Misinformation and the Currency of Democratic Citizenship

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Scholars have documented the deficiencies in political knowledge among American citizens. Another problem, misinformation, has received less attention. People are misinformed when they confidently hold wrong beliefs. We present evidence of misinformation about welfare and show that this misinformation acts as an obstacle to educating the public with correct facts. Moreover, widespread misinformation can lead to collective preferences that are far different from those that would exist if people were correctly informed. The misinformation phenomenon has implications for two currently influential scholarly literatures: the study of political heuristics and the study of elite persuasion and issue framing.

In the final chapter of *Voting*, Berelson, Lazarsfeld, and McPhee (1954) make a statement that is among the most influential and widely quoted in scholarly works on American politics. "The democratic citizen," they state, "is expected to be *well informed* about political affairs. He is supposed to know what the issues are, . . . *what the relevant facts are*, what alternatives are proposed, [and] what the likely consequences are" (308, emphases added). Berelson himself not only rejected these expectations as unrealistic, he went on to proclaim widespread citizen apathy as an essential element of democracy.

Berelson's legacy has been his statement of conventional democratic norms, not his rejection of them. From the publication of Converse's classic (1964) to the present, the normative thrust in public opinion research has been unwavering: citizens should be factually informed.[1] Delli Carpini and Keeter (1996) state

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[1] Ironically, Berelson's unorthodox and controversial conclusion that a political system requires uninformed and uninvolved citizens gave life to the very words he rejected. Scholars overwhelmingly construed Berelson's conclusion as undemocratic and thus advocated an informed citizenry more strongly than ever.

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this view eloquently in their book on citizens' political knowledge. "Political information is to democratic politics," they assert, "what money is to economics; it is the currency of citizenship" (8). More concretely, "such facts as the percentage of the American public living below the poverty line, how the line is determined, and how the percentage has changed over time provide a foundation for deliberation about larger issues. They prevent debates from becoming disconnected from the material conditions they attempt to address" (11).

Conceiving facts as the currency of democratic citizenship directs attention to two conditions that a democratic polity must meet to avoid bankruptcy. First, its citizens must have ready access to factual information that facilitates the evaluation of public policy. This information should be specific to the policy deliberations taking place among political leaders, for domain-specific facts best enable people to connect to policy debates (Delli Carpini and Keeter 1996, 37; also see Alvarez and Brehm 1998). Second, citizens must then use these facts to inform their preferences. They must absorb and apply the facts to overcome areas of ignorance or to correct mistaken conceptions. The more facts they bring to bear, the better, and some facts are always better than no facts. What is crucial is that preferences stem from facts, objective data about the world (but contrast Lupia and McCubbins 1998).[2] If both conditions are met, the thinking goes, then representative democracy is on solid footing.

Fulfilling the first condition is a prerequisite to meeting the second; citizens can use facts only if the political system disseminates them. Generally speaking, the American political system fares poorly on this count. Those best positioned to provide relevant facts, elected officials and members of the media, lack the incentive to do so. Politicians want their preferred policies to prevail, and so they employ manipulative rhetoric and create themes and images that will sway the electorate in the desired direction (Edelman 1964). When elected officials do cite facts, it is to dramatize their own cause, not to educate and elucidate. In the same vein, television news, the dominant source of information in American society, seeks to gain and maintain its viewers' interest. Rather than present general facts and place them in context, it reports specific events and personal situations, and the more vivid, the better (Iyengar 1991). If facts are the currency of citizenship, then the American polity is in a chronically impecunious state.

Given that the presentation condition is not met, scholars understandably have not done much to explore the use condition. Yet, if the purpose is to understand the limits and potentials of democratic politics, we need to know what happens

[2] An alternative view, positing that citizens need not be informed to render good judgments (Carmines and Kuklinski 1990; Popkin 1991; Sniderman, Brody, and Tetlock 1991), emerged during the last decade. Although this view is itself coming under increasing attack (Delli Carpini and Keeter 1996; Kuklinski and Hurley 1994; Kuklinski and Quirk 2000), what matters here is that even the citizens-as-users-of-heuristics conception does not explicitly reject the traditional normative idea that citizens should know the facts. It only posits that people sometimes do reasonably well without them.

when people receive a coherent bundle of domain-specific facts. Do they respond as the dominant strain of normative theory prescribes and use these facts to inform their policy preferences?[3]

The empirical investigations reported below represent our initial effort to find out. They show that, in general, citizens tend to resist facts. They can be induced to use correct information, even in the context of a single-shot survey, but it takes an extraordinarily obtrusive presentation of that information. This widespread resistance to newly available information stems from a phenomenon that a few scholars and journalists (Hochschild 2000; Lewis, Jhally, and Morgan 1991; Lewis, Morgan, and Ruddock 1992; Nadeau, Niemi, and Levine 1993; Nadeau and Niemi 1995; Page 1995) have begun to notice but that no one has yet fully articulated: people often are not *un*informed about policy, as political scientists continue to emphasize, but *mis*informed. People hold inaccurate factual beliefs, and do so confidently. The problem, then, at least with respect to attitudes about public policy, is not that people simply lack information, but that they firmly hold the wrong information—and use it to form preferences. Not only does this misinformation function as a barrier to factually educating citizens, it can lead to collective preferences that differ significantly from those that would exist if people were adequately informed.

A Conceptual Clarification

Bartels (1996, 194) begins a recent article with the blunt words that "the political ignorance of the American voter is one of the best documented data in political science." This statement effectively captures the principal conclusion of 40 years of research: many citizens are sorely uninformed about politics, to the point where they cannot even recite the basic facts of American government.

This conclusion, however, hides an important ambiguity. It reflects a two-category—informed versus uninformed—distinction when in reality the distinction should be threefold. To be *in*formed requires, first, that people have factual beliefs and, second, that the beliefs be accurate. If people do not hold factual

[3] Our focus on citizens' factual knowledge about public policy warrants emphasis. Previous research has been overwhelmingly weighted toward measuring how many civics-textbook-like facts people know. Investigators have not often asked for factual knowledge about policy, and even when they have, the request typically has taken the form of a single question (Delli Carpini and Keeter (1996) report most of the questions asked in the last three decades). Yet American citizens are constantly invited to judge policy proposals before Congress. During the last three years alone, the president and members of Congress debated the pros and cons of NAFTA, welfare reform, national health care, and the reduction of entitlements such as Medicare, Medicaid, and Social Security. In each case, the choice of options held substantial implications for people's lives; in each case, polls repeatedly reported people's preferences; in each case, elected officials voiced a strong interest in the poll results; and in several instances, politicians changed course apparently in response to what the polls said. If the citizenry's collective voice shapes government policies, then we need to understand the basis of the individual opinions that comprise it.

beliefs at all, they are merely *un*informed. They are, with respect to the particular matter, in the dark. But if they firmly hold beliefs that happen to be wrong, they are *mis*informed—not just in the dark, but wrongheaded.

