controlled. Second, we test if information-use affects awareness of propositions. Finally, we test if the propensity to have opinions on propositions is associated with the systematic component of awareness associated with information use.

Table 5 presents the results of these equations. Equations are estimated

TABLE 5. Information Sources as a Determinant of Awareness and Opinions on Ballot Propositions (California, October 30, 1990)

Independent variables	Dependent variables		
	Equation 1: Sources of information	Equation 2: Awareness of propositions	Equation 3: Opinions on propositions
Education	.047** (.021)	—	—
Sources of information ^a	—	2.10** (.537)	—
Awareness of propositions ^b	—	—	.946** (.256)
Age	.002 (.002)	.005 (.003)	-.005 (.004)
Woman	.085 (.081)	-.522** (.105)	-.123 (.131)
Anglo	.253** (.099)	.048 (.187)	.040 (.124)
Strong party	-.028 (.083)	.183* (.105)	.089 (.102)
Income	.044 (.041)	-.045 (.060)	-.006 (.054)
Constant	1.83** (.199)	-1.42 (1.11)	-0.23 (.759)
<i>R</i> ²	.02	.04	.04
<i>F</i>	3.37	8.72	8.02
Signif <i>F</i>	.002	.000	.000

Note: 1101 respondents were asked if they used any of nine information sources, if they were aware of any of six propositions from the November ballot, and if they had opinions on any of those six propositions. Unstandardized regression estimates shown. Standard errors in parentheses. Age is measured in years. Income is measured in four categories (1 lo, 4 high). Education is measured in nine categories. Other variables are dummies where 1 = the characteristic listed.

^aInstrumental variable predicted from Eq. 1.

^bInstrumental variable predicted from Eq. 2.

*Significant at $p < .10$.

**Significant at $p < .05$.

Source: California Poll, October 30, 1990.

with data from the October 1990 poll, expressing the causal relationship discussed above. In these equations, "Sources of Information" is an additive index of the number of information sources the respondent utilizes when deciding about ballot issues. "Awareness" is an additive index reflecting the number of propositions the respondent was aware of when questioned the weekend prior to the election and "Opinions" is the number of those ballot measures the respondent held an opinion on that same weekend.

In order to produce relatively unbiased estimates of the process, we use instrumental variables predicted from lower-order equations to represent variables that are exogenous at one stage of the model but endogenous at another (Hanushek and Jackson, 1977). For example, "Opinions" is estimated in a multi-stage process using as an independent variable an instrument predicted from the lower order equation estimating "Awareness." Results indicate that education has a significant effect upon the propensity to use information (Eq. 1), and that use of more information sources is associated with greater awareness of propositions (Eq. 2). Furthermore, awareness associated with information usage is shown to structure the propensity to have opinions (Eq. 3). Awareness, not surprisingly, is thus a primary determinant of opinions. These models suggest that education and the use of information have indirect effects upon the propensity to form opinions, an effect that is channeled through increased awareness of specific ballot propositions.

THE IMPACT OF CAMPAIGNS AND SPENDING

We have demonstrated that information mobilizes awareness of propositions and ultimately affects an individual's propensity to hold opinions on propositions. We have also shown that different voters use different sources of information. We now turn our attention to the effects of one particular type of information: campaign media spending. Explanations of opinion volatility based on conversion stress the role of paid campaign advertising. Campaigns designed to promote or defeat a ballot measure often disseminate information. Since party loyalties and incumbency are generally held not to be relevant for voting on ballot propositions, voters must rely on other means to guide their choice. One likely alternative is that choice might be guided by information provided through campaign activity in general, and paid advertising in particular.

Existing aggregate level results show that there are, indeed, effects upon turnout, roll-off and outcome that are due to spending (Hadwiger, 1992). The more that is spent on a given proposition the more people vote on it, and the more that is spent opposing a proposition (relative to the total spent) the larger the "No" vote. While statistically significant, neither effect can be said to be overwhelming. Bowler, Donovan, and Happ (1992), for instance, report figures which suggest that each \$100,000 in spending contesting a proposition reduces roll-off by around 0.02%. The California Commission on Campaign Financing reports partial correlations between expenditures and proposition vote results of around 0.3–0.4 (Democracy by Initiative, 1992, Table G.4). These correlations generally suggest that spending to oppose a proposition has more of an impact than spending in favor of one. The literature to date, then, does show some relationship

between generic measures of total campaign expenditure and aggregate outcomes on propositions. Even so, these effects do not seem overwhelmingly large—especially given an expectation grounded in the literature to date.

