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Can Voters Predict Changes in Their Own Attitudes?

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Although scholars have established that voters have unstable preferences (e.g., Converse, 1964; Zaller, 1992) and that they are not accurate when recalling past preferences (e.g., Markus, 1986; Niemi, Katz, & Newman, 1980; Smith, 1984), existing research has not systematically explored whether voters can accurately predict the changing nature of their own opinions. The question of whether people recognize the instability of their political preferences was explored in a random sample of Pennsylvania registered voters who were surveyed in August and October 1996, during the presidential election campaign. The first survey elicited respondents' positions on two political issues (welfare reform and the environment) and on the two major candidates, and also asked them to estimate the likelihood that each of these positions would change during the next 2 months. The second survey elicited positions at that time and also asked voters to recall their prior positions. Measured both by expectations and recall, respondents tended to underestimate the degree to which their own positions would change or had changed over time. This research has implications for the use of public opinion polling and more broadly for the practice of democratic politics.

KEY WORDS: attitude change (prediction and recall), public opinion.

A common finding from public opinion research is that people's political positions are not stable over time (Campbell, Converse, Miller, & Stokes, 1960; Converse, 1964; Markus, 1986). Converse (1964), in path-breaking research, found a pattern he referred to as "non-attitudes" in which individuals' responses to some survey questions varied almost randomly over time. Although Converse observed this pattern for "non-symbolic

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attitudes," he found much greater stability for "symbolic attitudes." Subsequent research has tended to support Converse's conclusions of differential stability for symbolic and non-symbolic attitudes (e.g., Converse & Markus, 1979; Markus, 1982; Sears, 1969). Some researchers, however, have raised methodological questions about the distinction between symbolic and non-symbolic attitudes (e.g., Achen, 1975; Inglehart, 1985; Krosnick, 1991). The stability of attitudes over time remains an active area of research (Krosnick, 1991; Markus, 1986; Pierce & Rose, 1974; Zaller, 1992).

Instability in public opinion need not be considered in a negative light. It is perfectly reasonable for people to change their political positions in response to new information they receive. Indeed, complete fixity of views in a changing environment would be as much of a cause for concern as extreme volatility. However, instability can be problematic if people are *unaware* of the transience of their own views. If people overestimate the stability of their own political opinions, they may support policies that are more extreme or irreversible than is warranted. Imagine a family that is contemplating buying season tickets for a local baseball team; not only should they take into account their immediate feelings about the team, but also they might try to predict how they would feel over the course of the season. Similarly, voters are likely to take heed not only of their current attitudes toward candidates and issues, but also of the stability and likelihood of change over time in those attitudes. If citizens fail to note the potential volatility of their own attitudes, they may support involvement in foreign conflicts that they end up not caring about, expensive remedies for problems they are temporarily stirred up about, or extreme sanctions for mild crimes that have received recent media attention.

Concern about the volatility of public opinion is not new. In *Federalist 71* (1787), Alexander Hamilton argued that although most people intend to act for the public good, often they become caught up in the prevailing mood; to prevent the public's erratic moods from exerting an excessive influence on public policy, the Executive should be able to act without "unqualified complaisance to every breeze of passion." James Madison, in *Federalist 10,* also justified his support of republican features of national government on the basis of the need to protect the people from their own volatile opinion swings.

Media ignorance of instability can likewise be problematic, as is nicely illustrated by events that occurred during the 1996 general election in North Carolina. In response to public criticism about too much horse-race coverage and too little issue coverage during campaigns, several major media outlets joined together to focus on the most important issues to North Carolina voters. Surveys conducted 4 months before the election produced a list of North Carolinians' top issues, which became the focus of campaign coverage.[1] Such a practice is problematic

[1] The top issues according to the poll were crime, drugs, taxes and spending, affordable health care, and education. Notable issues missing from the list were jobs and race. Bob Dole's presidential campaign had stressed jobs. When Harvey Gantt (Democratic nominee for the North Carolina Senate seat) had previously challenged the incumbent senator, Jesse Helms, race had proven to be a critical issue.

if, as we and other researchers have found, people's prioritization of issues can change relatively rapidly. In this case, the media's lack of knowledge about the instability of public opinion may have promoted an entire media campaign based on issues that no longer concerned the public by the time the election took place.[2]

We present results from a study that examines whether people foresee the degree to which their own political positions may change, and whether they are aware of such change after it occurs. In the months before the 1996 general election, we conducted telephone interviews of a quasi-random sample of Pennsylvania registered voters. Trained callers conducted initial interviews in August and follow-up interviews in October. The initial interview elicited respondents' positions on welfare reform, the environment, and the presidential candidates, and also assessed the likelihood that their opinions would change. The follow-up interview also elicited respondents' positions on issues (allowing us to measure how much they actually changed) and asked them to recall how their opinions had changed between the two interviews. The interview-reinterview design allowed us to compare respondents' actual opinion change over 2 months with their predictions of change and recollections of change.

Prior Research on Attitude Stability and Awareness of Change

Research has generally found that people overestimate the stability of their political positions. Primarily through the use of recall questions in surveys, political scientists have found that people underestimate the instability of their own positions on issues and attitudes toward parties.

Smith (1984) used the 1982 General Social Surveys (GSS) to study the reliability of attitude recall questions for several issues. Respondents gave current (1982) attitudes and recalled 1972 attitudes on communism, busing, and racial intermarriage. Some respondents showed a tendency to overreport conservative positions and traditional values, whereas many others underestimated the difference between their past and present positions and thus overestimated the consistency of their beliefs over the 20-year period.

Markus (1986) examined belief stability, and people's views of it, using data from a panel study of parents and their children. In interviews conducted in 1973 and 1982, respondents reported their positions on a variety of issues such as welfare spending, equality for women, and political ideology. During the 1982 interviews, respondents also gave their recollection of their 1973 positions. Respondents' positions were, in fact, fairly stable over time, but respondents nevertheless overestimated the stability of their views between 1973 and 1982.

[2] It is also possible that the media's persistent coverage on these issues kept the topics on the political agenda. In other words, the media were part of a circular process. Initially, they identified issues on the minds of voters, which probably reached voters through high levels of media coverage. Then, the media chose to focus on those issues throughout the campaign, preserving the issues' salience.