For the most part, scholars have conflated the latter two situations and classified the misinformed with the merely uninformed. This conflation is understandable. For one thing, many of the factual questions found in surveys ask about institutional rules (What does it take for Congress to override a presidential veto?) or political structures (How many Supreme Court justices are there?). With such questions, there is probably no behaviorally significant difference between having no answer and having a wrong one. Nothing follows, for example, from believing there are five or thirteen Supreme Court justices. With respect specifically to policy, moreover, empirically identifying the uninformed and misinformed is considerably more difficult than distinguishing them conceptually. Survey respondents frequently answer factual questions even when they do not know the answers, especially when they can choose among options the interviewer reads to them. Not knowing if people believe what they say precludes distinguishing the genuinely misinformed from the guessing uninformed. Unfortunately, few surveys ask about people's confidence in their answers to factual questions (Alvarez and Franklin 1994 is a notable exception).

Why even bother to distinguish the misinformed from the uninformed? One answer is conceptual clarity. We want our concepts to be as precise and as accurate as possible. In addition, the uninformed presumably give random answers to surveys that cancel out in the aggregate (Page and Shapiro 1992; but see Althaus 1998). In contrast, many of the misinformed might hold the same wrong beliefs. If these beliefs affect people's preferences, then the distribution of collective opinion will differ from what it would be if citizens possessed the facts. Even small differences at the margins of aggregate opinion can effect markedly different governmental policies (Erikson, MacKuen, and Stimson 2000). And, moreover, it is the misinformed who should resist facts when those facts contradict their firmly held beliefs. The greater their proportion among the American populace, the more difficult political education will be.

Finally, the idea that citizens cling to mistaken beliefs when evaluating policy challenges two currently popular streams of literature: the study of political heuristics (Mondak 1993; Popkin 1991; Sniderman, Brody, and Tetlock 1991; but see Kuklinski and Quirk 2000) and the study of how elite discourse shapes the contours of public opinion (Zaller 1992). One literature celebrates the ability of citizens to perform even in the absence of political information while the other views political attitudes as highly malleable and responsive to whatever cues and information citizens receive from their environments. As we discuss in our concluding comments, neither conclusion is especially compatible with the idea of a misinformed citizenry. Indeed, if misinformation should prove to be pervasive, we might need to rethink conceptions of politics that take an *un*informed citizenry as their point of departure.

The Psychology of Misinformation

If the political system fails to disseminate policy-relevant facts or disseminates them in a difficult-to-use form, one might expect that most citizens would not know or think they know them. Instead, however, psychological research predicts that people will hold factual beliefs. Moreover, these beliefs will be inextricably intertwined with people's preferences and thus systematically biased in the direction of those preferences.

To understand why people should hold any factual beliefs at all and why these beliefs often will be systematically skewed in the direction of their preferences, we need only to consider three mental processes that social and cognitive psychologists have documented as inherent in human thinking. The first is the drawing of social inferences, the second the strong drive toward belief and attitude consistency, and the third a tendency to become overconfident in one's beliefs and judgments.

People are constantly trying to make sense of the world. They seek to understand why situations exist, why events occur, and why others and they themselves act the way they do. To achieve this understanding, people do not act simply as passive receivers of stimuli from their environments. To the contrary, their minds actively (although often unconsciously) decide which information to attend to and how to interpret that information. When all the information is not available, which is most of the time, people make inferences. Metaphorically, they "fill in the blanks." Governing this process is what Abelson and Reich (1969) call the completion principle: inferring unknowns from what is stored in memory.

This implies that people do not necessarily make the most objective inferences they could. Rather, they strive for consistency in their beliefs and attitudes. To use Festinger's (1957) time-honored term, inconsistency causes dissonance. Because dissonance is uncomfortable, the individual seeks to avoid it. Better, then, to make inferences that fit one's existing beliefs and attitudes than not. In Lodge and Taber's (2000) words (also see Kruglanski 1989a, 1989b), people can pursue either accuracy or directional goals. When they already hold salient attitudes relevant to the subject at hand, they will be inclined to make biased and reinforcing inferences rather than accurate ones. Often this can be accomplished easily, either through searching out consistent and ignoring inconsistent information or by interpreting new information to be consistent with existing beliefs and attitudes.

Once people store their factual inferences in memory, these inferences are indistinguishable from hard data. And the more they then use this stored information, the more central it becomes to future inferences and judgments (what Srull and Wyer 1979 call the frequency effect; also see Higgins, Bargh, and Lombardi 1985; Wyer and Ottati 1993). Thus, many people quickly become overconfident about their factual beliefs. Indeed, a body of research completed since Fischhoff, Slovic, and Lichtenstein (1977) published a classic article on overconfidence has demonstrated that it is ubiquitous in human judgment (Allwood

and Montgomery 1987; Griffin and Tversky 1992; Mayseless and Kruglanski 1987; Paese and Sniezek 1991; Trafimow and Sniezek 1994). People constantly overrate the accuracy and reliability of their beliefs.

It is important to underline what kinds of factual inferences people are likely to make with respect to public policy. We do not expect them to infer details such as specific amounts and percentages in the ordinary course of events. Instead, they will construct and store more general factual beliefs, such as "welfare mothers receive a lot of money," "the government spends a good portion of its budget on welfare," and the like. When they have the occasion—for example, answering a survey—they will translate these general notions into more specific ones, such as "annual benefit payments of $15,000 a year," not "$5,000" and "10% of the national budget," not "1%," respectively. Such specific estimates, in turn, should be related to people's policy choices.

Data and Methodology

Our expectations are as follows. Not only will people hold factual beliefs about public policy, many will hold inaccurate ones and hold them confidently. Moreover, beliefs and preferences will be tightly intertwined. This combination—confidently held beliefs and a strong connection between those beliefs and existing preferences—will serve as a barrier to informing the American citizenry.

To test these propositions, we draw primarily on a telephone survey of a representative sample of Illinois residents. Half-hour interviews were completed with 1,160 respondents. The survey includes a series of questions on citizens' attitudes toward and perceptions of welfare policy. It also contains a number of question batteries and experimental manipulations designed to explore the psychology of mass opinion about public policy.

We used the following procedure. First, we created three randomly assigned groups, each containing about 300 respondents.[4] Respondents in the first group received a set of six factual items that were designed to give them relevant contextual information about welfare. In selecting the facts to present, we consulted with welfare experts[5] who identified a reasonably representative group of facts they deemed as fundamental to policy debates on welfare. In the guise of asking people whether they had heard the information,[6] the interviewers told respondents the following: the percentage of families who are on welfare, the proportion of the federal budget that welfare absorbs, the average annual benefit amount for a welfare family, the percentage of welfare mothers who are on welfare for more than eight years, the percentage of welfare families who are African-American, and the percentage of welfare mothers who have less than a high school education. The items were presented in random order. Obviously,

[4] A portion of the sample was not included in the study of factual beliefs.

[5] The consultants consisted of a sociologist and a political scientist who specialize in social policy.

[6] The questions began: "Have you heard that . . . ?"

only a subset of all possible facts could be presented. Since there is no formula for choosing one set of facts over another, we claim only that the six items represent the kind of facts that someone intimately familiar with welfare would know and deem important.

