

Information and Voting: A Panel Study

Michael D. Martinez
Department of Political Science
P. O. Box 117325
University of Florida
Gainesville, FL 32611
martinez@polisci.ufl.edu

Stephen C. Craig
Department of Political Science
P. O. Box 117325
University of Florida
Gainesville, FL 32611
scraig@polisci.ufl.edu

James G. Kane
Editor, *Florida Voter*
3000 SW 60th Avenue
Davie, FL 33314
jgkane@gate.net

Abstract: Political campaigns can be an important source of information for voters, but little attention has been paid to the questions of (a) who learns issue-related information over the course of a campaign and (b) the consequences of that learning on candidate preference. This study uses data from a three-wave panel survey of 301 respondents, conducted in Broward and Palm Beach counties during the 1998 Florida governor's race. Controlling for prior levels of information about candidate issue positions and group endorsements, we find that learning in these areas is promoted by general knowledge about politics, caring about the election outcome, and partisan independence. Further, new information helped respondents to cast votes consistent with their issue preferences, though more so on school vouchers than on abortion or gun control. Learning and partisan independence were found to be associated with changes in candidate preference between late summer and election day.

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Democratic theory has never been very specific about how much information and knowledge is needed in order for individuals to be able to fulfill the obligations of effective citizenship. Most would agree, however, that at a minimum one must have a basic understanding of the policy differences that exist between candidates for office, and between the parties they represent (see Thompson 1970; Natchez 1985; Neuman 1986). Without such an understanding on the part of at least some voters, the probability that election outcomes will broadly reflect the public's issue preferences is no greater than chance. Unfortunately, nearly half a century of empirical research has left the distinct impression that "[v]oters have a limited amount of information about politics, a limited knowledge of how government works, and a limited understanding of how governmental actions are connected to consequences of immediate concern to them" (Popkin 1991, p. 8; also see Delli Carpini and Keeter 1996).

While low levels of knowledge and information in the mass public have a number of normative and practical implications for democratic governance (for a review, see Niemi and Weisberg 2001), our focus in this paper is on how information learned in campaigns affects vote choice. Scholars have recently demonstrated that presidential votes cast by citizens who possess more complete information differ, to some degree, from those of citizens with similar preferences and backgrounds but less information (Lau and Redlawsk 1997; Bartels 1996). Information also may play an indirect role in shaping the issue preferences that form part of the basis of vote choice (Althaus 1998). Finally, voter uncertainty about presidential candidates, indicating a lack of complete information, tends to lower evaluations of those candidates (Alvarez 1997). This line of research has a little of the half-empty/half-full flavor to it: Individual votes and preferences would likely be somewhat different if everyone were fully informed, but there is considerable evidence that, given their cognitive and other limitations, voters' "guesses" about which candidates best represent their interests are not wildly off the mark in the aggregate.

Despite well-known limitations within segments of the mass public, there is considerable evidence that individuals' vote choices do reflect their issue preferences – or at least this is true some of the time on some issues for some voters (e.g., Page and Jones 1979; Markus and Converse 1979; Krosnick 1990). Of course, campaigns also can affect voters' abilities to translate issue preferences into votes. As V.O. Key (1966) reminded us long ago, elections are echo chambers in which votes are simple, relatively blunt responses to the choices offered to them. When candidates obfuscate, the ability to choose based on issues is thwarted. But when candidates and the media emphasize differences on a particular issue, vote choices should more clearly reflect preferences on that issue (Johnston et al. 1992). Thus, in our view, the prospects for issue voting depend on *both* voters and the information provided to them in campaigns.

The following analysis is based on the 1998 Florida gubernatorial race between Republican Jeb Bush and Democrat Buddy MacKay. Our goal is to determine (1) how much learning about candidates' issue positions occurred during the campaign, (2) which voters learned the most, and (3) whether learning had any effect on voter choice.

Campaigns and Learning

Much of the knowledge that citizens possess concerning candidate and party differences is acquired, one would imagine, within the context of spirited electoral competition. Yet there are some analysts who contend that "the campaigns conducted by candidates provide little, if any, information to the electorate – and that whatever information is disseminated by the campaigns is distorted by the mass media and even ignored by voters" (Alvarez 1997: 7). Indeed, the evidence is clear that candidates do not always take clear positions or address the issues of greatest concern to voters (Shepsle 1972; Page 1978; Franklin 1991; Geer 1998); when this happens, it is hardly surprising that there is a high degree of confusion and uncertainty about who stands for what.

Nevertheless, campaigns also appear to provide the single most "compelling incentive [for the average person] to think about government" (Riker 1989, p. 1). There is, in fact, reason to believe that candidates somehow

manage to get a large proportion of the citizenry sorted into opposing camps, each of which is convinced that the positions and interests of the other side add up to a less desirable package of benefits. Thus campaigns, to the extent that they are successful, temporarily change the basis of political involvement from citizenship to partisanship, and in the process attract interest and votes from people who generally find politics uninteresting or remote (Popkin 1991, pp. 8-9).

According to Gelman and King (1993), the instability in public opinion polls that typically occurs during presidential elections is a result of information flow; that is, as voters acquire information about candidates and issues, and as they incorporate that information into their decision-making processes, they eventually find themselves able to make choices consistent with their political attitudes, beliefs, and interests. It seems likely that if this type of learning takes place during high-visibility presidential campaigns (where at least some candidates are well-known early on), then it should happen in races for lower office as well (since most candidates will initially be less familiar to voters than their counterparts at the top of the ticket).¹

Data and Measures

The present study uses data from a three-wave telephone panel survey conducted by the *Florida Voter* polling organization during the 1998 campaign for governor of Florida.² Our initial interviews (late July-early August) were with 628 individuals, randomly chosen from a list of all registered voters living in Broward (including Fort Lauderdale) and south Palm Beach Counties in the southeastern part of the state. Wave two interviews (N = 402) were conducted in late September-early October, wave three (N = 301, 47.9 percent of the original group) in November beginning on the night of the election. The results reported below are limited to the 301 respondents who participated in all three waves.