Other researchers have observed a similar pattern (e.g., Krosnick, 1988). Using partisanship questions from national panel studies, Niemi et al. (1980) found that voters tended to overreport the stability of their partisanship. About 78% of respondents in a U.S. national panel study reported the same partisanship in 1972 and 1976, but many respondents did not recall past party identification correctly. Of the respondents who did not change their partisanship, 96% accurately reported not changing; of the respondents who did change their partisanship, however, 91% reported *not* changing. In short, respondents overwhelmingly reported not changing their partisanship, even though about 22% did change their party affiliation between the 1972 and 1976 interviews. Reiter (1980) also identified this pattern for American partisan attitudes; he found that many respondents apparently project their current party affiliation back into the past. MacDermid (1989) showed similar results for Canadian partisan attitudes. On the basis of the Canadian National Election panel studies (1974, 1979, 1980), MacDermid found that one-third of respondents reported consistent partisan attachment even when their partisanship had changed.

Ross, in an important series of papers (summarized in Ross, 1989), argued that underestimation of change in beliefs and attitudes results from people's reliance on intuitive theories of belief change and constancy. According to Ross, when people attempt to recall their own past political positions, they do not actually retrieve the desired information. Instead, they begin by considering their current position, then make an adjustment for how they are likely to have changed over time on the basis of their intuitive theories of how attitudes and feelings change over time. When people's theories are inaccurate, they will tend to misremember their own past beliefs or feelings.

In some cases, the use of intuitive theories can lead to exaggerated notions of change. For example, many people hold the apparently incorrect theory that people tend to become gradually more conservative as they age. This causes young people to predict that they will become more conservative as they age and causes older people to remember themselves as having been more progressive in their youth than they actually were. Consistent with this reasoning, Markus (1986) found that parents believed that their political views had changed more over a 10-year interval than did their children, despite the lack of any significant difference between the two groups.

Despite the apparently widespread belief in creeping conservatism, the dominant intuitive theory is that political attitudes tend to be relatively constant, at least in the short term. According to Ross (1989), people tend to believe that their current attitudes resemble those they held in the recent past unless they have explicit reasons to think that they have changed. In the absence of such reasons, therefore, people are likely to underestimate changes that actually occur.

The research just reviewed focuses on how people recall their past attitudes and why they tend to overestimate the stability of their attitudes from the past to the present. Our research also examines retrospective estimates of attitude stability, but takes this line of research one step further by examining people's *predictions* of their own future attitudes. Such predictions are likely to have similar determinants

and to display similar biases as recollections. As Ross (1989) noted, people are likely to use implicit theories not only to recall the past but also to predict the future. Indeed, reliance on implicit theories is even more likely for predictions than for recollections because that is all that people have to go on; when recalling the past, people can also make use of actual memories of the past. If people believe intuitively that their attitudes do not change much over time, therefore, it will be natural for them to predict that their own future attitudes will resemble the attitudes they hold in the present.

In addition to the implicit theories described by Ross (1989), there are other reasons to anticipate that people will tend to underpredict changes in their beliefs and attitudes. The "hindsight bias" (Fischhoff, 1975), which is also sometimes referred to as the "knew it all along" effect, reflects the well-documented observation that people view past events as having been more predictable than they actually were. One consequence of the hindsight bias is that people tend to underestimate the surprise value of new information they receive about people and events; as soon as they hear that something happened, they believe that they had anticipated it beforehand. Believing that they live in a world with few surprises, they are unlikely to anticipate that unexpected future events will change their opinions on issues.

A third reason for underestimating change applies specifically to emotion-laden attitudes. Loewenstein (1996, 1998) provided evidence of "cold-to-hot" and "hot-to-cold" intrapersonal empathy gaps: When in a "cold," nonemotional state, people have difficulty imagining themselves in a "hot" state; likewise, when in a "hot" state, they find it difficult to imagine themselves being "cold." Both types of intrapersonal empathy gaps apply prospectively (to predictions of the future) and retrospectively (to recollections of the past). Applied to political beliefs and attitudes, hot-to-cold empathy gaps imply that people who are worked up about a particular issue will remember themselves as having been more agitated about the issue in the past than they actually were, and will anticipate being more agitated in the future than they will actually be. Likewise, cold-to-hot empathy gaps imply that people who felt emotionally about an issue in the past, but no longer do, will tend to underappreciate the intensity of their own past feelings.

In this research we examine how people's opinions change, whether they can predict their changes, and whether afterward they are aware of changes that do occur. On the basis of the research reviewed above, we test several hypotheses. First, in line with the literature on attitude change, we expect people to change their opinions between the two interviews. Second, and more important, we hypothesize that respondents will underpredict the magnitude of their own changes. Third, and consistent with the idea that problems of memory play a role in mispredictions, we anticipate that people will underrecall their own degree of change. Support for the first and third hypotheses would represent replications of existing research; support for the second hypothesis would be an extension of research in the area of attitude prediction.

Method

We administered two surveys, separated by a 2-month interval, to a quasi-random sample of Pennsylvania voters (see the Appendix for complete question wording). In the first survey, we asked respondents a series of three questions about each of four political issues: the importance to them of the environment as a political issue, their position on welfare reform, and their support for Bill Clinton and Bob Dole. We chose to ask slightly different questions for welfare and the environment. We felt the importance rating was more relevant to the environment question because we expected most people to take fairly similar positions on the issue. We thought the positioning question was better suited for the welfare reform question, where we expected greater variation in individual positions. In addition, respondents were asked to identify what they considered to be the most important problem facing the nation.

For each issue (including the most important problem identified) and for each candidate, respondents were asked to rate the issue or candidate on a scale ranging from 0 to 100 with respect to importance, support (in the case of welfare reform), or candidate approval. The second question asked respondents to estimate the likelihood of changing their rating (of the issue or candidate) if they were asked again in 2 months. For the most important problem identified by respondents, this question read:

> Imagine that we contact you again in 2 months, what do you think is the chance that you will *either* increase or decrease your rating by at least 10 points? That is, what is the likelihood that you will feel substantially different (meaning more than plus or minus 10 points different) about this issue than you do now? Please give your answer on a scale from 0 to 100, where 0 means no chance and 100 means you are absolutely certain that you will either increase or decrease your rating by at least 10 points.