A second group of respondents was given a multiple choice quiz on the same items of information for the purpose of getting them to retrieve and explicate their beliefs. The items had five options and were also presented in random order. After each of the quiz items, respondents were asked how confident they were of their answer, with the four options ranging from "very confident" to "not at all confident." A third group of respondents received no treatment at all. Individuals in this control group represent citizens as they actually evaluate policy under ordinary circumstances in the real world.

All three groups received the same questions about their policy preferences on welfare, the first two after they had dealt with the factual items. Specifically, respondents were asked to indicate their attitudes toward cutting welfare and toward imposing a two-year limit on welfare payments. Response options are on a five-point scale ranging from strongly support to strongly oppose.

The Prevalence of Misinformation

Responses to the survey questions reveal widespread mistaken beliefs about the realities of welfare (Figure 1).[7] The proportion getting an individual fact wrong ranges from two-thirds on the percentage of all welfare families who are African-American to a striking 90% on the percentage of the federal budget that goes to welfare. On none of the individual items did a majority, or close to it, get the fact right. Moreover, although some individuals were more accurate across the six items than others, only 3% got more than half the facts right.

It is reasonable to ask whether this inaccuracy across items is sufficiently great so as to be worrisome. Some beliefs could be wrong, strictly speaking, but still be in the ballpark. There are three items on which this argument holds particular weight. Guessing that the annual welfare payment is $9,000 when it really is $6,000 is not bad.[8] Nor is it grossly wrong to believe that 5% rather than 1% of the nation's budget goes to welfare, or that 3% rather than 7% of American families are on welfare. Of course, construing these "not-too-bad" estimates as accurate will reduce the proportion categorized as inaccurate. The question is, by how much?

The consequence is a discernible drop-off in the percent deemed inaccurate, but not to the point of rendering our overall conclusion wrong.[9] More than 60%

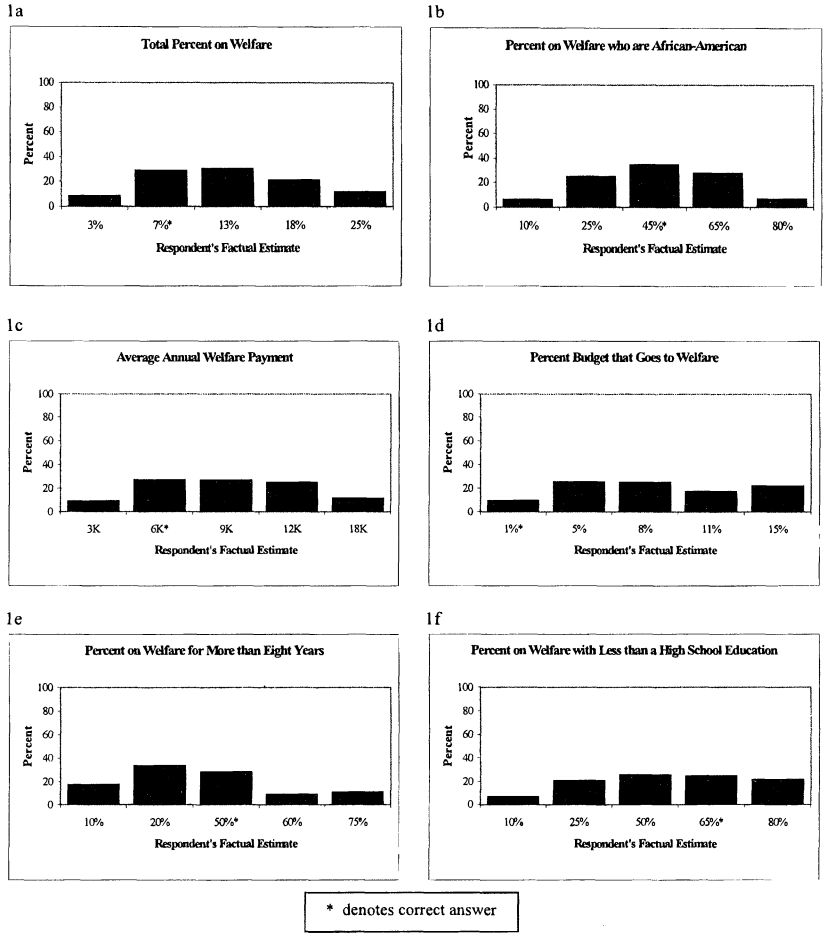
[7] Accurate is defined as choosing the correct answer from those offered. This is a strict criterion, to be sure. As we show below, however, relaxing this requirement does not change our conclusion. It should be noted that the accuracy figures do not include "don't know" responses, which are excluded from analysis.

[8] In an admittedly arbitrary decision, we construed $9,000 as accurate but not $3,000, on the grounds that the latter is very close to zero, no payment at all.

[9] To preserve space, we have not reported the specific results. They are available on request.

FIGURE 1

Respondents' Factual Accuracy on Welfare Items



still overestimate at least twofold the total proportion of American families who are on welfare; 40% still overestimate and 10% underestimate the average annual payment; and nearly two-thirds still grossly overestimate the percentage of the national budget that goes to welfare. Had we not set limits on the options available to respondents, the range of mistaken beliefs undoubtedly would be greater still.[10]

[10] Our second study, reported below, confirms this assertion.

Moreover, suppose we classify wrong answers as either pro- or anti-welfare. Under such a scheme, for example, overestimating the amount of money received by a welfare family, the percentage of welfare families who are black or the proportion of the national budget that goes to welfare are classified as anti-welfare errors.[11] Then, with two exceptions,[12] a sizeable majority of the respondents make errors that are skewed in an anti-welfare direction. Furthermore, people's errors tend to be in the same direction (the average correlation is .23). Most respondents, in other words, hold mistaken beliefs that reinforce each other and thus have a cumulative anti-welfare effect.

In any case, the crucial patterns are those shown in Figures 2 and 3. The patterns in Figure 2 show that many people hold their beliefs confidently. For each of the six factual questions that respondents were asked, a majority indicated that they felt very or fairly confident as opposed to little or not at all confident. Slightly more than 20% reported feeling very or fairly confident on all six items. Although some respondents undoubtedly overstated their confidence, one pattern suggests that much of this confidence is real. Respondents expressed especially high confidence on the three items that pertain to characterizations of the welfare recipients. These are the percentage of recipients who are black, the percentage of welfare mothers who have been on welfare for more than eight years, and the percentage of welfare recipients who have less than a high school education. In these three cases, social stereotypes undoubtedly functioned as "real data" and thus provided a strong foundation for people's confidence in their estimates.[13]

Most significant, those holding the least accurate beliefs perversely expressed the highest confidence in them (Figure 3). For example, 47% of those who estimated the proportion of American families on welfare correctly (at 7%) said they were very or fairly confident, while 74% of those who grossly overestimated the figure (at 25%) did. Similarly, 54% of those who estimated the average welfare payment correctly (at $6,000) were confident, while 77% of those who grossly overestimated it (at $18,000) were confident. The one item on which this relationship does not hold is the percentage of the national budget going to welfare: people with correct beliefs expressed slightly more confidence than did those with incorrect beliefs. And although fewer respondents hold wildly extreme beliefs than do not, the former are a substantial minority who also repre-