Most research on the effects of campaigns on political knowledge is based on the analysis of either cross-sectional surveys (which do not take into account the amount of information that people *bring to* the campaign and, hence, do not allow for the measurement of individual-level change) or experimental data (which cannot fully capture the dynamics of a real-life campaign). Most of it also centers on presidential elections, where trends and relationships may vary from

what one would find in races for congressional, state, and local office. Our study is hardly unique in its use of panel data (e.g., Berelson et al. 1954; Patterson and McClure 1976; Patterson 1980; Bartels 1993), or in the fact that issue learning is examined within the context of an actual campaign below the level of president (e.g., Atkin and Heald 1976; Merritt 1984; Weaver and Drew 1993; Zhao and Bleske 1995). On the plus side, we also are able to determine whether issue learning is more likely to take place early or later in the campaign (e.g., Brians and Wattenberg 1996; Holbrook 1999). Moreover, this study is one of the few to look at gubernatorial politics (e.g., Ansolabehere and Iyengar 1995) – a level of electoral competition that is in some ways similar to, but in other ways quite different from, the race for the White House.

None of the above is intended to suggest that our approach is without shortcomings. First of all, there is the fact that we employ survey data alone, i.e., relying solely on respondent self-reports (see Ansolabehere and Iyengar 1996). Secondly, the focus on a single community raises obvious concerns about the extent to which our findings can be generalized to other settings – though, traditionally, panel studies of media effects have relied on local samples (e.g., Berelson et al. 1954; Patterson and McClure 1976) in order to control respondents' media environments. Finally, a potentially serious problem in any panel survey is that which stems from the inevitable process of respondent mortality. As noted earlier, slightly less than half of our original sample participated in all three waves. If the sociodemographic and political characteristics of this group differed markedly from those of the individuals we interviewed at wave one, then our results and conclusions would be called into question. Fortunately, this did not happen. Not only did the final panel have substantially the same characteristics as the original sample in all important categories (details are available upon request) but, perhaps equally important, its choice for governor was within two percentage points of the actual outcome.³

Election Backdrop: Bush vs. MacKay

The early front-runner for governor in 1998 was Miami businessman Jeb Bush, son of former President George Bush, who had run for and lost the same office four years earlier by the closest margin in Florida's history. Although making only his second bid for elective office, that earlier campaign and, no doubt, his family ties gave Bush an extremely high profile among voters: Statewide polls showed his name recognition level to be consistently above 90 percent during the year leading up to the election.⁴

Bush's opponent was Democratic Lieutenant Governor Buddy MacKay, a former congressman and loser (in another incredibly close contest) in his 1988 U. S. Senate race against Connie Mack. In Florida, the lieutenant governor is elected on a ticket with the governor and has no formal constitutional role apart from replacing the latter in case of death or incapacity – which is exactly what MacKay did (briefly) following the sudden death of Governor Lawton Chiles in December 1998. Although less of a sure thing than Bush, MacKay entered the election year as his party's undisputed leader for the nomination; the obscurity of his office notwithstanding, he had name recognition in the 80-percent range (91 percent in wave one of our Broward-south Palm Beach survey).

Both candidates escaped a primary challenge, and neither had begun any individual campaign advertising prior to the first survey in July/August.⁵ As a result, the situation in late summer was one in which the candidates were personally well-known, but their positions on the issues were not. As studies (especially at the presidential level; see Bartels 1988 and 1993; Patterson 1980; Popkin 1991) have shown, many voters obtain a considerable amount of information during the prenomination phase – and surveys that do not begin until the general election are unable to capture the issue-based (or other) learning that may already have taken place. In principle, our study is problematic in this regard. Yet with no serious primary competition taking place on either side, and with most campaigning prior to Labor Day being of the "inside politics" variety, one could anticipate that voter awareness of the policy positions of these two extremely well-known public figures would be limited. As we shall see momentarily, it was.

Our sampling area (coinciding with the circulation market of our sponsor, the *Fort Lauderdale Sun Sentinel*) included all of Broward County and portions of south Palm Beach County. More than 900,000 of the estimated 1.7 million residents are registered to vote – primarily as Democrats (53 percent vs. 34 percent Republican), though the trend both here and throughout the state has lately been in the opposite direction (Craig 1998).⁶ Considering its size, the media market is somewhat limited. Broward County, which makes up the largest portion of our study area, has no television stations of its own; instead, residents must rely on TV news from Miami and, in some parts of the county, Palm Beach. Although these non-local stations regularly cover developments in Broward, such stories frequently take a back seat to reporting on events closer to home.⁷ On the print side, the region under study is served principally by two major newspapers: the *Sun Sentinel* and, to a lesser extent, the *Miami Herald*. Both papers are fairly traditional in their approach to news coverage, and both contained numerous stories relating to the 1998 race for governor.

Issue Awareness and Group Support

Our analysis centers on two aspects of issue-related learning among voters. The most familiar of these is a battery of questions that was introduced as follows:

Next, I'm going to read a brief series of statements. After each, I'd like you to tell me which of the two major candidates for governor, Buddy MacKay or Jeb Bush, is more likely to favor the statement, if you happen to know. Let's start with "thinks we don't need any more gun control laws." Do you think MacKay or Bush is more likely to favor this position, or don't you know?

The gun control query (correct answer: Bush) was followed by six others: "supports vouchers for students in underperforming public schools" (Bush), "wants to guarantee that 40 percent of the state budget goes to public education" (MacKay), "believes that a woman should have the right to have an abortion in most instances" (MacKay), "wants patients to have the right to sue their HMO when they're denied proper care" (MacKay), "has pledged not to raise taxes" (MacKay), and "wants to appoint a statewide drug czar to fight drug abuse" (Bush).

Our challenge in preparing this list was to identify, in advance of the public campaign, (1) issues that one side or the other, or perhaps both, could be expected to emphasize in their communications with voters (directly via ads, and indirectly through print and broadcast media); as well as (2) issues on which the two candidates offered a relatively clear-cut choice.⁸ Five of

the seven issues we selected ended up meeting these standards to a greater or lesser degree. Bush's proposal for a drug czar was something of a trial balloon; it came and went with scarcely any notice being paid by the press or by the MacKay camp. Also, as we explained earlier (see note 5), both candidates -- for strategic reasons -- handled the no-new-taxes pledge fairly quietly, and in manner that was not entirely consistent with their respective parties' images.⁹

A second set of questions was included in the survey, relating to group bases of support for the two candidates:

Now I'm going to ask you if you happen to know which groups and organizations are currently supporting either Buddy MacKay or Jeb Bush for governor. The first is police organizations -- do you think they are supporting Buddy MacKay or Jeb Bush, or is this something you're not sure about?