One way to broaden our understanding of the general impact of money in proposition elections is to examine expenditure on electronic media in specific contests. The examination of spending on one set of ballot propositions presented below reveals a fairly complicated process where media spending might be seen as having a relatively muddled impact on opinions on ballot issues at an aggregate level. The hypothesis of this section of the paper is well known and intuitively sensible—that media expenditure for (against) a given proposition should increase (decrease) support for that proposition.

We present evidence from a series of different tests of this hypothesis using various levels of analysis. In proceeding through the levels of analysis we demonstrate the difficulty of establishing a relationship between spending and outcome at the individual level—a null finding that we subsequently argue is of substantive importance to questions of opinion conversion and mobilization. In short, the fact that it proves relatively hard to find evidence of a process that the literature suggests should be strong provides the springboard for a subsequent question about alternative sources of information that might affect opinion formation.

MEDIA SPENDING AND OPINION ON BALLOT PROPOSITIONS

One way of addressing the impacts of media spending upon individual opinion over ballot propositions is to examine one election in particular where money might have been expected to matter. Several propositions from the 1988 California election present an opportunity since so much money was spent by campaign organizations. Tens of millions were spent contesting a cigarette tax and insurance regulation issues in 1988. Given the volume of media expenditure, one might expect to see fairly substantial effects of advertising. Data is also available detailing the location of electronic advertising aired during this election. In 1988 the California Fair Political Practices Commission reported on money spent by the various campaigns to purchase air time on individual TV and radio stations. These data provide at least some means of examining variation in opinions in response to spending across California's 12 different media markets. Media markets embrace, with only one or two exceptions, whole counties. This allows us to merge spending data on to California Poll data from November 1st of that year (Broadcasting Yearbook, 1988; California Yearbook, 1988). The California Poll records each respondent's county of residence, allowing us to determine the amount of paid advertising existing in each respondent's home area. Thus, we can test if respondents residing in the context of heavy electronic media ad-

vertising are more aware of issues or hold different opinions than respondents residing in low-advertising contexts (for a similar approach in candidate contests, see Stewart and Reynolds, 1990). Evidence of advertising effects would be consistent with the opinion conversion thesis.

We use LOGIT to estimate the relationship between media spending and individual-level awareness/opinions, with additional variables included as controls (see Appendix for coding). Our effort reveals little support for the idea that variation in expenditure across markets had an impact on issue awareness or opinions. If we examine the likely impact of media market expenditure on whether or not someone is aware of a proposition, or we look at spending as a determinant of opinions on propositions, we see little evidence of spending effects in these data. These negative findings are reported in Tables 6 and 7.

TABLE 6. Awareness of Propositions and Media Spending (LOGIT Estimates)^a

	Proposition				
	100	101	103	104	106
Constant	-1.16	-1.3	-0.71	-1.4	-2.5
Union	0.38 (.24)	0.37 (.28)	0.74** (.26)	-0.33 (.25)	0.02 (.33)
Latino	0.26 (.29)	0.33 (.30)	-0.23 (.29)	0.04 (.30)	-0.22 (.41)
Anglo	0.42** (.20)	0.47** (.22)	0.15 (.20)	0.59** (.21)	0.04 (.27)
Education	0.37** (.07)	0.22** (.07)	0.30** (.07)	0.37** (.07)	0.34** (.10)
Media spending	-0.07 (.008)	-0.04 (.008)	-0.039* (.02)	0.005 (.007)	0.02 (.20)
Income	0.0002 (.003)	0.0002 (.003)	-0.002 (.34)	0.001 (.003)	-0.0009 (.004)
Age	0.0039 (.0003)	-0.002 (.003)	-0.71** (.30)	0.002 (.002)	0.005 (.0049)
-211	1515	1478	1499	1522	1013
Number of cases	1123	1123	1123	1123	1123

Note: Figures in parentheses are standard errors. Cell entries are logit MLE coefficients. Parameters for spending have been multiplied by 100,000. Age, income, and education are measures as in Table 5. Other variables are dummies where 1 = the listed characteristic.