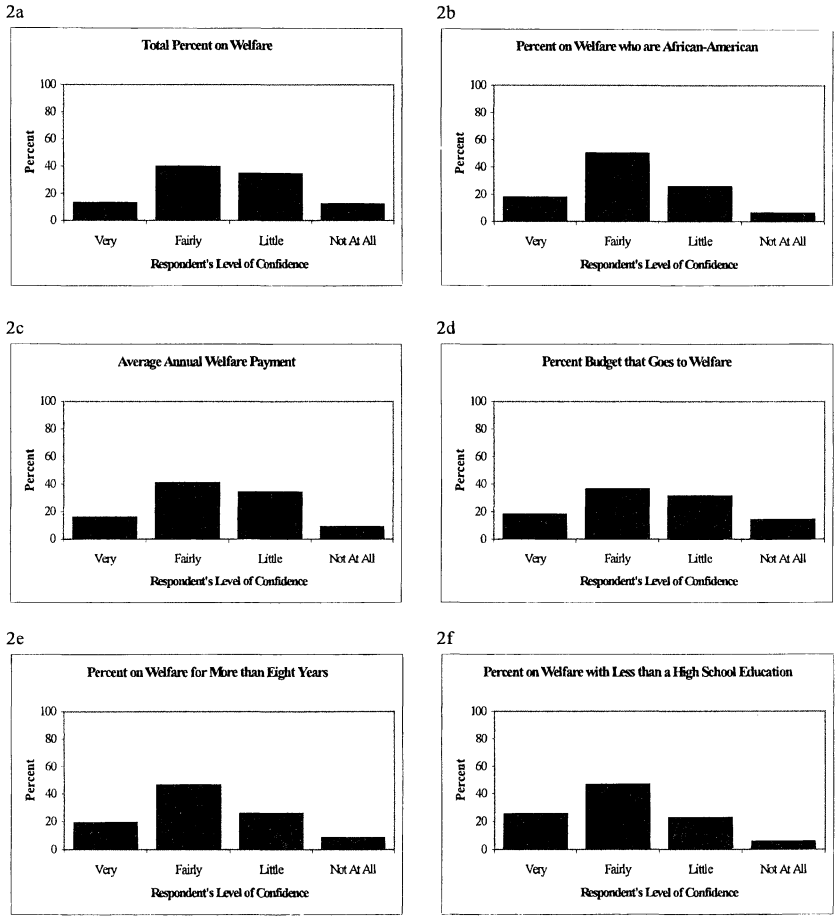
[11] An individual could, say, overestimate the percentage of the national budget that goes to welfare and also believe that more should go to it. Our second study indicates that very few people fall into this category.

[12] Overall, respondents underestimate the percentage of welfare recipients who have been on welfare for more than eight years (we construe this distribution of responses as a pro-welfare bias) and are equally distributed around the correct answer to the question on the percentage of welfare recipients who are black.

[13] As a validity check, we followed Alvarez and Franklin's (1994) work on uncertainty. Using their set of explanatory variables—race, gender, education, political sophistication, and interest in politics—to predict respondents' overall confidence (as measured by an index) across the six facts, we found all but gender and political sophistication to be statistically significant.

FIGURE 2

Respondents' Confidence on Welfare Items



sent a potentially influential segment of the population. For example, those who are both highly inaccurate and highly confident tend to be the strongest partisans and thus the very people who most frequently convey their sentiments to politicians.[14]

In sum, although factual inaccuracy is troublesome, it is the "I know I'm right" syndrome that poses the potentially formidable problem. It implies not only that

[14] The correlation between partisan strength (highly partisan versus not) and misinformation is a noteworthy .34 ($p < .01$).

FIGURE 3

Relationship Between Confidence and Accuracy on Welfare Items

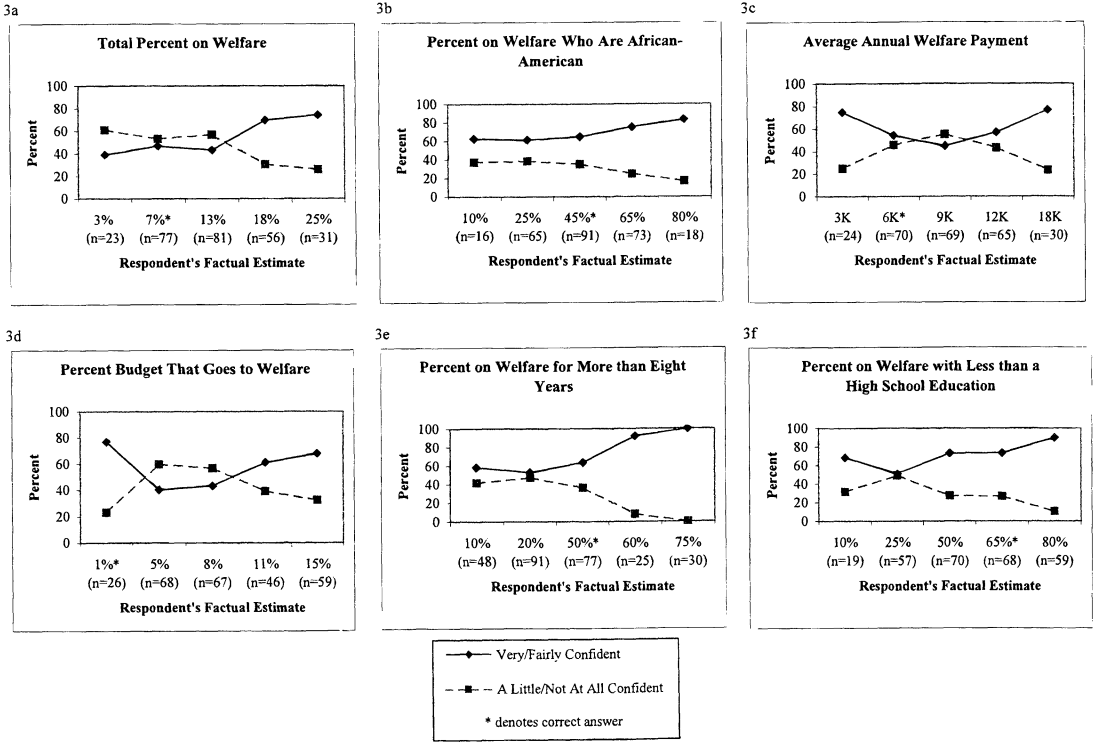
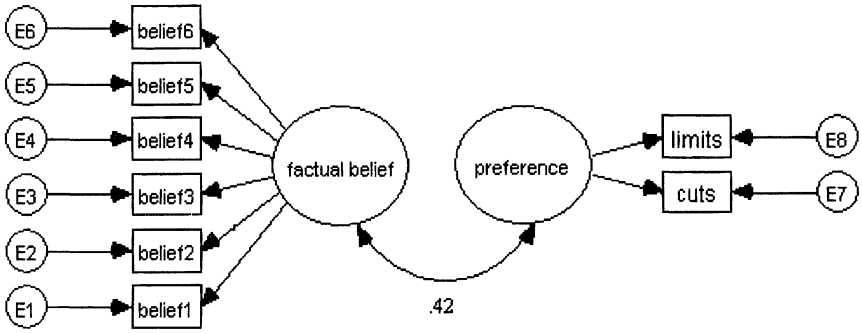


FIGURE 4

Correlation between Factual Belief and Policy Preference



most people will resist correcting their factual beliefs, but also that the very people who most need to correct them will be the least likely to do so.