The final question in each series determined whether respondents expected the change in their ratings to be positive or negative. Respondents were not asked the direction-of-change question if they reported a zero likelihood that their answer would change. The initial interview concluded with a series of standard demographic questions.

The second interview again asked respondents for ratings from 0 to 100 on the importance of the environment, support for welfare reform, and approval of Clinton and Dole, and the most important problem that they had mentioned in the first interview. In addition, respondents were again asked to state the most important problem facing the nation and to rate its importance. Next, they were asked to recall whether their own prior positions had changed for each of the issues and candidates. They were not asked this question for the most important problem, because it was difficult to make this inquiry without explaining to some respondents that they had in fact changed their responses.

We selected the issues of welfare reform and the environment because they represented two different types of issues that might ultimately become critical in

the 1996 election.[3] We chose to ask questions regarding Clinton and Dole because they were the major party nominees for president. Time constraints led us to exclude similar questions on Perot and other third-party candidates. The candidate questions were included to test for different patterns of predicted and recalled changes in attitudes toward candidates versus attitudes toward issues.

Ten Carnegie Mellon University undergraduates conducted the interviews by telephone. The interviewers attended two training sessions before their first calling session and were supervised throughout the calling period. All calls were made during weekday evenings. Initial interviews were conducted in mid-August; follow-up interviews were conducted in mid-October.

We interviewed a quasi-random sample of Pennsylvania registered voters using lists of voters broken down by neighborhood clusters. Lists were created through a random selection of individuals. Once individuals were selected, the program selected other names that were geographically closest to the selected individuals. For the first interviews, callers contacted the first person on the list and continued to call until they were rejected or could not reach the person after five attempts. At this point, they followed the same procedure for the next person on the list. In the follow-up interviews, the number of attempts was increased to 12. The response rate during the first interview was 42.0%. For the follow-up interviews, the response rate was 74.4%; that is, 163 of the 219 people who completed initial interviews also completed follow-up interviews. We examined demographic variables as well as initial ratings and predictions of change, and we did not find any systematic differences between the respondents who were reached for the follow-up interviews and those who were not reached. Between the two groups (those who completed the follow-up interview and those who were not reached for the follow-up interview), we did not find significant differences on gender, partisanship, or initial ratings or predictions of change for Clinton, Dole, welfare reform, the environment, or the most important problem.

Results

Table I shows, for each issue, the mean rating at the first interview, the mean change in ratings, and the mean absolute value of change in ratings.[4]

[3] Early in the election season, pundits identified these issues as potentially damaging issues for the Republicans. Ultimately, the Democrats did not use the environment issue because Clinton retained a lead over Dole in most opinion polls throughout the campaign. Welfare reform did in fact become more important as the two major party candidates argued about which changes were necessary in the Welfare Reform Act passed in 1996.

[4] N values vary throughout these analyses because individual respondents did not answer every question in the surveys. The total number of respondents who completed both waves is 163. Respondents were excluded for individual analyses if they did not provide answers in both waves for the questions being examined.

Table I. Mean Ratings at the Initial Interview and Mean Observed Changes from First to Second Interview

Issue	Mean rating at first interview	Mean change (second – first)	Mean absolute value of change (second – first)	*N*
Welfare	64.69 (31.80)	1.62 (33.60)	20.46 (26.66)	149
Environment	76.64 (20.93)	2.53 (19.17)	11.58 (15.45)	158
Clinton	55.88 (29.11)	1.18 (19.53)	11.62 (15.72)	160
Dole	40.79 (34.61)	–2.59 (20.41)	11.89 (16.76)	158
Most important problem	83.43 (16.02)	3.82 (21.05)	13.51 (16.56)	150

Note. Standard deviations are in parentheses.

Although the initial ratings vary substantially from issue to issue, this is not unexpected because they represent responses to different questions (i.e., support for a candidate, position on an issue, or importance of an issue). The mean change for ratings was quite small and generally positive. For Dole, however, the mean change was negative and still quite small. The initial Dole ratings were lower than the mean ratings for other issues, and they shifted even lower (on average) at the second interview. The absolute change in respondents' ratings provides more information about the average size of rating shifts. The mean absolute change was largest for welfare (20.46) and smallest for the environment (11.58).

Figure 1 shows the distribution of changes in ratings for each topic. Although a large number of respondents did not change between the two interviews, many respondents did display significant instability. Combining the changes across the five topics, 28% of responses changed by at least ±20 points, 14% by at least ±30 points, 10% by at least ±40 points, and 7% by at least ±50 points.

Table II shows responses to the most important problem question for the first and second interviews as well as the instability of the responses. Gallup and other polling groups have asked this question regularly for decades and found significant volatility in the public's responses over time. In our sample, most people changed their opinion of what the most important problem was between the initial and follow-up interviews.

Economic issues were the most popular responses to the most important problem question for both interviews (37.3% in August and 35.2% in October), but nearly 40% of the people listing economic issues at one point in time gave a different response at the other (see lower panel of Table II). Domestic issues ranked as the second most popular responses, but in this case the volatility was even greater, with 58% of the respondents identifying domestic issues at only one interview or the other. These general categories offer a conservative interpretation of the amount of change. In fact, the responses combined into the domestic issues category are quite diverse, and the percentage of changers is much higher on the specific issues.