^aDependent variables: 1 = having heard of (named proposition), 0 = not heard of.

*Significant at $p < .10$.

**Significant at $p < .05$.

Source: California Poll, November 1988. Spending data reported by the California Fair Political Practices Commission, 1988.

TABLE 7. Opinions on Propositions and Media Spending (LOGIT Estimates)^a

	Proposition				
	78	98	99	100	104
Constant	0.54	0.49	-0.25	1.54	-0.10
Union	-0.11 (.37)	-0.01 (.25)	0.01 (.25)	-0.35 (.30)	-0.60 (.44)
Latino	0.34 (.45)	0.42 (.29)	0.05 (.29)	-0.20 (.41)	0.08 (.43)
Anglo	-0.32 (.31)	0.05 (.21)	-0.15 (.21)	-0.55* (.31)	-0.03 (.33)
Education	-0.02** (.005)	-0.01** (.003)	-0.005 (.003)	-0.01** (.005)	-0.003 (.005)
Spending (pro-con)	1.01 (1.0)	1.96 (8.1)	0.07 (.08)	0.02 (.13)	0.02 (.20)
Income	-0.004 (.004)	-0.0038 (.003)	0.0002 (.003)	-0.005 (.005)	-0.0009 (.004)
Age	0.49** (.11)	0.18** (.07)	0.44** (.07)	-0.18* (.11)	-0.20* (.11)
Conservative	-0.16* (.08)	-0.21** (.05)	-0.07 (.05)	-0.23** (.09)	-0.03 (.09)
-211	743	1009	1036	732	686
Number of cases	584	743	743	560	560

Note: Figures in parentheses are standard errors. Cell entries are logit MLE coefficients. Parameters for spending have been multiplied by 100,000. The *N* varies due to variation in sample size for different questions in the California Poll. Age, income, and education are measured as in Table 5. Other variables are dummies where 1= the listed characteristic.

^aDependent variables: 1= intending to vote for (named proposition), 0=voting against/DK.

*Significant at $p < .10$.

**Significant at $p < .05$.

Source: California Poll, November 1988. Spending data reported by the California Fair Political Practices Commission, 1988.

Table 6 reports estimates of awareness of several insurance propositions with measures of electronic media expenditure in the market of each respondent. Table 7 reports estimates of favorable opinions on two of these insurance propositions (100 and 104), a cigarette tax proposition (99), a school funding proposition (98), and a school facilities bond act (78).⁶ In Table 7, spending is measured as the difference between expenditure in favor and expenditure against each proposition. This reflects the relative advantage that favorable spending might have in a given area.

In Table 6 education overwhelmingly determines if a voter is aware of each proposition and coefficients for spending are insignificant or in the wrong direction. In Table 7 ideology has an impact on opinions about most

propositions, not the relative advantage of local campaign spending on behalf of the measure. One striking thing about these data is that over a variety of ballot measures where different amounts of money were spent, electronic media expenditure does not appear to affect awareness or opinion. Per capita measures of expenditure within each market also produce null results when used to estimate awareness and opinions (results not reported here).

Taken together these results do not suggest any great impact for media spending, at least at an individual level. Indeed they suggest there is no impact, thus the conversion via spending hypothesis has not been supported. This seems to be at odds with what results from other types of elections and aggregate level data tell us. One problem lies in the data. Around 75% of the respondents in these surveys come from one of three media markets (LA, San Diego, and the SF Bay Area). This provides limited variance in the central independent variable.