Presentation of the Facts

What happens, then, if a champion of political education gives citizens correct facts? Do they use the new information to adjust their policy preferences appropriately?

To begin with, we can show that beliefs and preferences are indeed related. (If not for this relation, beliefs would be largely irrelevant.) Using Analysis of Moment Structures (AMOS),[15] we created two latent variables corresponding to welfare belief and welfare preference (Figure 4). The two variables are correlated at r =.42 ($p < .001$).

Unfortunately, we cannot determine the causal direction of this relationship. Ideally, a researcher would identify a group of individuals who initially hold no beliefs or preferences about an issue and then track them over time to determine which comes first—beliefs or preferences—and how each affects the other. Such data do not exist. Like other scholars who have worked in this area (Gilens 1997; Nadeau and Niemi 1995; Nadeau, Niemi, and Levine 1993), we can only assume that some of the causation runs from beliefs to preferences. From a normative standpoint, of course, most of the influence should run in that direction.

To measure the effect of receiving correct factual information, we compare the policy preferences of people who were given the correct facts with those who received no treatment at all. The no treatment group was neither

[15] AMOS is the SPSS version of LISREL.

TABLE 1

Relationship Between Receiving Facts and Policy Preference

Independent Variable	Coefficient
Received Facts	.051
	(.076)
Egalitarianism	.966**
	(.282)
Anti-Governmentalism	−.302*
	(.176)
Partisan Identification	−.027
	(.060)
Ideology	.049
	(.052)
χ^2	60.565**
Goodness of Fit	.98
Adj. Goodness of Fit	.95
n	561

Maximum likelihood estimates with standard errors below.
*$p < .10$; **$p < .001$.

asked about their factual beliefs nor told the correct facts. We noted earlier that this group represents unprimed citizens as they exist in the real world. Given the random assignment of respondents to the three experimental conditions, we can assume that they hold the same array of factual beliefs as those who estimated the facts.

Table 1 reports the results of an AMOS analysis that includes policy preference as the dependent variable and a host of independent variables that we expected to be related to it. These include two value measures (egalitarianism and anti-governmentalism) and two political orientation measures (political ideology and partisan identification). Most important here, the equation also includes a dummy variable that distinguishes the factually informed group, those who were told the correct facts (coded as 1), from the no treatment group (coded as 0). If initially misinformed people act on the newly received facts, then the coefficient of this variable will be positive and significant. That is, those who received the facts will be more pro-welfare in their preferences because they will have used the information to overcome their overall anti-welfare bias.

In fact, this coefficient does not approach statistical significance, indicating that the preferences of the two groups do not differ.[16] Those who were told the

[16] An identical result obtained in a similar analysis on health care. The specific results are available from the authors.

facts either did not absorb them or did but failed to change their preferences accordingly.[17]

Having found earlier that the most highly misinformed tend to be the most partisan, we added an interaction term comprised of two dummy variables—whether the respondent was a strong partisan and whether he or she received the factual information—and repeated the analysis. Our expectation was that strong partisans—the most grossly misinformed—would be even more inclined than weak partisans to reject the factual information. Although it falls short of statistical significance, the coefficient of this interaction term is in the expected direction.[18]

Needless to say, reading a handful of facts to respondents in the course of an interview is not a very effective means of informing them. Although the results are clear-cut and quite suggestive, they leave open the possibility that more effective means of presenting facts could have a greater impact. Indeed, as we will now see, people can be induced to respond to new factual information, even in a survey context, under highly favorable circumstances.

The Limits of Resistance

Rather than give up entirely on citizens' factual learning, we undertook a second, smaller study[19] to see whether people will absorb and use facts presented in a more compelling way than those presented in the original survey. This study centers on a single fact, the percentage of the national budget that goes to welfare. In light of our earlier findings, it is a natural choice: not only were people grossly misinformed about spending on welfare, but their estimates of the proportion of the budget assigned to welfare was the strongest single predictor of their policy preferences.[20]

The design is as follows. One randomly assigned group was first asked to estimate the percentage of the budget that goes to welfare, much as in the state survey. However, this time we asked an open-ended question: "From zero to 100 percent, what percent of the national budget do you think is spent on welfare?" More significant, we next asked respondents to indicate what percent of the bud-

[17] One might argue that this test is not sufficiently strong because respondents should be exposed to the facts at selected intervals over time. We see no reason to expect different results. For one thing, the interviewers were instructed to read the individual facts slowly and carefully. For another, our presentation of the coherent bundle of facts already exceeds what is likely to occur in the real world. Moreover, evidence from our second study, reported below, indicates that people absorb the facts, but then choose not to use them.

[18] The coefficient is significant at $p < .15$.

[19] Lacking access to another statewide study, we used students who were enrolled at a large state university (Iowa State). Although admittedly not ideal, this sample at least allows us to push our argument a step further. Needless to say, we present these results as suggestive, not conclusive.

[20] When policy preferences were regressed on the six individual items, people's estimates of the proportion of the budget proved to be the strongest predictor, followed by estimates of the average size of the annual welfare payment and the proportion of welfare recipients who are black.

get they thought *should* be spent on welfare.[21] Posing these two questions back to back should lead them, consciously or unconsciously, to contrast their perception of reality with their preferred level of spending: "Twenty-two percent of the budget goes to welfare and only 5% should." These respondents later indicated their support for welfare spending.

The second group answered the same two initial questions. Immediately thereafter, they were told the correct fact. Most of those assigned to the second group, therefore, found themselves in this situation: having just expressed both their estimated and their preferred levels of government spending, they were now told that in reality spending is lower than either their estimate or their stated preference. If the purpose is to render a fact immediately salient, meaningful, and interpretable, this presentation should do it. Later, these respondents too expressed their policy preferences.

Two questions interest us. First, what impact, if any, does the difference between people's estimated levels and their (usually lower) preferred levels of spending have on their support for spending cuts? The greater this gap, the more inclined people should be to support cuts in welfare spending. Someone who believes that 25% of the budget goes to welfare and prefers only 5% should want cuts in welfare more than someone with the same preferred level who believes that 12% goes to it. In the first instance, the gap is 20%, in the second, only 7%.

Second and more important, does receiving the correct fact in the blunt manner described above reduce the impact of this difference between estimated and preferred level on policy judgments? If people take the information they are given into account, they should recognize that their perceived excess of actual over preferred spending is a figment of their imagination and thus not use it as a criterion to judge welfare policy.