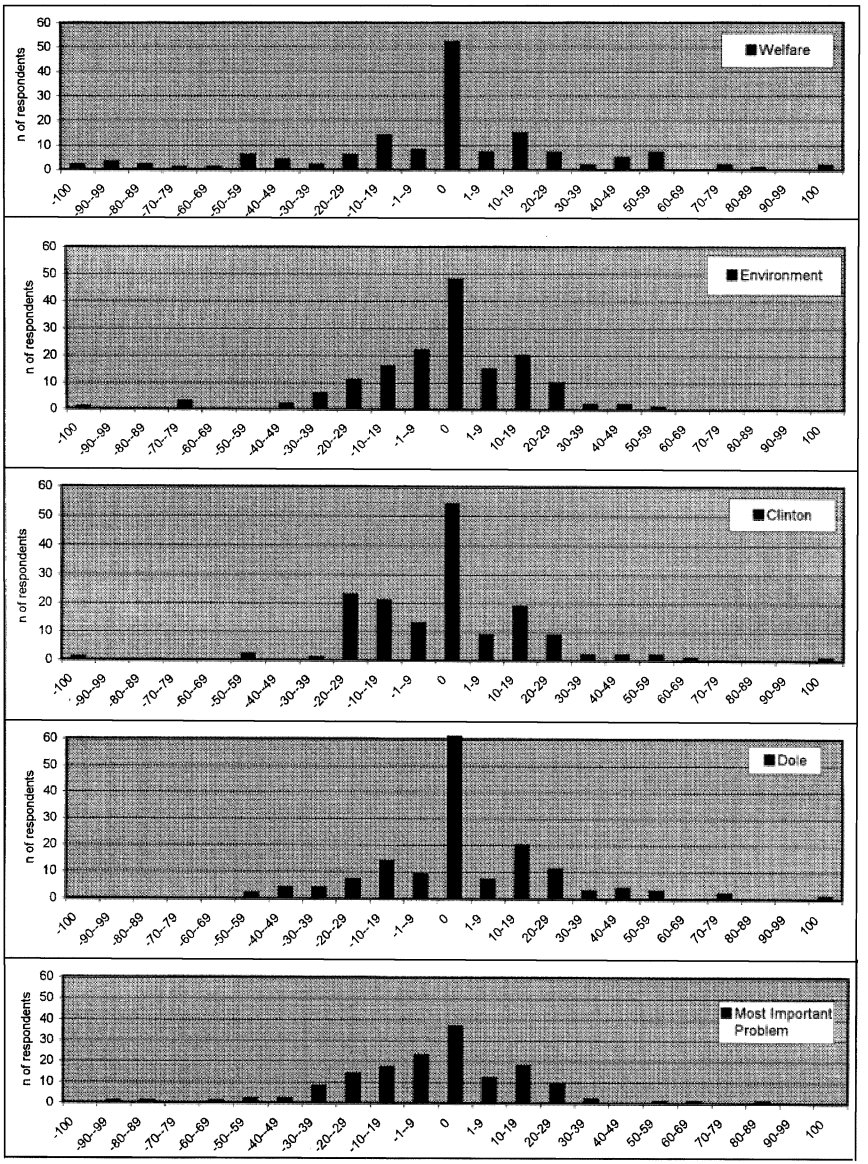

Figure 1. Distribution of changes.

Table II. Responses to Most Important Problem Question by Frequency of Citation at First and Second Interviews

Issue	Percent cited at first interview ($N = 161$)	Percent cited at second interview ($N = 162$)	Percent with different responses between interviews[a]
	Original response categories		
Crime	16.1	14.8	57.1
Debt/deficit	14.3	10.5	67.7
Economy	14.3	14.2	46.7
Jobs/employment	8.7	8.0	50.0
Morality	8.1	10.5	38.9
Welfare	5.6	4.9	58.3
Family	5.0	3.7	44.4
Racism/equality	4.3	3.1	42.9
Drugs	3.1	5.6	60.0
Poverty/hunger	3.1	3.1	57.1
Population/people	3.1	1.2	60.0
Health care	3.1	1.2	100.0
Politics/politicians	2.5	6.8	75.0
Terrorism	1.9	–	100.0
National defense	1.9	–	100.0
Abortion	1.9	0.6	66.7
Education	1.9	4.9	75.0
Environment	0.6	0.6	0.0
Other	0.6	0.6	100.0
Taxes	–	2.5	100.0
Imports/trade	–	1.2	100.0
Immigration	–	0.6	100.0
Gun control	–	0.6	100.0
	Combined response categories[b]		
Economy	37.3	35.2	39.7
Domestic issues	23.6	21.0	58.0
Crime/safety	21.1	21.0	55.3
Moral issues	13.0	14.2	48.3
Politics	2.4	6.8	75.0
Other	2.5	1.9	100.0

[a]This column shows the percentage of respondents who gave different responses to the most important problem question in the two interviews.

[b] "Economy" includes debt/deficit, economy, jobs, taxes. "Domestic issues" includes welfare, education, environment, racism, poverty, health care, population, abortion, immigration. "Crime/safety" includes crime, drugs, gun control, terrorism. "Moral issues" includes morality, family. "Politics" includes politics, politicians. "Other" responses were defense and trade.

The data in Table II indicate that most people changed their responses to the most important problem question between the first and second interviews. At the aggregate level, however, there was less change between interviews. Crime, debt, economy, jobs, and morality remained the top five responses in both interviews (see upper panel of Table II).

Table III shows, for each topic, the percentages of respondents who did not change, decreased, or increased their ratings.[5] The percentage of non-changers ranged from 45.0% for welfare to 53.2% for the environment. The observed changes between the two interviews support previous research on the instability of people's opinions. Between the August and October interviews, about half of the respondents changed their ratings for each issue or candidate by 10 points or more. On the basis of our wording of the predicted change question, we define "no change" as a situation in which the second rating was within 9 points of the first.[6]

When respondents were asked to predict the likelihood of changing their responses if they were asked again in 2 months, a majority predicted they would not change for each issue. Prediction responses of 50 or greater on the 101-point probability response scale were considered as predictions of change, whereas those less than 50 were considered as predictions of not changing.[7] The percentage predicting no change was 67.6% for Dole, 70.8% for welfare, 72.4% for Clinton, 75.0% for the most important problem, and 81.9% for the environment. A comparison between these percentages and those reported in the first column of Table III indicates that fewer respondents predicted that they would change than actually did change, for every topic. This basic finding provides us with initial support for our hypothesis that people underpredict changes in their own future attitudes toward issues and candidates.

Respondents were even less accurate in *recalling* whether they had changed their ratings between the two interviews. For each topic, a majority of respondents believed that they had not changed their positions between the first and second interviews. The percentage of respondents who stated that they had not changed was 74.5% for support of Dole, 76.6% for support of Clinton, 85.8% for welfare, and 89.4% for the environment. These results are consistent with earlier findings that indicate underrecall of attitude change.

[5] If the respondent gave different responses to the most important problem question in August and October, interviewers followed up with an additional question in October in which respondents were asked to rate the importance of the issue they had mentioned as the most important problem in August. This design allowed us to calculate the change in importance ratings between interviews for all respondents, even those who gave different responses to the most important problem question.