In addition to law enforcement (correct answer: Bush), respondents were asked to name the candidate supported by teacher organizations (MacKay), environmentalists (MacKay), the Christian Coalition and other conservative religious groups (Bush), and tobacco companies (Bush).¹⁰ Our intent was partly to have surrogates in place for issues (or clusters of issues) that had not yet emerged at wave one but might arise later in the campaign such as school prayer, credentials for teachers in public schools, environmental problems related to the Everglades or other ecologically sensitive areas, and so on; in each of these instances, we expected that the candidates' positions would be relatively clear and predictably different from one another.¹¹

Apart from specific (and often short-term) issues, however, prior research has shown that voters tend to associate the Republican and Democratic parties and their leaders with particular sociopolitical groups and organizations -- associations which stem from the tendency for each party, over time, consistently to represent the interests and policy views of certain segments of society better than others (e.g., Weisberg and Rusk 1970; Conover and Feldman 1981; Miller et al. 1991; Weisberg et al. 1995; Wlezien and Miller 1997; Craig et al. 1999). Many voters will be aware of these party-group linkages regardless of whether or not there is a campaign under way, just as they will know that one prospective candidate for president or governor favors Policy A while another prefers Policy B. But for the electorate as a whole, the level of awareness should increase as more cues become available from the media or from candidates themselves.

Results

The Extent of Campaign Learning

The frequency of accurate candidate-issue and candidate-group associations is shown in Table 1, along with the magnitude of change occurring between waves one and three.¹² Several observations are in order. First, except for abortion (which was a major issue in the 1994 governor's race when Jeb Bush ran against Lawton Chiles, and which voters throughout the country increasingly perceive as being a point of division between the two parties; see Adams 1997; Abramson et al. 1999, p. 139), fewer than half -- and usually fewer than one-third based upon corrected estimates (see note 12) -- of all respondents at the beginning of the campaign were able to connect any policy stand with the candidate taking it. Similarly, the Christian Coalition "and other conservative religious groups" (which had been strongly in Bush's corner four years earlier) was the only instance where a majority could successfully link a group with

the candidate that group was supporting. Thus, as we already have pointed out, the candidates for governor in 1998 were well-known by the electorate, but in a relatively superficial way.

Table 1 about here

This changed somewhat as the campaign unfolded. Among our five issues, the greatest amount of learning was evident for school vouchers: By November, 67.9 percent (corrected) knew that Jeb Bush advocated the use of vouchers – a huge increase of 44.6 points over the preceding three months. And even though many voters knew at the start where Bush and MacKay stood on abortion, a considerable amount of learning (20.2 points corrected) took place there as well. Other issues (gun control, education, patient rights, and the appointment of a drug czar) saw more modest improvements in voter awareness, which is hardly surprising given that they did not receive nearly as much attention from the media and the candidates as did vouchers and abortion.¹³ While the broad issues of taxing-and-spending have been prominent in previous gubernatorial elections, the issue never came to the forefront of the 1998 campaign. Throughout our panel, a plurality of respondents incorrectly associated Bush as the candidate who had pledged not to raise taxes. On these specific issues, it appears that campaigns matter. Learning was the highest on the issue that was most prominently featured in the campaign, and lowest on an issue that was largely ignored.

Among group support variables, a rough negative correspondence between awareness at the outset of the campaign and the amount of learning suggests a ceiling effect may be at work. The biggest gains by far occurred for police organizations: In wave one of the survey, respondents were equally likely to name Bush and MacKay (16.9 percent each, for a corrected total of exactly zero) as the preferred candidate of official law enforcement. Seizing upon an opportunity, the Bush campaign saturated the state's airwaves with a series of ads attacking MacKay for being soft on crime ("He's Not Our Buddy!"). By November, a respectable 54.5 percent (corrected) knew that the GOP standard bearer had received the endorsement of the Police Benevolent Association and similar organizations.

The remaining four group associations exhibited less change. A majority of voters (51.8 percent corrected) knew in July/August that the religious right was supporting Bush, and only 7.7 percent were added to that number over the ensuing three months; total gains were not much higher for teachers (14.3 points corrected) and environmentalists (11.0 points). Apart from law enforcement, the greatest amount of learning occurred for tobacco companies: 60.9 percent (corrected) naming Bush as the favored candidate in wave three, up 22.0 points from our initial survey. This is somewhat puzzling since tobacco did not play a prominent role in the 1998 governor's race. It was in the news, however, because of an enormous out-of-court settlement between tobacco companies and the state government (the former having been sued by the latter), and because of the ensuing controversy over how much of that settlement should be part of the fee paid to attorneys (traditionally a Democratic group) who had represented the state on a contingency basis. Perhaps these events led some voters to conclude that tobacco companies were behind Bush; or, more simply, it may have been another case of people applying longstanding party stereotypes (see note 9), i.e., big business is usually pro-Republican, so big tobacco must be pro-Republican in Florida. Still, even if the latter is true, the campaign appears to have played at least some role in activating those stereotypes for many individuals.

In order to summarize the amount of learning that took place over the course of the campaign, an index was created based on the number of correct responses given by each respondent to the twelve information items (seven issues and five groups). As we saw in Table 1 with the items individually, there was a clear gain in knowledge between the July/August and October waves of the panel (the mean number correct increasing from 4.89 to 5.62) – with the sharp jump in November indicating that the bulk of the learning occurred during the final month. This result is consistent with the view of the campaign shared by most political professionals, including the fact that learning is especially likely to occur on issues that have been highlighted by the media, or by the candidates themselves. On some issues, large numbers of voters never figure out who stands for what; but in instances where information is readily available, the potential for issue-related learning grows accordingly.

Learning, however, is only one kind of change that can occur during a campaign. Further analysis shows that some respondents also “forgot” information which they apparently had possessed in the initial wave of our panel. For example, Table 2 shows that learning (moving from an incorrect response in wave one to a correct response in wave three) accounted for most of the individual-level change in answers to questions about candidates’ stands on school vouchers, but a few people moved from correctly associating this position with Bush in July/August to a different, incorrect response in November. Both guessing and measurement error factor surely factor into the forgetting phenomenon, but the amount of forgetting seems to be associated with the emphasis accorded an issue by candidates. In the aggregate, forgetting was highest on two of the underplayed issues noted earlier (MacKay’s tax pledge and Bush’s drug czar proposal), as well as on teachers’ endorsement of MacKay (perhaps reflecting the fact that educational reform was a key issue for the Republicans in 1998).