Table 2 reports the regression results separately for the two groups. Consider first those who did not receive the correct fact. As hypothesized, the difference between estimated and preferred level strongly influences people's policy judgments (as does the estimated level alone). On a 9-point measure of preference for cutting welfare, for example, someone whose perceived-versus-approved gap is 20% is predicted to be four points higher (more inclined to cut welfare spending) than someone whose gap is 1%. Moreover, the impact of this difference varies as a function of individuals' estimates of actual spending: the higher the perceived level of spending, the more impact the same perceived-versus-preferred gap has on people's judgments.

Those who received the correct fact show a different pattern. Neither the respondents' estimates of welfare spending nor the differences between those estimates and their preferred levels affect their policy judgments. Respondents take

[21] Estimates among all of the respondents ranged from 1% to 48%, with a mode of 16%. Nearly everyone overestimated the level of spending. Only a few expressed a preferred level of zero or 1%. The preponderance overestimated the proportion of the budget that goes to welfare and expressed preferred levels that were lower than their estimate but also greater than the actual percentage.

TABLE 2

Relationship Between Estimate-Norm Difference and Policy Preference

Independent Variable	Coefficient	
	Received Fact	Did Not Receive Fact
Estimate	.01	−.12*
	(.03)	(.05)
Estimate − Norm	−.10	−.26***
	(.06)	(.07)
(Estimate − Norm) × (Estimate)	.00	.01**
	(.00)	(.00)
	Adj. R^2 = .01	Adj. R^2 = .40
	n = 34	n = 32

Unstandardized OLS estimates with standard errors below. Includes controls for ideology, egalitarianism, humanitarianism, and partisan identification.

*$p < .05$; **$p < .01$; ***p .001.

notice when told that the percentage actually spent on welfare is even lower than their preferred level. Misinformed citizens, then, do not always remain oblivious to correct information. If it is presented in a way that "hits them between the eyes"—by drawing attention to its policy relevance and explicitly correcting misperceptions—such information can have a substantial effect.[22] Unfortunately, our data preclude us from determining whether that effect is also long lasting. As we discuss in our concluding comments, there is reason to think not.

The Collective Consequences of Misinformation

It is one thing to find misinformed citizens, quite another to show that this misinformation has an effect on the citizenry's collective voice. In this final analysis, we consider the potential for misinformation to skew aggregate opinion. We first present simulations of collective opinion about welfare based on data and estimated parameters from the first study. We compare several scenarios with differing distributions of misinformation and consider alternative assumptions about the causal relation between beliefs and preferences. We then look at the actual effects of misinformation as they are reflected in the consequences of correcting it in the second study.

The Illinois study affords an opportunity to gauge the potential effect of misinformation on the distribution of policy preferences. First, we estimated a

[22] Whether this effect is permanent is wholly another matter. Like recent experimental research on media effects (Iyengar 1991), this study was not designed to address that question.

structural equation model (again using AMOS) in which policy preference is the dependent variable and factual belief, values, and political orientations are the independent variables. Using the estimated parameters, we then simulated the collective effects of four conditions of individual-level misinformation. They are: (1) everyone is maximally misinformed in an anti-welfare direction; (2) everyone is maximally misinformed in a pro-welfare direction; (3) half of the sample is maximally biased in one direction and the other half in the other; and (4) everyone is at the empirical mean. In holding the parameters constant, we are assuming that the five factors, including misinformation, have the same relative influence on preferences in each of the four situations.

Figure 5 reports the results of the simulations. The distributions of welfare preferences under the assumption of maximum anti-welfare misinformation are mirror images of those under the assumption of maximum pro-welfare misinformation. From the perspective of representatives interested in responding to public opinion, these two sets of collective preferences speak in dramatically different voices and presumably would push policy in opposing directions. Similarly, when misinformation is bifurcated, so are collective preferences. And perhaps most significant, the distribution of collective preferences under the assumption that everyone is at the empirical mean does not mirror any of the others. In principle, misinformation can greatly distort the citizenry's collective voice.

These findings assume that all of the causal direction goes from beliefs to preferences. Since this is unlikely, we repeated the preceding analysis but reduced the parameter of the belief or misinformation variable to half its original size. Figure 6 indicates that misinformation still affects collective preferences to an extent that easily could push policy makers in one direction or another.

We would not expect to find such dramatic effects of misinformation in real-world public opinion, for people's inaccurate beliefs rarely will be distributed as extremely as we just assumed. The effects often will be on the margins of collective opinion, where the fate of public policy is often determined.

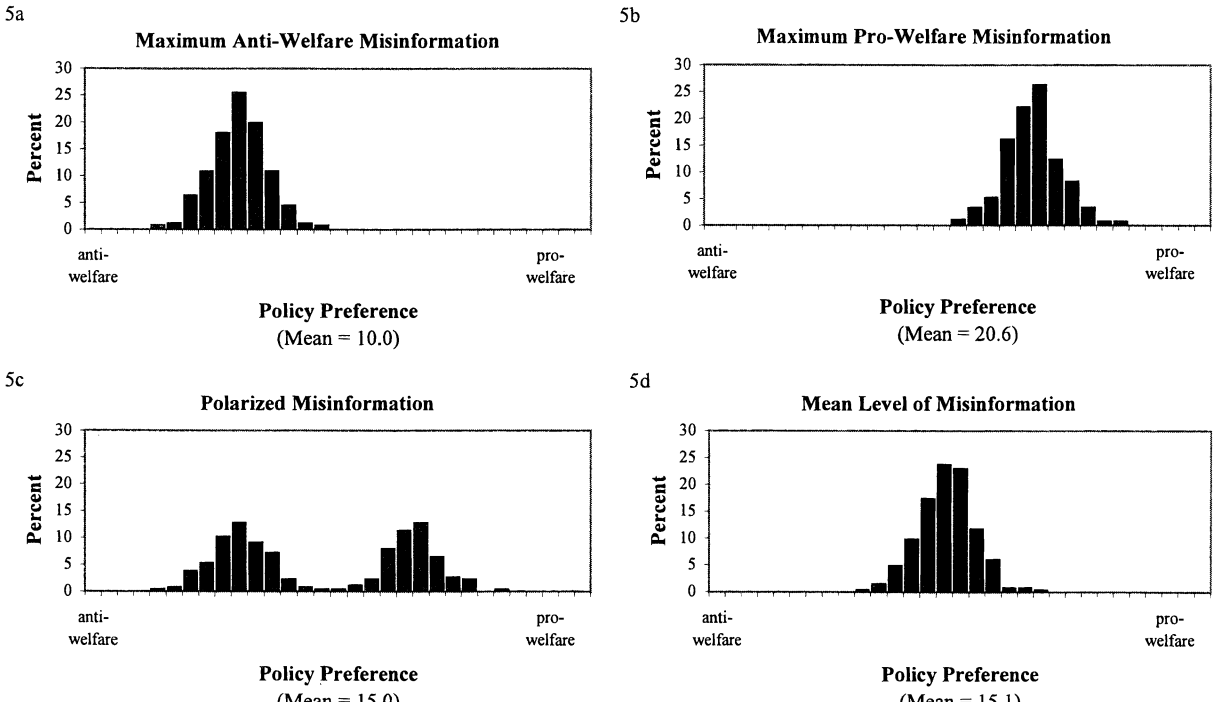
Our second study provides an opportunity to ascertain misinformation's actual effect. Recall that respondents who were told the actual level of welfare spending immediately after stating both their estimated and preferred levels appeared to ignore or correct their initial mistaken beliefs. Our analysis thus takes the form of comparing the aggregate preferences of those who received the correct information with those who did not.