One potential way around this problem of limited variation in the independent variable is to examine the relationship between aggregate county vote results and local media spending. Table 8 lists the correlations between votes and media spending for and against these propositions. Measured this way, we do find some limited (and counter-intuitive) results related to the effects of media spending. For most of these propositions, there is a positive correlation between county vote in favor and local spending in favor. For one proposition, however, there is an inverse relationship between "yes" expenditure and vote (Prop. 106). For two of the proposi-

TABLE 8. Correlations for Local Media Spending and County Vote Share^a

VOTE on	Spending in favor	Spending against	Collinearity ^b	Spending differential ^c (for-against)
Prop 78	.37*	n/a	n/a	n/a
Prop 98	.31*	.07	.72*	.32*
Prop 99	.27*	.27*	.88*	-.27*
Prop 100	.78*	.65*	.98*	.12
Prop 104	n/a	-.34*	n/a	n/a
Prop 106	-.14	-.09	.87	.07

N = 58.

Note: n/a indicates that the FPPC recorded no spending exclusively on behalf of anti-Prop. 78 campaign, nor on behalf of the pro-104 campaign.

^aVOTE on = percent county vote in favor.

^bCorrelation of spending in favor with spending against across counties.

^cCorrelation of spending in favor minus spending against across counties.

*Significant at $p < .05$.

Source: Spending data, California Fair Political Practices Commission, 1988; vote results, California Office of Secretary of State.

tions (99, 100) it appears that higher levels of “no” spending are associated with more “yes” votes. At least part of the reason for counter-intuitive aggregate-level results are the multicollinearity between spending for and spending against a given proposition in each county. Collinearity between spending measures for propositions 106, 99, and 98 are quite high.

Some headway can be made by looking at the difference in spending within local markets (spend for–spend against). When we examine local spending differentials, correlations between spending and county vote share for the “yes” side are slightly positive albeit insignificant for Prop. 106 and Prop. 100, while positive and significant for Prop. 98.⁷ That is, these propositions gain a greater vote share (in favor) in those counties where a greater proportion of spending was made in favor of the proposition. For Prop. 99, however, there is a $r = -.27$ result when using the spending differential measure. This is counter-intuitive given conventional expectations about the effects of spending (for Prop. 99, where the spending advantage went to the “no” side, support for the proposition was greater).⁸

What do these aggregate, cross-sectional results and individual level results tell us about the capacity for media spending to affect or convert public opinion? They do suggest we can find some spending impacts in aggregate data, sometimes in ways anticipated by conventional wisdom. In other words, some weak effects are evident if we move away from individual level data. Having said that, it took quite a lot of effort to get to results that conventional wisdom suggests should have been quite apparent.

There are a number of reasons why electronic media spending effects, particularly at the individual level, are so difficult to document here.⁹ It could very well be that these data have serious problems of collinearity and limited variance, and thus are only useful for descriptive purposes. Following Kramer (1983) it also might be objected that we can only see spending effects at an aggregate level, and that the individual level is not the appropriate place to model such effects. It should also be noted the 1988 election could be a biased case since so much money was spent by the insurance industry. Even if this is so, logic suggests it should be biased in favor of the “spending matters” hypothesis since spending was high and fairly one-sided. If it is to be argued that this is an inappropriate case because spending was high, the argument must be tied to claims about how we expect spending effects to be felt if “too much” spending produces no results. At present, the literature offers limited guidance here.

A somewhat different response is to note that these multi-collinearities and non-results (or weak results) of spending have a substantive interpretation. The multicollinearity issue is easiest to see. Media purchases for and

against a given proposition are often highly correlated. It may be the case that campaigners cannot "beat LA" by piecing together non-LA media markets once an opponent has saturated the LA market with a message. Put differently, dollars spent in opposition (support) must often flow to areas where dollars are being spent in favor (opposition) of a proposition. Given this it is not surprising that we have to try hard to find results in the direction one might reasonably expect to see in Tables 6 and 7.

BALLOT PAMPHLETS AND ELITE ENDORSEMENTS

The arguments that spending might have only limited impact in ballot proposition campaigns is perhaps more plausible if we consider that information sources other than media advertising might assume greater importance to many voters. A glance at Table 4 above illustrates that most voters (54%) report using the ballot pamphlet when making decisions about propositions, yet barely one-fifth of voters claim to use information from TV ads. We might expect then that elite endorsements associated with the free pamphlet assume importance as a source of information.