[6] The results reported in this section are somewhat weaker if we expand the definition of no change to being within 10 points, but the same general patterns remain. Even if we reclassify respondents who changed their ratings by exactly 10 points and consider them to be "changers," the overall pattern of results remains; respondents underpredict and underrecall the instability of their own attitudes.

[7] We chose to be conservative and included responses of exactly 50 as predictions of change. A substantial minority of respondents chose this midpoint response for each issue (8 to 15%).

Table III. Observed Change in Ratings from Interview to Reinterview

Issue	No change	Decrease	Increase	*N*
Welfare	45.0%	27.5%	27.5%	149
Environment	53.2%	24.7%	22.2%	158
Clinton	47.5%	30.0%	22.5%	160
Dole	52.5%	19.6%	27.8%	158
Most important problem	48.0%	30.7%	21.3%	150

Note. No change is defined as a change of 9 points or less in either direction.

Figure 2 provides a graphic representation of predicted, actual, and recalled change by respondents' initial ratings on the topics.[8] Respondents' ratings for welfare, environment, Clinton, and Dole are categorized by deciles. The lines on the graph show the percentage of respondents who predicted they would change (gave a predicted likelihood of 50 or greater), actually changed (by 10 or more points), and recalled changing. The figure indicates several important points about our data. First, the actual change of respondents' ratings follows a specific pattern: People with extreme initial ratings are least likely to change, whereas people with initially low ratings (in the range 10 to 40) are most likely to change. In addition, those with extreme ratings show the greatest tendency to underpredict their own likelihood of changing. These respondents *are* in fact the most fixed in their views, but they still believe that their beliefs are even more fixed than they actually appear to be. The recalled change variable, by contrast, remains relatively flat and does not show any significant differences between respondents with extreme and moderate ratings. Because the biggest changes occurred in the tails of the distribution, relatively few respondents crossed the midpoint of the scales for any topic. The percentage who did shift their positions across the midpoint ranged from 3% for Clinton to 12% for the environment.

Additional analyses permitted a closer examination of the relationship between respondents' predictions and actual changes for each issue and candidate. Table IV presents, for each issue, a breakdown of respondents according to whether they expected to change, and actually changed, during the 2-month period. Below the data for each issue are tests of two hypotheses. The first is a test of whether there was any relationship between expected and actual change. A significant χ^2 statistic indicates that we can reject the null hypothesis that there is no connection between respondents' predictions that they will change on an issue and whether they actually do. People were certainly not perfectly accurate in their predictions, as indicated by the substantial number of respondents off the diagonals for each issue (38.4% for the environment, 50.8% for welfare, 43.7% for Clinton, 44.2% for Dole, and 42.7% for the most important problem). Nonetheless, there is a significant relationship between predicted and actual change for most topics. The

[8] The most important problem question was excluded from the graph because we did not ask respondents the recalled change question.

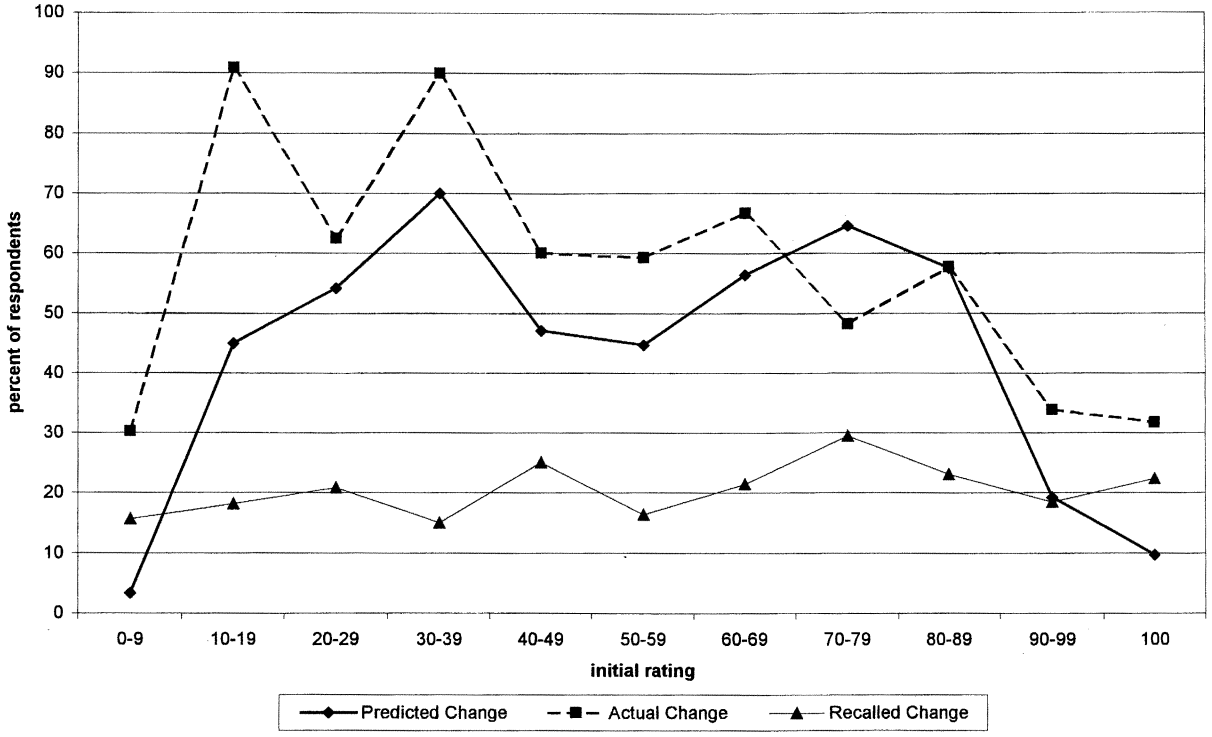

Figure 2. Predicted, actual, and recalled change as a function of initial rating.