Table 2 about here

Who Learns? Who Forgets?

We propose a model of campaign learning based on the concepts of ability, motivation, and partisan strength. Cognitive psychology suggests that people who possess basic knowledge structures (or schemas) have the ability to process and store new information relevant to a particular structure, whereas aschematics who lack knowledge are less able to understand and remember new information associated with that schema. In practice, there is no consensus as to whether general textbook knowledge about the system of government or awareness of current officeholders are factors that contribute to voters’ understanding of salient campaign issues. While it is generally agreed that an information base contributes to one’s ability to acquire and retain new information, it is an open question as to whether factual knowledge about the Supreme Court’s role in the political process (for example) is a meaningful part of that information base.

We test the argument here by measuring *ability* in terms of a six-item index constructed from July/August questions dealing with Janet Reno’s current job (91 percent of panel respondents correctly identified her as U. S. Attorney General); who has the responsibility to determine a law’s constitutionality (82 percent said the Supreme Court); which party held a majority of seats

in the U. S. House (73 percent said Republican); which party held a majority of seats in the state legislature (37 percent said Republican); what vote is needed for Congress to override a presidential veto (46 percent said two-thirds); and which party is more conservative nationally (74 percent said Republican). The mean number of correct answers was 4.04, and the alpha reliability for our index was an acceptable .61.

Motivation presumably connects new information to existing knowledge structures. Most new information that people encounter in their day-to-day activities is easily forgotten because it is never processed in a manner that allows for its incorporation into an existing knowledge structure. Some information is never processed at all because the receiver of the information does not believe that it has any relevance, and some information that is processed peripherally is not likely to be remembered. The central path to information processing that enables the storage and future retrieval of new information requires at least a minimal degree of motivation on the part of the receiver. Our measure of motivation is a question from the November survey: “Generally speaking, how much would you say that you personally cared who won the election for governor this year – did you care a great deal, some, or not much?”

The third variable in our model is *partisan strength*, which could operate either to promote or to retard the learning of new issue information. Beginning with Campbell et al. (1960), numerous studies have demonstrated that strong partisans tend to be much more cognitively engaged in politics than independents and, consequently, are more likely to receive and learn new information as it is disseminated by the media and campaigns. Much of that information is reinforcing, reminding partisans of their own party's virtues, or the other party's sins, and bringing reluctant or hesitant supporters back into the fold (cf. Converse 1962). Especially when candidates stress issue stands consistent with their parties' traditions during the campaign, partisans with strong party images also should be more likely to infer correctly positions on other issues (Feldman and Conover 1983; Lodge and Hamill 1986).

Alternatively, the effect of partisan strength when *controlling for ability and motivation* may be quite different. Among individuals with similar levels of cognitive involvement in politics, it is possible that independents will be more open to receiving new information than partisans. Strong partisans may, in fact, tend to stop processing new information once they feel their store of existing information is sufficient to make a vote choice – while highly motivated independents and late deciders continue searching. Moreover, partisans with strong party images may screen out and reject new information that is inconsistent with or unrelated to traditional stereotypes. In order to test for these various possibilities, we include a standard measure of partisan strength in our model of learning.

That model can be summarized as follows:

$$\text{Learning} = \text{''} + \beta_1 \text{ General Knowledge} + \beta_2 \text{ Prior Campaign Knowledge} + \beta_3 \text{ Care about Election} + \beta_4 \text{ Partisan Strength} + e$$

where Learning is the number of issue or group support positions incorrectly identified in July/August but subsequently identified correctly in November.

We estimate the model using ordinal regression; results are presented in Table 3. First, the fact that prior campaign knowledge is negatively associated with learning points to a strong ceiling effect, i.e., voters who are more knowledgeable early at the start of the campaign tend to learn less. Second, we see that general campaign knowledge is positively associated with learning, suggesting that respondents with an existing store of factual knowledge about the political process, current officeholders, and the parties were, as predicted, more likely to learn new campaign-relevant information. Conversely, individuals possessing a weaker grasp of civics knowledge in July/August were less likely to learn about the issue positions and group endorsements of the candidates.

Table 3 about here

Learning also is associated with motivation, though a moderate amount of motivation seems to go a long way. Respondents who reported caring “some” about the gubernatorial election outcome were not significantly different in their propensity to learn than the majority of our respondents who reported caring “a great deal.” However, the few respondents who said they cared “not much” about the election were less likely than others to acquire new information.

Finally, Table 3 shows that learning is associated with partisan independence, *ceteris paribus*. Weak partisans were statistically similar to the baseline strong partisans, but leaners and pure independents were slightly more likely to learn new information, controlling for motivation and prior levels of both campaign and general political knowledge. This suggests that those without entrenched partisan positions were more open to learning new information, provided that they were motivated and able to do so.

We also estimated a model of forgetting, measured as the number of campaign information items answered correctly in July/August that were answered incorrectly in our post-election wave. Like learning, forgetting probably reflects some amount of guessing by our respondents, except in this case they would have guessed correctly at the beginning and incorrectly later on. Our results show that prior campaign knowledge is again a factor, reflecting a strong negative floor effect (those who answered fewer questions correctly in July/August had fewer to forget in November). Motivation does not appear to have an impact, however, as voters who cared little or some about the outcome were not reliably different than those who cared a great deal. There is a modest tendency for weak partisans to be more forgetful than strong partisans, *ceteris paribus*, but there is no discernible difference between the other partisan categories. The most notable effect here is associated with general campaign knowledge: In addition to promoting learning, it also impedes forgetting. These two effects demonstrate its utility as an indicator of a political knowledge structure that helps people to process campaign-relevant information.

The Effect of New Information

Learning in campaigns is useful insofar as it helps citizens to make an informed choice on election day. While there is considerable evidence attesting to the importance of voters’ general information levels, and their cognizance of candidates’ or parties’ positions, as prerequisites of casting an issue-based vote (Delli Carpini and Keeter 1996, Bartels 1996b, Campbell et al. 1960), we are not aware of any literature which directly addresses whether newly acquired

information is as useful as older information. New issue-related information may not be as important as old information for voters whose candidate preferences have been formed largely on the basis of partisanship, retrospective evaluations, and pre-existing perceptions of candidates (Finkel 1993). Similarly, if a voter is part of an issue public and is generally well-informed at the outset of the campaign with regard to that issue, new information on other issues may not do much to sway his or her vote choice. On the other hand, the fact that many voters start the campaign with genuine issue preferences but little issue-related knowledge of the major candidates creates an opportunity for new information to affect vote choice.