One important component of the campaign is the public ballot pamphlet provided to all voters in California in which proponents and opponents lay out their case and attach their names to issue positions. If a sizable component of the participating electorate is likely to be higher educated/more interested voters, it might be that many voters get information through the pamphlet rather than from media advertising. Thus, we might not always expect to always find sizable effects of campaign media expenditure. Table 4 illustrates that the higher educated voters are more likely to refer to the pamphlet, and previous research has demonstrated that roll-off in the booth is likely to create a participating electorate skewed to represent the more educated (Magleby, 1984; Donovan, Bowler, and Happ, 1991). These factors suggest that the ballot pamphlet might have a substantial impact on individual decisions, more so perhaps, than information gleaned from paid advertising. Although we do not have data appropriate to test the relative effects of paid advertising vs. ballot pamphlets on individual decisions, we can present results relevant to this argument.

Elite endorsements by politicians and groups are a key part of the pamphlet. These cues are important in that they might provide some political and/or party referent for voters. Such cues can only have an effect, however, if voters understand the referent. To be influenced one way or the other by John van de Kamp's or Common Cause's endorsement requires that the voter know something about the endorsee. Elite endorsements might provide voters a means of anchoring decisions about specific propositions to their general underlying preferences. The use of endorsement in-

formation, however, could be fairly demanding. Voters must have some existing knowledge of party cues, party elites, and public figures in order to use an endorsement in forming an opinion. Thus, endorsement cues might be more useful to the more partisan and more educated portions of the electorate.

In order to establish if endorsements act as an alternative source of information for voters deciding on ballot issues, we first need to establish if people are likely to have their opinions influenced by elite endorsements. Second, we must test if the people more likely to have their opinions affected in this way are the higher educated, and if the impact of these endorsements is associated with partisanship.

Respondents to the August 1990 California Poll were asked whether the initiative positions of a list of 26 politicians, political groups, and elites would have either a positive or negative influence on their vote. The 26 had actually adopted public positions on measures appearing on that election ballot. Only about one in eight voters said they would not be influenced by any of the endorsers mentioned. A question relevant to the issue at hand is which voters should be most influenced by elite endorsements. Voters with higher education are more likely use the pamphlet (Table 4), and we assume that they also have greater cognitive capacity. If this is so, they should also be more likely to respond that they are influenced by the issue positions taken by key elites. Furthermore, we expect that partisanship is associated with attentiveness to elites within each party, and with the ability of respondents to use endorsements as a surrogate for party cues. If this is the case, independents should be less likely to be affected by endorsements, even when education is accounted for.

Table 9 reports an OLS estimation of the number of times a respondent claims that an elite endorsement would not influence their decisions on propositions. Income, race, gender, and age are included as control variables in the estimate. These results demonstrate that educated voters are less likely to say that endorsements have no impact. This suggests that educated people are more likely to utilize endorsement information when making decisions. Our expectations about partisanship are also supported by the data in Table 9. Independents are more likely to claim that endorsements will not influence their decisions. (The opposite result is produced if a measure partisanship is used in the equation: partisans are less likely to claim that an endorsement will not affect their decision).

The relationship between the influence of endorsements, partisanship, and education can be represented another way. Splitting the sample by educational attainment buttresses the point that effects differ between higher and lower educated voters. Splitting the sample also demonstrates that education is likely to be associated with the ability to translate elite endorse-

TABLE 9. Number of Times Respondent Claimed that Elite Endorsement Would Not Influence Vote on Ballot Issue (OLS Estimates)

Variables	
Independent	.638* (.263)
Income	.287* (.119)
Non-white	-.083 (.415)
Gender	-.015 (.250)
Age	.007 (.006)
Education	-.209* (.055)
Constant	5.479* (.555)
R^2	.023
$F =$	3.68
Signif. $F <$.0013

Note: 941 respondents.

*Significant at $p < .05$.