Table IV. Observed Change by Predicted Change

	No change (observed)	Change (observed)	Marginals
	Welfare		
No change (predicted)	32.1%	38.1%	70.1%
Change (predicted)	12.7%	17.2%	29.9%
Marginals	44.8%	55.2%	$N = 134$
Test for relationship between observed and predicted change: $\chi^2(1) = 0.119, p > .10$			
Test for asymmetry of prediction errors: $\chi^2(1) = 17.00, p < .005$			
	Environment		
No change (predicted)	49.3%	32.6%	81.9%
Change (predicted)	5.8%	12.3%	18.1%
Marginals	55.1%	44.9%	$N = 138$
Test for relationship between observed and predicted change: $\chi^2(1) = 6.57, p < .05$			
Test for asymmetry of prediction errors: $\chi^2(1) = 25.83, p < .005$			
	Clinton		
No change (predicted)	38.2%	34.0%	72.2%
Change (predicted)	9.7%	18.1%	27.8%
Marginals	47.9%	52.1%	$N = 144$
Test for relationship between observed and predicted change: $\chi^2(1) = 3.70, p < .10$			
Test for asymmetry of prediction errors: $\chi^2(1) = 19.44, p < .005$			
	Dole		
No change (predicted)	37.7%	29.7%	67.4%
Change (predicted)	14.5%	18.1%	32.6%
Marginals	52.2%	47.8%	$N = 138$
Test for relationship between observed and predicted change: $\chi^2(1) = 1.60, p > .10$			
Test for asymmetry of prediction errors: $\chi^2(1) = 7.229, p < .005$			
	Most important problem		
No change (predicted)	39.7%	34.6%	74.3%
Change (predicted)	8.1%	17.6%	25.7%
Marginals	47.8%	52.2%	$N = 136$
Test for relationship between observed and predicted change: $\chi^2(1) = 5.06, p < .05$			
Test for asymmetry of prediction errors: $\chi^2(1) = 22.34, p < .005$			

Note. No change for observed is defined as a change of 9 points or less in either direction. No change for predicted refers to a response less than or equal to 49 out of 100. Percentages refer to proportion of the total sample in each cell.

relationship is strongest for the environment [$\chi^2(1) = 6.57, p < .05$] and weakest for welfare [$\chi^2(1) = 0.119, p > .10$]. Although respondents failed the strictest test of accuracy by not being perfect at their predictions, a majority were accurate (i.e., on the diagonal) for each issue.

The second statistical test examines whether there was a systematic tendency for respondents to overestimate the stability of their own ratings. We predicted that they would not be randomly inaccurate in their predictions, but rather would systematically overestimate stability. If this prediction is correct, then we would expect to find an asymmetry in the off-diagonal cells, with more respondents in the

upper right cell than in the lower left cell. For each issue, we observed this pattern. Respondents significantly overestimated the stability of their own positions on all topics.[9]

Table V helps to clarify the source of the underprediction of change. It compares the accuracy of respondents who predicted they would change to that of those who predicted they would not change. For example, the welfare entries indicate that 45.7% of respondents who predicted they would not change their positions on welfare were accurate, whereas 57.5% of the people who predicted they would change their positions on welfare were accurate. Consistent with the general pattern of underprediction of change, for every issue but Dole a higher percentage of respondents who predicted change were accurate relative to those who predicted no change. However, the differences were relatively small (or, in the case of Dole, nonexistent). The major source of underprediction, therefore, was not the greater accuracy on average of those who predicted no change, but rather the disproportion of people who predicted they would not change.

Inevitably, some respondents were more accurate than others in their predictions of change. We used the demographic information collected in the initial survey to determine whether the accuracy of prediction was related to any demographic factors. Table VI shows the percentages of respondents accurately predicting change or no change by party and gender. Once again, we defined no change as being within 9 points of their previous rating. Overall, about 56% of respondents made accurate predictions about changes in their ratings. We did not find significant differences in accuracy on the basis of partisanship or gender. Nor was the accuracy of prediction statistically related to any of the other demographic variables (education, income, age).

Table VII shows the relationship between observed changes and recalled changes for each issue, with statistical tests of hypotheses presented below the data for each issue (as in Table IV). Again, the respondents were not perfectly accurate, as indicated by the substantial number of respondents off the diagonals for each issue (45.6% for the environment, 54.7% for welfare, 48.7% for Clinton, and 50.6% for Dole). However, the first statistical test for each issue reveals that, unlike predictions of change, there are no statistically significant relationships between recalled and actual change (all p values $> .10$). As was true for predictions of change, but even more strikingly, respondents significantly underrecalled the magnitude of changes in their own positions. The underrecall of change was statistically significant at the .001 level for all the topics: welfare, Clinton, and Dole, and at the .005 level for the environment.

[9] In additional analyses not reported here in detail, we examined the relationship between predicted direction of change and observed direction of change for each topic. Even when respondents correctly predicted that they would change, they seldom predicted the direction of change accurately. Including the direction of change in the test of accuracy yields very low levels of accuracy for respondents' predictions. Similarly, the relationship between recalled direction of change and observed direction of change was weak and nonsignificant for each topic.

Table V. Accuracy by Predictions of Change for Each Issue

Accuracy	Predicting no change	Predicting change
Welfare	45.7% (43)	57.5% (23)
Environment	60.2% (68)	68.0% (17)
Clinton	52.9% (55)	65.0% (26)
Dole	55.9% (52)	55.6% (25)
Most important problem	53.5% (54)	68.6% (24)

Note. Percentages represent the proportion of respondents who made accurate predictions within the groups predicting no change and change, respectively. Values in parentheses are numbers of respondents.

Table VI. Percentages of Respondents Accurately Predicting Change or No Change, by Party and Gender

Issue	Mean	Democrat	Republican	Male	Female	*N*
Welfare	50	49	51	52	47	133
Environment	61	59	64	59	63	137
Clinton	56	55	56	56	56	143
Dole	55	59	52	51	60	137
Most important problem	57	55	60	57	58	136

Discussion

The results just presented lend further support to findings from earlier research showing that people tend to underestimate changes in their own political positions. Consistent with the earlier research, we find that people underestimate past changes. We show, however, that people also underpredict future changes in their own positions. All of the topics we examined showed the same pattern of underprediction and underrecall of change.