We compare the effect of new information with that of old information by estimating a binary logistic model of vote choice as a function of issue preference, dummy variables representing voter knowledge of which candidate held a particular position on that issue (specifically, whether an individual's post-election response indicates that knowledge was learned during the campaign, whether s/he attributed the position to the wrong candidate, and whether s/he didn't know which candidate held that position), plus interaction terms. Specifically, the abortion issue-voting equation is

$$\Pr(Y_i = 1) = \alpha + \beta_1 I + \beta_2 \text{learned} + \beta_3 \text{wrong} + \beta_4 \text{don't know} + \gamma_1 (I * \text{learned}) + \gamma_2 (I * \text{wrong}) + \gamma_3 (I * \text{don't know}) + e$$

where Y is the post-election vote report (1 = Bush, 0 = MacKay); I is the respondent's issue position on abortion (2 = pro-life, 1 = pro-choice); learned is a dummy variable (1 if the voter correctly indicated in the post-election wave that MacKay supported a woman's right to choose but gave a different response to that question in the July/August wave, 0 otherwise); wrong is a dummy variable (1 if the voter incorrectly indicated in the post-election wave that either Bush, both candidates, or neither candidate supported a woman's right to choose, 0 otherwise); and don't know is a dummy variable (1 if the voter indicated in the post-election wave that he or she didn't know which candidate supported a woman's right to an abortion).

From the estimated equations for abortion, vouchers, and gun control, we derive the vote choice probabilities for voters (a) on each side of an issue and (b) with each type of knowledge about candidates' positions (correct all along, newly learned, wrong, and don't know). The model is presented in Appendix 1, and the probabilities are summarized in Table 4.

Table 4 about here

New information is valuable in helping voters cast ballots based on issues, but there is some variability across the three issues examined here. On school vouchers, an issue which clearly divided the candidates and received considerable attention from both campaigns and the media, the effect of new accurate information was about equal to the effect of old accurate information. Strong voucher supporters who learned that Bush shared their view on that issue during the campaign were about as likely to vote for Bush as those who knew (or suspected) Bush's position all along (.873 to .916). Similarly, strong voucher opponents who knew about Bush's position on vouchers voted overwhelmingly for MacKay, regardless of whether they knew Bush's stand since the summer or the information was newly acquired (.041 to .037 respective probabilities of voting for Bush). Not surprisingly, wrong information or no information severely hampered accurate issue voting; under each of those circumstances, voucher opponents were actually more likely to support Bush than were voucher supporters. The bottom line with regard

to school vouchers is that learning matters. People who learned about Bush's position (and probably MacKay's as well) were nearly as likely to cast votes for the candidate closer to them as were those who possessed the information all along. But for those who never learned the candidates' stands, vote choice did not consistently reflect their views on this issue.

On gun control and abortion rights, new information was helpful – though not as much as old information in terms of facilitating an issue-based vote. Among those who were informed at the start about abortion, the probability of backing Bush was over 85 percent for pro-life voters and just 7 percent for pro-choice voters. Among those who became aware during the campaign that MacKay supported a woman's right to choose, the probabilities of voting for Bush were 56 percent for the pro-life group and 19 percent for pro-choice advocates. Abortion views were thus associated with candidate choice among newly informed voters, but not as strongly as for citizens who knew the candidates' positions in July/August.¹⁵

A similar pattern holds for gun control. We measured preference on this issue with a post-election question asking respondents whether they had supported a constitutional amendment (endorsed by gun control advocates) that would permit a local option on waiting periods for gun purchases. Voters who knew all along about Bush's general opposition to additional gun control laws were sharply divided. In this group, those against waiting periods had a 77 percent probability of voting for Bush, compared with 13 percent among those in favor of waiting periods. Among citizens who learned about Bush's opposition during the campaign, the issue still was divisive but not as strongly (67 percent support for Bush among waiting period opponents vs. 22 percent among supporters).¹⁶

We can only speculate about why new information on vouchers was roughly as effective as old information in structuring an issue-based vote, but less effective on gun control and abortion. Perhaps voters who considered the "easy" gun control and abortion issues (Carmines and Stimson 1980) to be important were more likely already to know the long-standing relative positions of candidates and their parties, while those who cared less about the issue were more apt to be uninformed at the outset but to learn where the candidates stood during the campaign. The correlation between having old information and issue importance might not have been as high for vouchers, a relatively new issue in 1998; for example, the high level of discussion about vouchers by the candidates and in the media may have primed its importance for all voters (cf. Johnston et al. 1992; Iyengar and Kinder 1987).

Information and Vote Change

Most, but not all, of our panel respondents told us in November that they voted for the candidate that they had preferred in July/August. Even with the peculiarities of our sample, the overall aggregate stability of vote choice is hardly surprising. Yet campaigns often are fought on the margin, with one or both sides making every effort to target the relatively small number of voters who might be persuadable. The final question we want to address is whether the acquisition new information can help candidates to accomplish that goal.

Our analysis is based on an estimate of the following binary logistic model:

$$\Pr(Y_i = 1) = \hat{\alpha} + \hat{\alpha}_1 \text{ General Knowledge} + \hat{\alpha}_2 \text{ Prior Campaign Knowledge} + \hat{\alpha}_3 \text{ Learned} + \hat{\alpha}_4 \text{ Forgotten} + \hat{\alpha}_5 \text{ Care About Election} + \hat{\alpha}_6 \text{ Partisan Strength} + e$$

where General Knowledge is measured with the six-item index described earlier; Prior Campaign Knowledge is the number of correct candidate issue positions and group endorsements identified in the July/August wave the panel; Learned is equal to the number of issue positions and group endorsements identified incorrectly in July/August but correctly in the November wave; Forgotten is the number of information items answered correctly in July/ August but incorrectly in November; and Care About Election and Partisan Strength are measured in the same manner as before.

For respondents who favored one candidate in July/August and reported voting in November, learning clearly increased the probability of changing preferences during that period. Our model is presented in Appendix 2, with the effects of learning and partisan strength displayed in Figure 1. It is apparent that, overall, an increase in the number of facts learned during the campaign is positively associated with the likelihood of a preference change, *ceteris paribus*. In contrast, neither general knowledge about political processes and officeholders nor prior campaign knowledge has a significant impact. The coefficients for forgetting campaign-related information, caring about the election outcome, and partisan strength are larger and in the anticipated direction, but not reliably different from zero. In Figure 1, we show the magnitude of the estimated effects of learning and strength of partisanship for "typical" respondents, i.e., those who cared a lot about the outcome, knew the correct answers to four of our six general knowledge questions, correctly identified five of twelve candidate issue positions and group endorsements in wave one, and forgot one piece of information during the campaign.