Figure 7 shows the distribution of preferences by group. The two distributions differ in the expected direction.[23] Those who were "hit between the eyes" with the factual information express more support for welfare spending, on the whole, than those who relied on their misconceptions. Significantly, the informational impact is greatest among those who, before correction, are most strongly opposed to welfare spending. At least in this instance, the basis on which indi-

[23] These distributions are significantly different at $p < .01$.

FIGURE 5

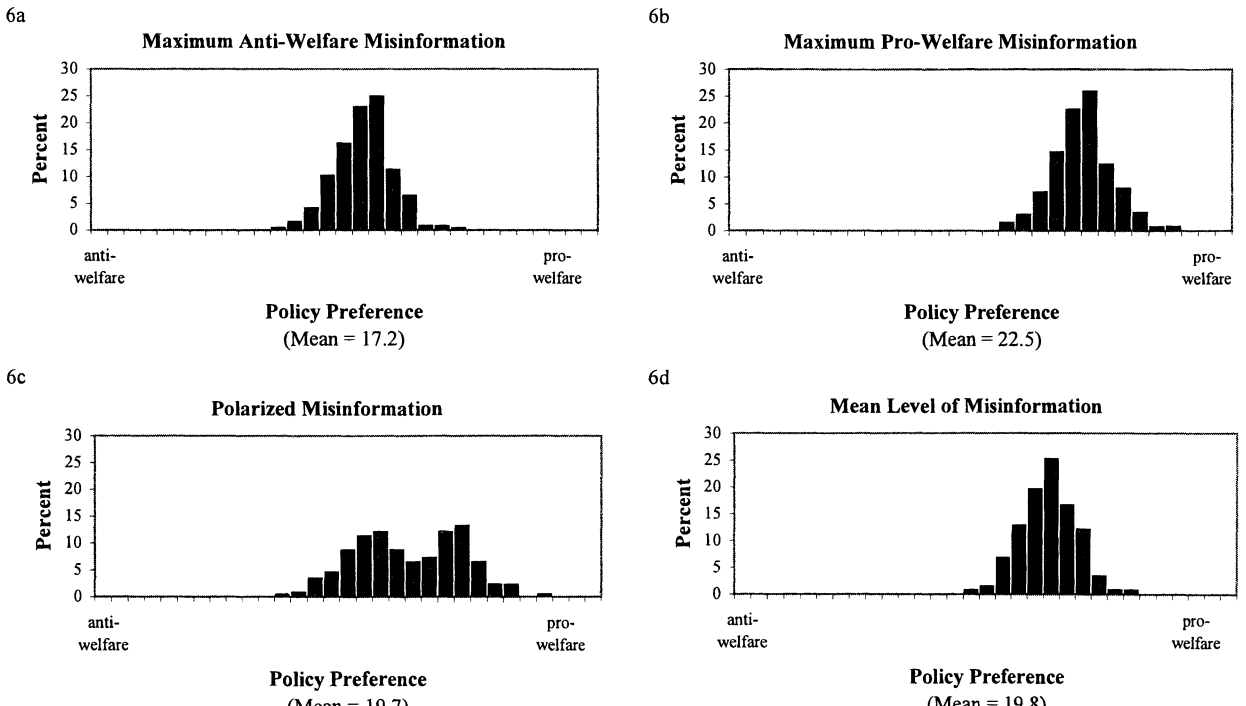
Simulated Collective Preferences under Different Distributions of Misinformation*



*Predicted policy preferences range from 0 to 30. They were calculated in AMOS.

FIGURE 6

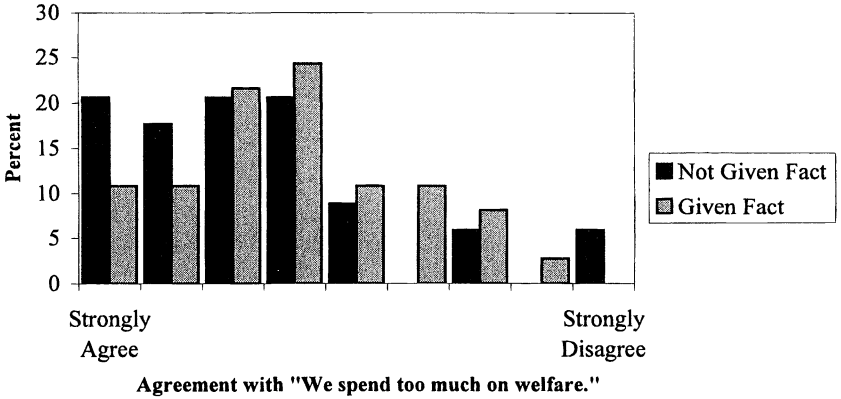
Simulated Collective Preferences under Different Distributions of Misinformation (Factual Belief Coefficient Reduced by Half)*



*Predicted policy preferences range from 0 to 30. They were calculated in AMOS.

FIGURE 7

Collective Preferences by Factual Condition



viduals made their decisions—fact or misinformation—shaped their collective voice.

Conclusion

Judging from our findings on factual beliefs about welfare, many people are likely to be misinformed, not only inaccurate in their factual beliefs but confident that they are right. Their errors can be skewed in a particular direction—for example, pro- or anti-welfare—and may cause or at least reinforce preferences about policy. To a degree that we cannot specify with much precision, people also resist correct information. We do not pretend to know how widespread misinformation is, how much it skews policy preferences or behavior, or whether any feasible changes in media practices or political debate could significantly reduce it. It will take a good deal of further research before we can answer these and related questions. Nevertheless, the notion of misinformation raises some implications for public opinion research.

The principal implication is that students of public opinion should take seriously the distinction between misinformation—confidently held false beliefs—and a mere lack of information. It is one thing not to know and be aware of one's ignorance. It is quite another to be dead certain about factual beliefs that are far off the mark. This distinction has especially serious implications for two currently influential streams of thought that assume citizens to be uninformed. One is the work on political heuristics, the other the work on political persuasion and issue framing.

The first body of research, which emerged in the late 1980s and early 1990s (Carmines and Kuklinski 1990; Lupia 1994; Mondak 1993; Popkin 1991; Sniderman, Brody, and Tetlock 1991), claims that citizens effectively use decision-making shortcuts, or heuristics, to overcome their informational shortcomings. As a result, the argument goes, even the poorly informed make reasonably good political judgments. But is this optimism about citizen competence justified?