Although our research has uncovered some previously unrecognized regularities, one potential criticism is that some of the observed changes in ratings may reflect measurement error rather than actual change in attitudes. Measurement error could contribute to, or even explain, respondents' tendency to overestimate the stability of their ratings (in predictions as well as recall). Our question wording was intended to minimize this problem by asking respondents for the chance that they would increase or decrease their *rating* (as opposed to their underlying position) by at least 10 points. Also, before asking the first such question, we explicitly reminded them that "people sometimes change their opinions about the importance of different problems." This reminder also served to diminish potential hesitance by respondents to predict that they would change because doing so might suggest that their current attitudes were wavering.

Table VII. Observed Change by Recalled Change

	No change (observed)	Change (observed)	Marginals
	Welfare		
No change (recalled)	35.8%	45.9%	81.7%
Change (recalled)	8.8%	9.5%	18.3%
Marginals	44.6%	55.4%	$N = 148$
Test for relationship between observed and recalled change: $\chi^2(1) = 0.17, p > .10$			
Test for asymmetry of recall errors: $\chi^2(1) = 40.50, p < .001$			
	Environment		
No change (recalled)	47.5%	39.9%	87.4%
Change (recalled)	5.7%	7.0%	12.7%
Marginals	53.2%	46.9%	$N = 158$
Test for relationship between observed and recalled change: $\chi^2(1) = 0.61, p > .10$			
Test for asymmetry of recall errors: $\chi^2(1) = 9.68, p < .005$			
	Clinton		
No change (recalled)	36.9%	38.1%	75.0%
Change (recalled)	10.6%	14.4%	25.0%
Marginals	47.5%	52.5%	$N = 160$
Test for relationship between observed and recalled change: $\chi^2(1) = 0.53, p > .10$			
Test for asymmetry of recall errors: $\chi^2(1) = 37.35, p < .001$			
	Dole		
No change (recalled)	37.3%	35.4%	72.7%
Change (recalled)	15.2%	12.0%	27.2%
Marginals	52.5%	47.4%	$N = 158$
Test for relationship between observed and recalled change: $\chi^2(1) = 0.26, p > .10$			
Test for asymmetry of recall errors: $\chi^2(1) = 12.80, p < .001$			

Note. No change is defined as a change of 9 points or less in either direction. Percentages refer to proportion of the total sample in each cell.

Some of the patterns observed in the data, such as the pronounced differences in likelihood of change as a function of initial position (see Figure 2), suggest that observed changes in opinions are in large part real. Figure 2 also shows that, at the individual level, there is a relationship between extremity and respondents' beliefs about change (for both predictions and recollections). The correlation between actual and predicted change supports the notion that observed changes are more than random error. Also, across issues, we observe differences in the distributions of change, as shown in Figure 1. It is also worth noting that one measure of change in opinion that did not involve comparisons of ratings—the comparison of perceived most important problem facing the nation—also revealed changes in opinions between the two surveys. In short, the changes we observe are not random; they are related to other things, such as the initial position of respondents, their predictions and recollections. Further, the changes are quite large. Averaged across all issues, 28% of responses changed by at least ±20 points and 7% changed by at least ±50 points, as shown in Figure 1. Nevertheless, despite the size and nonrandom nature of the changes we observed, future research that compares actual

opinion change against predicted and recalled opinion change needs to deal more carefully with the potential measurement error problem.

More generally, our research raises the question of when a change in attitude becomes psychologically meaningful. Our framework assumes that a psychologically significant change can be operationalized as 10 points on a 101-point scale. Although in some analyses we treat all changes of 10 or more points as equal, they may not have the same meaning to respondents. If someone gives an initial rating of 95 and subsequently gives a rating of 85, he or she may not perceive these ratings to be meaningfully different, yet by our definition that person's rating has changed. Perhaps people who reported extreme attitudes (such as 95) were most likely to underpredict their own likelihood of change because they were less likely to perceive these changes as meaningful. By contrast, a 10-point change for a person who holds a moderate attitude might be very meaningful, because that change might lead one to go from a moderate position to a neutral position, or from a moderately positive position to a moderately negative position.

Another potential shortcoming of our research is the possibility that we happened to pick specific issues, or a specific time period, that turned out to be unexpectedly volatile. This seems unlikely. First, the time period we selected (August to October 1996) turned out to be an unusually uneventful time for an election year. Not only were there relatively few major shifts in people's preferences for the candidates and issues included in our survey, but also there were remarkably few observable shifts in general during these final months of the 1996 campaign. If our survey had been conducted during a time period with major shifts in attitudes, the inaccuracy resulting from overestimating predicted stability would likely have been much stronger. On the other hand, if highly salient events had occurred, people might have been more likely to believe their ratings had changed, and thus more accurate in recalling change.

According to our data, there was substantial change in attitudes at the individual level for the issues and candidates in our surveys. Yet most of the individual-level change appears to cancel out at the aggregate level. Of course, there are times when aggregate public opinion does change (e.g., attitudes toward scandals), but, as noted, our study focused on a period in which attitudes, in the aggregate, were relatively stable. If we assume that there is some level of individual change occurring for most topics, we need to draw some distinction between those topics that also show aggregate change and those that do not. The difference between these topics (those that do and do not show aggregate change) is simply that the individual changes are correlated when aggregate shifts occur. There is no reason to believe that people would be more accurate in their predictions of their own attitudes on topics when correlated changes occur.

Conclusions

The tendency to underpredict changes in one's own political positions could have important implications for public opinion research. First, researchers and others who make use of political opinion surveys should be aware of the volatility of the opinions expressed by the people they survey. When data are used in campaigns, policy debates, and media reports, it is important to recognize that the results represent people's opinions at a given moment in time and that these opinions can change, even over relatively short periods of time. Second, and perhaps more important, it appears that questions asking people whether they have changed their opinions from the past, or expect to change opinions in the future, do not provide researchers with reliable information. As our research indicates, respondents are not very accurate when predicting or recalling opinion changes.

Beyond its ramifications for survey methods, our research has important implications for "direct democracy" mechanisms, such as referendum and initiative voting, that are common at the state and municipal levels. Recent referenda in California and Arizona, for example, asked voters to determine state policies regarding medicinal uses of marijuana, affirmative action, immigrants' rights, and preservation of state parklands. Such mechanisms could pose special hazards because they allow for speedy implementation of policies that may be desired only temporarily by an "inflamed majority" (Elster, 1992, p. 40) who are unaware of the transience of their own feelings. Advocates of direct democracy treat the referendum and initiative as pure forms of democracy, allowing voters to have a direct voice in government policy. If voters respond to referenda with an unrealistic sense of the fixedness of their own feelings, however, they could enact extreme policies that they might well oppose in the future. To some extent, the aggregate stability of public attitudes diminishes the likelihood of catastrophic consequences. Nevertheless, there are times when aggregate public opinion changes (and does so rapidly). In such times, people might well take regrettable actions without knowledge of the transience of their views.