Figure 1 about here

The figure confirms that learning had a substantial effect on the probability of a change in vote preference in the 1998 Florida gubernatorial race. For typical respondents who learned no new facts about the candidates' positions or group endorsements, the probability of a preference change was less than one in twenty for all categories of partisan strength. That probability grew quickly, however, for independents and leaners, e.g., with individuals who learned five facts having about a 15 percent probability of change. Notably, the estimated probabilities for leaners and pure independents were nearly identical. In our panel, leaners closely resembled pure independents in terms of the effects of learning, in contrast to the view that leaners often are closet partisans. (Keith et al. 1986) At the outer limits of these two explanatory variables (eight new facts learned by pure independents), the probability of a preference change is nearly 30 percent. Thus, while partisanship tends to stabilize vote choice, the acquisition of new information in combination with partisan independence clearly can precipitate changes in voter preferences. In short, campaigns matter – and they matter most of all for the fence sitters whose choices make the difference between victory and defeat in many close elections.

Conclusion

Much of the recent literature in political communications and cognition is a response to the old conventional wisdom that the media in general, and political campaigns in particular, have "minimal effects" on the attitudes and actions of citizens. Although some have pointed us in directions where we frequently can find "not-so-minimal" effects (Zaller 1996; Iyengar and Kinder 1986), there still is abundant accumulated evidence that voters' decisions are greatly shaped by their partisanship, the state of the economy, and prior beliefs that are relatively impervious to change in the short term (Holbrook 1996; Campbell 2000). Yet in the end, many campaigns operate at the margins, hoping to find some way to move a few persuadables over to their side. This seems likely to be even more true in the future than in the past, as the competitive balance between Republicans and Democrats -- both nationwide and in many states and localities -- is extremely close.

We find evidence in our panel survey of Broward County and south Palm Beach County that voters learned a considerable amount of issue-related information about the candidates during the course of the 1998 Florida gubernatorial campaign. To be sure, such learning was not evenly spread throughout the electorate. Those who had more to learn, who cared a great deal about the identity of their next governor, who had a basic understanding of the political process and players, and who expressed no partisan allegiance tended to learn more than others. And the learning that took place often mattered. New information, for example, was as valuable as old information in helping voters cast a vote consistent with their positions on school vouchers, though not quite as helpful on the issues of gun control and abortion. Moreover, those who learned more (especially independents, both pure and leaning) showed a greater willingness to change their vote intention during the campaign.

Our findings concerning the impact of general knowledge and nonpartisanship on learning may seem at first glance to be counterintuitive. They are more understandable, however, when considered in the context of controls for other variables. Several scholars have concluded that general knowledge of the political process and players is *not* a requirement for an individual to cast a minimally informed vote based on issue preferences. Yet when we control for level of prior information, we find that general knowledge does in fact operate as a schema for the ability to process information: Those with less prior information have more to learn, and they appear to learn more if they have general knowledge in place that enables them to process the information coming to them during the campaign. Just as importantly, general knowledge seems to impede forgetting information that voters already possess about the candidates.

As for the effects of partisanship, our results both support and contradict the traditional conception of partisan independence. On the one hand, traditionalists will not be surprised to hear that independents (leaning as well as pure) were more likely than partisans to change their vote intention over the course of the 1998 campaign for governor of Florida. On the other hand, they also learned (controlling for motivation and ability) more issue-related information than did their Republican and Democratic counterparts. If these findings can be generalized, the extent of learning should be greatest among voters who care about and understand politics, but who remain at arm's length from both parties. To the extent that the process of cognitive mobilization

is transforming the modern electorate (Dalton 1984), the information function of political campaigns may grow in importance in the years to come.

Notes

1. On the other hand, the quantity and quality of issue-related information available in subpresidential (and for that matter, some presidential) campaigns may be suspect.

2. *Florida Voter* publishes a nonpartisan political journal based upon periodic surveys of registered voters. The particular surveys described here were commissioned by the *Fort Lauderdale Sun Sentinel*, whom the authors wish to thank for their generous support of this research. Additional information relating to the study design can be obtained from *Florida Voter* directly (800-899-7655), or from the Graduate Program in Political Campaigning in the Political Science Department at the University of Florida.

3. One difference that did emerge had to do with the tendency for less-informed people to drop out of panel surveys at disproportionately high rates (Price and Zaller 1993). Consistent with this pattern, members of our panel scored significantly higher than other respondents on measures of general political knowledge, interest in "government and public affairs," and interest in the campaign for governor; not surprisingly, they also were very likely to have made it to the polls on election day (92 percent self-reported turnout). The two groups had roughly equal levels of formal education, however.

4. The figures reported here and in the next paragraph are based on bi-monthly surveys conducted by *Florida Voter* during 1997-98 (see note 2).

5. The Republican Party did broadcast a number of so-called "party-building" ads, most of which featured Jeb Bush. These ads primarily centered around Bush and his family (image building) and did not have any real issue content. Also, before the public phase of the campaign began in earnest, the Republican Party tried to label MacKay in the unpaid (earned) media as a tax-and-spend liberal. This message had worked well a decade earlier, when Connie Mack repeatedly used the TV commercial tag line, "Hey, Buddy, You're a Liberal." MacKay, hoping to avoid a similar outcome in 1998, countered the latest GOP attack with a somewhat incongruous (given his party affiliation) no-new-taxes pledge. Jeb Bush, a fiscal conservative who was nonetheless aware of the problems encountered by his father following his "read my lips" pledge to the Republican National Convention in 1988, chose to avoid making an anti-tax commitment of his own. In the wake of these strategic maneuverings, the tax-and-spend issue never crystallized in 1998 as it had in earlier campaigns in Florida.

6. The Democrats carried Broward County by comfortable margins in the gubernatorial elections of 1994 (65 percent) and 1998 (62 percent), the latter despite the fact that Bush won statewide by nearly ten percentage points over MacKay.

7. This disparity should, of course, have no bearing on coverage of a statewide election.

8. "Relatively clear" does not necessarily mean "polar opposite." For example, Bush endorsed higher spending for public education but refused to commit to the 40 percent share of the state budget urged by MacKay.