Source: California Poll, August 1990.

ments into a partisan referent. Table 10 reports a series of correlations between strength of partisanship and impact of elite endorsements. These correlations reflect if partisanship of the respondents is associated with whether or not the respondents' decision is influenced by the endorsement. Correlations having higher absolute values reflect a stronger association between partisanship and influence. Results in Table 10 illustrate that the impact of only eight of 26 endorsements are associated with respondent's partisanship among the less educated half of the sample. Among the more educated half, 16 of these endorsements are associated with partisanship.

Conceivably, it is through these cues that many voters can draw links between their general political preferences and specific proposals that appear on the ballot. For example, if a voter knows which side of an issue Ralph Nader stands, and also knows what Nader stands for, this might provide enough information to cast a vote. Although these data are not perfectly suited for assessing this, they do suggest a link between education, party identification and decisions on propositions.

DISCUSSION

This paper has developed an account of decision-making in ballot proposition elections that differs from some existing accounts and from what

TABLE 10. Correlation Between Strength of Voter's Party ID and Direction of Impact of Elite Endorsement by Education

	Lower	Higher
van de Kamp	.0948	.2031**
State Legislature	.0681	.1802**
Farm lobby	-.0495	-.0597
Chamber of Commerce	-.0209	-.0651
Environmental groups	.2147*	.3601**
Dianne Feinstein	.2683**	.3105**
Common Cause	.1174	.2794**
Pete Schabarum	.0955	-.0052
Drug Prevention Group	-.0072	.0686
George Dukmejian	-.3314**	-.4216**
Joel Fox	-.0227	-.3490**
David Roberti	.0661	.2325**
Tom Hayden	.0492	.2934**
Chemical Companies	.0224	-.0888
Consumer Groups	.1402	.1338*
Willie Brown	.3178**	.3244**
Alcohol Industry	.0070	-.0340
Logging Industry	-.0591	-.0535
Pete Wilson	-.3135**	-.3526**
Wildlife Preservation	.1638*	.1693**
CA Taxpayers Assoc.	.0264	-.0685
State Labor group	.2842**	.2061**
League of Women Voters	.2414**	.2074**
Ralph Nader	.0663	.1630**

Note: Party identification is a 5-point scale +2 = strong Democrat, -2 = strong Republican. The impact of each of these groups/elites is coded on a 3-point scale (1 = positive influence, 0 = no impact, -1 = negative influence).

Source: California Poll, August 1990.

might be thought of as the conventional wisdom on this subject. The existing literature often presents a portrait of proposition campaigns where vast sums of electronic media advertising expenditure can often easily "reverse" public opinion over the course of a campaign. Some interpretations of proposition elections suggest that individuals have pre-existing, malleable opinions on specific ballot issues that switch from support to opposition in response to paid political advertising.

Our alternative account stresses the initial stages of the campaign are characterized by very low levels of voter awareness. This being the case, it seems there is limited room for campaigns to convert existing opinions. Voters might have general preferences, but they must learn how specific ballot proposals relate to their preferences. Results presented here suggest that proposition campaigns are often associated with a learning process that mobilizes the attention and opinions of an undecided electorate. Further-

more, once voters learn enough to form opinions on issues, opinions appear to be relatively stable.

These findings have important implications regarding the interpretation of trends in opinion measured over the course of a proposition campaign. Changes in aggregate level measures are likely to reflect changes in the proportion of the electorate that has learned enough to become aware of a specific proposition and formed an opinion on it. Change might often reflect individuals "switching" from undecided/unaware to having some stable opinion. There is a danger in evaluating trends in support while ignoring the large proportion of the electorate that has not yet heard about or learned about a ballot issue. We should not be surprised to find instability in measures of aggregate opinion taken over the course of a proposition campaign if early polls include prompted responses from individuals who have not heard of the proposition. At the very least, we should not automatically assume that instability is the product of conversion produced by paid campaign advertising. Results presented here demonstrate that voters utilize non-advertising sources of information when deciding on propositions. Indeed, it is difficult to find a link between individual-level opinions and exposure to campaign spending.