One alternative to the general ballot measures, as suggested by Fishkin (1991), is to provide voters with sufficient information, time, and an unemotional environment in which to discuss the issues before taking action. Such efforts might help to mitigate the problems we have found. Giving people the time and the right environment to fully understand the arguments and consider the alternative courses of action might diminish the volatility of their attitudes, thereby bringing their perceived and actual volatility into alignment with one another.

Once we recognize that the policies or candidates that voters support at one time might gain or lose favor in the future, we might want to find ways to prevent citizens from taking drastic actions. Fortunately, there are existing institutional mechanisms that serve such a function. For example, according to Elster (1992), provisions that make it difficult to change constitutions are precisely designed to resist efforts of the public to disengage constitutional safeguards in response to

salient events such as flag desecration. Constitutions, it would seem, are designed at least in part to protect people from what they do not know about the instability of their own beliefs.

APPENDIX: Sample Survey

What do you personally think is the most important problem facing the nation today?_____

Compared to other problems that have faced the nation in the past, how would you rate the importance of this problem? Please rate the importance of the problem on a scale from 0 to 100 where 0 means extremely unimportant and 100 means extremely important. _____

People sometimes change their opinions about the importance of different problems. Imagine that we contact you again in 2 months, what do you think is the chance that you will *either* increase or decrease your rating by at least 10 points? That is, what is the likelihood that you will feel substantially different (meaning more than plus or minus 10 points different) about this issue than you do now? Please give your answer on a scale from 0 to 100, where 0 means no chance and 100 means you are absolutely certain that you will either increase or decrease your rating by at least 10 points. _____

Do you think your rating is more likely to *increase* or *decrease* (choose one).

The first issue is *welfare reform.* The welfare reform proposal that we're interested in getting your opinion on would shift responsibility for welfare from the federal government to the states. On a scale from 0–100 where 0 means strongly oppose and 100 means strongly support, how do you feel about this welfare reform proposal? _____

If we contact you again in 2 months, what do you think is the chance that you will *either* increase or decrease your support for welfare reform by at least 10 points? Please give your answer on a scale from 0 to 100, where 0 means no chance and 100 means you are absolutely certain that you will either increase or decrease your rating by at least 10 points. _____

Do you think your rating is more likely to *increase* or *decrease* (choose one).

The second issue is the *environment.* As you may know, Congress is currently debating the appropriate role of government involvement with the environment. Are you personally in favor of more ___, less ___, or the current level ___ of government involvement in the environment?*

Regardless of your position on the issue, please rate how important the environment issue is to you personally. Please rate the importance of the environment issue on a scale from 0 to 100 where 0 means extremely unimportant and 100 means extremely important. _____

If we contact you again in 2 months, what do you think is the chance that you will *either* increase or decrease your rating of how important the environment issue is by at least 10 points? Please give your answer on a scale from 0 to 100, where 0 means no chance and 100 means you are absolutely certain that you will either increase or decrease your rating by at least 10 points. _____

Do you think your rating is more likely to *increase* or *decrease* (choose one).

The remaining questions are about the *presidential candidates.* Do you approve of the job *Bill Clinton* is doing as president? On a scale from 0–100 where 0 means strongly disapprove and 100 means strongly approve, how would you rate your opinion of Clinton? _____

If we contact you again in 2 months, what do you think is the chance that you will *either* increase or decrease your approval of Bill Clinton by at least 10 points? Please give your answer on a scale from 0 to 100, where 0 means no chance and 100 means you are absolutely certain that you will either increase or decrease your rating by at least 10 points. _____

Do you think your rating is more likely to *increase* or *decrease* (choose one).

How strongly do you support *Bob Dole* (the Republican nominee) as a candidate for president? On a scale from 0–100 where 0 means strongly oppose and 100 is strongly support, how would you rate your support for Dole?____

If we contact you again in 2 months, what do you think is the chance that you will *either* increase or decrease your support of Bob Dole by at least 10 points? Please give your answer on a scale from 0 to 100, where 0 means no chance and 100 means you are absolutely certain that you will either increase or decrease your rating by at least 10 points. _____

Do you think your rating is more likely to *increase* or *decrease* (choose one).

** This question was included to test for different response patterns for importance ratings based on initial positioning on the environment. Such differences were not found, and, therefore, we chose to simplify the results section by excluding this question.*

The following questions were asked in the second wave of the survey, after repeating the original set of questions from the first wave. Respondents who gave a different response to the most important problem question in the two interviews were asked:

Here's one last issue I'd like to ask you about. _____ (respondent's most important problem response from first wave).

Compared to other problems that have faced the nation in the past, how would you rate the importance of this problem? Please rate the importance of the problem on a scale from 0 to 100 where 0 means extremely unimportant and 100 means extremely important. _____

People sometimes change their opinions about the importance of different problems. Imagine that we contact you again in 2 months, what do you think is the chance that you will *either* increase or decrease your rating by at least 10 points? Please give your answer on a scale from 0 to 100, where 0 means no chance and 100 means you are absolutely certain that you will either increase or decrease your rating by at least 10 points. _____

Do you think your rating is more likely to *increase* or *decrease* (choose one)?

For all respondents (those who gave different responses to the most important problem questions and those who were consistent over the two interviews), the survey concluded:

Finally, I have one additional question about each issue in the survey. In the last 2 months, do you think you've changed your support for welfare reform? YES NO

If yes, has your support for welfare reform *increased* or *decreased*?

In the last 2 months, do you think you've changed your view on the importance of the environment? YES NO

If yes, has your view on the importance of the environment *increased* or *decreased*?

In the last 2 months, do you think you've changed your approval of Bill Clinton? YES NO

If yes, has your approval of Clinton *increased* or *decreased*?

In the last 2 months, do you think you've changed your support for Bob Dole? YES NO

If yes, has your support for Bob Dole *increased* or *decreased*?

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