9. These items showed little or no evidence of voter learning during the campaign. For example, respondents were about as likely to associate *incorrectly* the no-new-taxes pledge with Jeb Bush in November (38.5 vs. 23.6 percent who said MacKay) as had been the case in July/August (28.2 vs. 16.6 percent). We believe that this illustrates the continuing importance of party stereotypes (Rahn 1993; Lodge and Hamill 1986) as a tool, or cognitive short-cut, used by citizens to help them make sense of a complex political environment.

10. Some of these connections (MacKay and teachers) were stronger and more explicit than others (Bush and tobacco).

11. As it happened, none of the issue types listed here became major points of contention during the campaign.

12. The second, fourth, sixth, and eighth columns in Table 1 display percentages that include a correction for guessing. The correction was calculated as percent wrong subtracted from percent right, setting aside those who say they don't know (cf. Patterson 1980).

13. While our evidence on this point is admittedly impressionistic, we are confident that a content analysis of news sources (especially print) and of paid ads would provide few surprises. There was one important difference between vouchers and abortion: Both candidates aired spots dealing with the former, but only MacKay addressed the latter in his ads – primarily, we suspect, because the issue had hurt Bush in 1994 and, with the religious right already behind his candidacy, there was no reason to risk having the same thing happen in 1998.

14. Abortion and voucher preferences were measured in our July/August survey, gun control in November. Question wordings were as follows: (a) "When it comes to abortion matters, in general, would you describe yourself as being pro-choice or pro-life?" (2 = pro-life, 1 = pro-choice); (b) "Have you read or heard anything about vouchers for public school students? (If Yes) Do you think the state giving vouchers to students in underperforming schools is a very good idea, a somewhat good idea, a bad idea, a very bad idea, or haven't you thought much about this?" (4 = very good idea, 1 = very bad idea); (c) "In [the November] election, did you vote for or against a state constitutional amendment that would allow individual counties the option to increase the waiting period for criminal records checks from three days to five days in connection with the sale of any firearm?" (2 = against, 1 = for).

15. Bush benefitted from whatever ambiguity remained at the end of the campaign. Pro-choice voters who were misinformed about which candidate supported abortion rights had a 62 percent probability of supporting Bush, compared with 50 percent for the totally uninformed. Looked at from another angle, the probability of a Bush vote was 88 percent for pro-life misinformed and 75 percent for pro-life uninformed.

16. As with abortion, Bush fared quite well with people who lacked information. The Republican nominee received 99 percent of the vote from gun control opponents, as well as 60 percent from gun control advocates, who did not know where the candidates stood. Among those who wrongly believed that MacKay opposed additional gun laws, most still ended up supporting the candidate whose views most closely matched their own (60 percent Bush from gun control opponents vs. 37 percent from gun control advocates).

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Table 1
Learning in the 1998 Florida Governor's Race

A. Issue Position	<u>July/August</u>		<u>October</u>		<u>Post-election</u>		<u>Learning</u>	
	Correct	PDI	Correct	PDI	Correct	PDI	Correct	PDI
school vouchers (B)	42.2	23.3	62.1	43.8	79.4	67.9	37.2	44.6
abortion rights (M)	59.8	52.5	66.3	55.0	81.1	72.7	21.3	20.2
no more gun laws (B)	43.2	29.9	46.8	31.8	63.3	45.8	20.1	15.9
right to sue HMOs (M)	48.2	33.6	58.0	42.7	63.2	45.0	15.0	11.4
budgeting 40% to education (M)	39.5	22.2	47.2	32.5	54.1	33.2	14.6	11.0
drug czar (B)	26.6	3.7	28.9	1.7	37.5	14.5	10.9	10.8
not raising taxes (M)	16.6	-11.6	28.2	-6.0	23.6	-14.9	7.0	-3.3
 B. Group Support	 Correct	 PDI	 Correct	 PDI	 Correct	 PDI	 Correct	 PDI
police organizations (B)	16.9	0.0	26.7	14.4	66.7	54.5	49.8	54.5
tobacco companies (B)	46.5	38.9	47.8	40.8	66.7	60.9	20.2	22.0
teacher organizations (M)	47.8	38.5	49.3	41.3	65.0	52.8	17.2	14.3
environmentalists (M)	44.9	35.3	42.9	32.6	59.9	46.3	15.0	11.0
Christian groups (B)	56.5	51.8	56.5	49.5	67.3	59.5	10.8	7.7
 Mean number correct	 4.89		 5.62		 7.27			
Alpha	0.791		0.775		0.719			

Source: Fort Lauderdale Sun Sentinel panel survey of registered voters, July - November 1998 (N = 301)

Note: Correct identifications of Bush are indicated by (B); correct identifications of MacKay are indicated by (M).

The first set of entries for each wave indicates the percentage of all panel respondents who matched the appropriate candidate with the issue position or group endorsement. The second set of entries (PDI) presents the difference between that percentage and the percentage who matched the wrong candidate with that position or endorsement. The entries for "learning" indicate the differences in these figures between the post-election wave and the July/August wave.

Table 2
Changes in Campaign Related Knowledge

A. Who favors vouchers? (correct response: Bush)

November	July/August					Row marginals
	MacKay	Bush	Both	Neither	DK	
MacKay	3.7%	2.7%	0.7%	0.3%	4.1%	11.5%
Bush	14.9%	38.2%	1.4%	1.0%	24.0%	79.4%
Both		0.3%				0.3%
Neither	0.7%	1.4%			6.8%	8.8%
DK						
Column marginals	19.3%	42.6%	2.0%	1.4%	34.8%	100.0%
correct (Bush - Bush)		38.2%				
learned (other - Bush)		41.3%				
forgot (Bush - other)		4.4%				
never knew (other - other)		16.1%				

B. Summary of learning and forgetting by issue or group endorsement

		Learned	Forgotten	Difference
police organizations	Bush	52.4%	3.1%	49.3%
school vouchers	Bush	41.2%	4.4%	36.8%
abortion rights	MacKay	26.7%	5.7%	21.0%
tobacco companies	Bush	26.5%	6.8%	19.7%
no more gun laws	Bush	27.9%	8.4%	19.5%
teacher organizations	MacKay	26.5%	10.2%	16.3%
right to sue HMOs	MacKay	20.3%	5.1%	15.2%
budgeting 40% to education	MacKay	24.3%	9.8%	14.5%
environmentalists	MacKay	22.1%	7.8%	14.3%
Christian groups	Bush	17.7%	7.1%	10.6%
drug czar	Bush	22.3%	11.8%	10.5%
not raising taxes	MacKay	17.2%	10.1%	7.1%