We have also demonstrated that information is likely to affect different people in different ways: certain voters rely on different sources of information. Individuals who utilize more sources of information are likely to be aware of a greater proportion of issues on the ballot. Awareness of the issues, moreover, is a prerequisite to forming opinions on propositions. Results reported above emphasize the primacy of the public ballot pamphlet as a source of information. This finding is important if we consider that some direct democracy states do not provide voter pamphlets to the public (Cronin, 1989). Most survey respondents in these California Polls claim to refer to the pamphlet, and our analysis establishes that the more educated and partisan members of the electorate are likely to have this information influence their decisions. If states are searching for ways to reform direct democracy processes, or to counter the effects of campaign spending on behalf of "the interests," public voter pamphlets containing elite endorsements might be a simple first step.

Finally, we must note that care should be used when generalizing beyond these cases. Propositions we use to test for campaign effects might be fairly typical of direct democracy in California, but these low-visibility, non-candidate races are not necessarily analogous to other contests. It might be that mobilization effects characterize these low-visibility races, but that different processes operate in more balanced, higher visibility, partisan races. Findings reported here suggest that future comparisons between direct democracy and candidate contests would further our under-

standing on campaign effects. Furthermore, although our inability to detect clear spending effects is used as evidence against the conversion thesis, this should also be interpreted with caution. Most importantly, it should be seen as establishing a need for development of a theory of spending effects and a need for further study using different measures and/or different cases.

NOTES

1. Gelman and King (1993, p. 435) discuss opinion change in "relatively balanced, high-information campaigns." In such races voters are able to improve their information set such that they have "sufficient knowledge" for making decisions by election day. Direct democracy often produces unbalanced campaigns that disseminate less information than many elections. Variants of rational actor models can apply to direct democracy, however, a smaller proportion of voters are likely to have "sufficient knowledge," causing many to abstain (Bowler, Donovan, and Happ, 1992).
2. These cases were selected because they were emphasized as examples of opinion reversal in one of the few empirical studies on this subject (Magleby, 1989). We also assume that these cases are fairly typical of contested ballot propositions.
3. It can be objected that proposals with low visibility would be atypical and ripe for mobilization effects. We can compare the 70% unaware/undecided on Prop. 40 and the 40% unaware/undecided on Prop. 61 to other contests. For the five issues on the California poll of late October 1986, the average level of unaware/undecideds was 43.2%. For the 12 issues on the late October 1990 poll, the average was 42.7%. California Polls typically ask only about propositions that are relatively newsworthy, so it is difficult to gauge how these compare to all propositions. Averages are likely to underestimate awareness across all propositions due to the California Polls selection of cases. Nevertheless, the visibility of Prop. 61 of 1986 appears rather typical for California propositions.
4. Note that by late October more voters have heard of Prop. 61 (1986) than Prop. 40 (1984). Over five times more money was spent contesting Prop. 61 than was spent on Prop. 40.
5. Sources mentioned included: the ballot pamphlet (54%), newspaper editorials (47%), TV editorials (33%), friends (22%), TV ads (21%), direct mail ads (20%), newspaper ads (18%), radio editorials (10%), radio ads (6%), and the League of Women Voters (2%).
6. The November 1, 1988 California Poll asked the "have you heard about Proposition_____" question for the insurance propositions only.
7. The relevance of significance test is questionable here since these data are not a sample.
8. Aggregate level spending effects can also be identified by examining an individual insurance proposition (100) and breaking down spending by radio and TV. Partial correlations for spending and county vote share are:

TV in favor .16
 Radio in favor .08
 TV against .14
 Radio against -.39

Spending effects are visible here, in part, because there is low collinearity between spending on radio ads against Prop. 100 and spending on TV ads in favor. Opponents placed

radio ads in areas not covered by supporters. For most propositions examined here, this is not the case.

9. Many additional individual-level null results are not reported here. For example, an attempt to separate out the impact of TV as opposed to radio spending for all the propositions noted above also failed to detect spending effects across media markets (for an exception, see note 6). Using measures of spending that reflect spending per capita in market, absolute levels of spending, or differentials between spending in favor and spending against also failed to demonstrate spending effects at the individual level.

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