Table 3
Ordinal Regression Models of Learning and Forgetting

	Learning		Forgetting	
	coeff.	sig.	coeff.	sig.
General Knowledge July	0.14	0.09	-0.39	0.00
Campaign Knowledge July	-0.40	0.00	0.24	0.00
Care who wins? Not much	-0.90	0.05	-0.35	0.48
Care who wins? Some	0.14	0.60	-0.03	0.90
Care who wins? Great Deal (omitted)				
Partisan Strength - independent	0.66	0.10	0.41	0.34
Partisan Strength - leaner	0.52	0.08	0.44	0.17
Partisan Strength - weak partisan	0.13	0.63	0.53	0.08
Partisan Strength - strong (omitted)				
-2 log likelihood	925.32		594.39	
Nagelkerke R ²	0.33		0.11	
Number of cases	285		285	

Table 4

Probability of voting for Bush by issue position and awareness of candidate's position

a. Vouchers

	Very Bad	Very Good
Knew all along	4.1%	91.6%
Newly learned	3.7%	87.3%
Wrong	37.3%	17.3%
Don't Know	85.2%	15.8%

b. Abortion

	Pro-choice	Pro-life
Knew all along	7.4%	85.7%
Newly learned	18.5%	55.6%
Wrong	61.5%	87.5%
Don't Know	50.0%	75.0%

c. Gun Control (position on waiting period)

	For	Against
Knew all along	12.8%	76.9%
Newly learned	21.8%	66.7%
Wrong	37.2%	60.0%
Don't Know	60.0%	99.8%

Appendix 1
Binary Logistic Regression Estimates of Vote Choice by Issue Position and Issue Awareness

	Abortion		Vouchers		Gun Control	
	coeff.	std. error	coeff.	std. error	coeff.	std. error
Issue Position	4.322	0.642	1.85	0.349	3.124	0.733
Issue Awareness - Wrong	5.846	1.793	4.834	2.377	3.591	1.443
Issue Awareness - Don't Know	5.753	1.665	7.898	3.381	-0.346	11.177
Issue Awareness - Learned	3.665	1.188	0.004	1.312	1.795	1.285
Issue Position by Wrong	-2.846	1.371	-2.198	1.014	-1.153	1.055
Issue Position by Don't Know	-3.223	1.188	-2.991	1.268	-2.195	1.213
Issue Position by Learned	-2.617	0.827	-0.117	0.501	2.671	11.149
Constant	-6.852	0.878	-5.006	0.927	-5.043	0.922
-2 Log Likelihood	225.038		175.081		290.417	
Nagelkerke R Square	0.477		0.501		0.275	
Number of Cases	272		219		278	

The outcome variable in each model is the reported vote choice (1 = Bush, 0 = MacKay). These models were used to derive the estimated probabilities in Table 4.

Appendix 2
Binary Logistic Regression Estimates of Preference Change

	coeff.	sig.
General Knowledge July	-0.014	0.942
Campaign Knowledge July	0.064	0.625
Facts learned	0.28	0.046
Facts forgotten	0.223	0.272
Care who wins? Great Deal (omitted)		
Care who wins? Not much	1.177	0.179
Care who wins? Some	0.573	0.309
Partisan Strength - strong (omitted)		
Partisan Strength - independent	1.213	0.157
Partisan Strength - leaner	1.107	0.127
Partisan Strength - weak partisan	0.532	0.463
Constant	-4.804	0.000
-2 log likelihood	119.061	
Nagelkerke R ²	0.126	
Number of cases	236	

The outcome variable in this model is 1 if the reported vote in November was different than the reported preference in July/August, 0 otherwise. This model was used to derive the estimated probabilities in Figure 1.

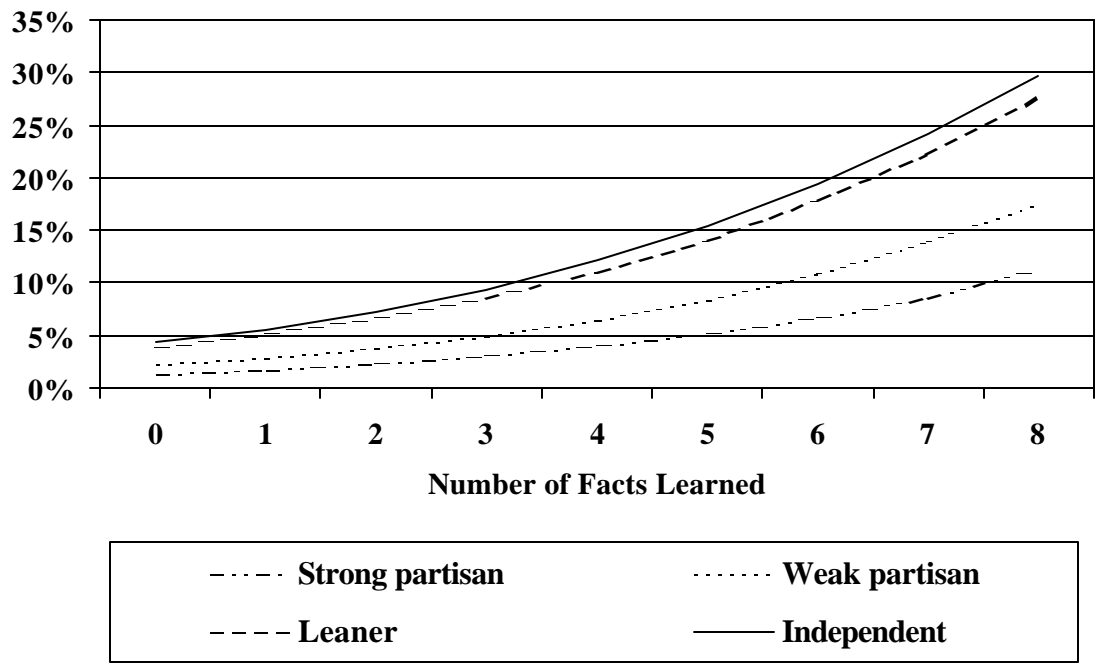


Figure 1: Probability of Preference Change by Learning and Strength of Partisanship