Elsewhere, we have raised questions about the efficacy of heuristics as a means to overcome the lack of information (Kuklinski and Quirk 2000). They should be even less effective when the shortcoming is misinformation. Using rules of thumb to draw inferences or decide preferences on the basis of limited information does not produce rational opinion if the information is wrong. Under conditions of extreme misinformation, in fact, it can lead to worse outcomes than if citizens made random, totally uninformed judgments. We currently do not know how mistaken people are in their factual beliefs or how often they follow them when judging policy. We can say this: first, the utility of heuristics should decline if not become negative as the severity of the misinformation problem increases, and second, the possibility of a misinformed citizenry renders the celebration of political heuristics premature.

The second literature argues that political elites—politicians, interest groups, members of the media—exert considerable influence on how and what people think about public policy. The most extensive work is Zaller (1992; also see Alvarez and Brehm 1998), who argues that the configuration of elite messages determines what ideas or considerations people take into account and thus what judgments they reach. Related research on framing effects has accumulated evidence that people respond differently to alternative frames of the same issue (Krosnick and Kinder 1990; Nelson, Clawson, and Oxley 1997; Nelson and Kinder 1996). For example, people assess affirmative action more positively when it is presented as an effort to overcome historical discrimination against blacks than when it is presented as reverse discrimination against whites (Kinder and Sanders 1990).

All of this research purports to show that people readily change preferences in response to the cues they receive from the political environment. This occurs, the argument goes, because citizens are ambivalent (Zaller 1992). They simultaneously see reasons to support and to oppose a course of action; and the way that competitive political elites frame an issue determines which set of reasons—for or against—comes to mind and thus what people decide.

From a misinformation perspective, people's preferences should be hard to change. Our findings support this prediction. Rather than respond willy-nilly to whatever cues the environment provides, people resist change. Unless they are "hit between the eyes" with the right facts, they continue to judge policy on the basis of their mistaken beliefs. In fact, it is likely that even those "hit between the eyes" with facts will eventually return to their original beliefs and preferences. In their work on deliberative polls, for example, Luskin, Fishkin, and Jowell (1997) found that people frequently changed their issue positions after partici-

pating in intense deliberations with fellow citizens and listening to testimony from politicians and policy experts. However, a follow-up survey found these changes to be largely temporary.

There appears, then, to be a conflict between the elite-framing literature and research on citizens' response to policy-relevant facts. One research tradition says it is easy to move public opinion around, the other says it is difficult if not impossible. How, if at all, do we reconcile the discrepancy?

First, the conflict might not be as severe as we just portrayed it. Not all citizens respond to all frames, not all citizens are misinformed, and not all misinformed citizens necessarily refuse to move under all circumstances. In fact, available evidence says no more than that there are (in the case of framing) or are not (in the case of factual education) statistically significant changes in the dependent variable. A statistically significant change in preferences could result from many people changing a lot, a few people changing a lot, or many changing just a little. Our reading of the evidence is that the third condition—people changing just a little—explains many of the positive findings on framing effects. Small changes in expressed preferences—few studies ascertain whether those changes are permanent—differ little from no change.

Second, Sniderman and Theriault (1999; also see Sniderman 2000) contend that those who have studied the effects of issue framing overstate their case. They characterize past framing studies as flawed, in that individuals are given one or the other frame, but never both as occurs in politics. They show that when both sides of an issue are presented simultaneously, citizens adopt positions consistent with their preexisting values. In Sniderman and Theriault's words (1999, 23), "When citizens are able to hear opposing sides of a political argument, rather than falling into confusion or succumbing to uncertainty, or inner conflict, or muddle-headedness, they are more likely "to go home," that is, to pick out the side of the issue that fits their general view of the matter."

Sniderman and colleagues do not explore why people "go home," but they take it as evidence of a (relatively) competent citizenry. That might be. However, "going home," like the tendency of people to return to their initial positions after temporarily responding to new facts and arguments, is also consistent with a citizenry who knows its beliefs are right even though they are not (also see Lodge and Taber 2000).

Finally, frames such as racial discrimination versus reverse discrimination and free speech versus public order are references to particular goals, values, or problems. In other words, they center on aspects of an issue to which people can readily relate. It is not surprising, therefore, that the framing of an issue, especially in the context of a survey where people are given value cues directly, moves people more than the presentation of facts does.

But let us assume that this is precisely how many people act in the real world: they respond to rhetorical issue frames but not to facts. This only exacerbates the misinformation problem, for it indicates that when people do not use their mistaken beliefs it is not because they correct them with facts, but rather be-

cause they react, apparently willy-nilly, to the rhetoric that reaches them. When rhetoric gains their attention, they grab onto it; when it does not, they rely on factual beliefs that can be way off the mark.

Necessarily, our discussion has been highly speculative. We think it is time, therefore, to ask a wholly new set of questions designed to uncover the nature and extent of misinformation. Many of these questions, including those below, beg for little more than an exploration of the misinformation landscape.

1. What kinds of factual beliefs about public policy do people have (before they are asked factual questions by an interviewer)? For example, do they have implicit estimates of budget shares or just a general feeling about whether spending in some area is burdensome? Do they analyze policy in terms of concrete expectations about individuals—getting handouts makes you lazy, and the like? To what extent do the factual issues that citizens consider in forming their policy preferences correspond to those that concern policy analysts and political leaders?
2. What is the direction of causality between beliefs and preferences? Like scholars before us, we made an assumption about direction. Knowing the true relationship, which might vary across issues, is crucial. To understand why, suppose that preferences mainly drive beliefs, that is, beliefs exist largely to buttress opinions that people already hold. Then efforts to provide people the correct facts will face an especially formidable challenge. If people already know their policy opinions, why should they bother to consider the facts?
3. How widespread is misinformation? We know that Americans overestimate the crime rate, the proportion of the total population that is black or on welfare, and the threatening activities of hostile political leaders such as Saddam Hussein. Although researchers typically do not measure people's confidence on an issue, it is undoubtedly high for many. But is misinformation equally prevalent in other domains—the environment and health care, for example? Or is misinformation a problem only in those domains where people can use group stereotypes to infer the facts? Moreover, everything we know to date stems from cross-sectional research. Thus, we do not know how these incorrect estimates might vary, if at all, over time. Were people just as factually misinformed about welfare in 1960 as they were in 1996? More crucially, were they also misinformed in an anti-welfare direction back then?
4. What is the relation between inaccuracy and confidence? One of the more disturbing findings reported above is the perverse positive relationship between the magnitude of error and the feeling of certainty: the more inaccurate people's beliefs, the more convinced they are that they have them right. Although we might expect this relationship to hold across policy domains, we have no evidence one way or the other. Nor do we know if people who are simultaneously confident and inaccurate in one policy area are consistently so across domains.

5. What causes people to be misinformed about political phenomena? One answer—which might be the entire explanation—is that basic mental processes lead to errors in beliefs about everything in life, including politics. We identified three such processes—making inferences, seeking consistency in beliefs and attitudes, and attaching excessive confidence to one's judgments. As political scientists, however, we wish to know how the political environment might interact with these mental processes to create and foster misguided beliefs. One plausible hypothesis is that political rhetoric is asymmetrical in its effects, such that politicians who can activate existing stereotypes have more influence on the shape of factual beliefs than those who cannot. Another is that a single highly visible event—reporting of a violent crime, for example—generates grossly inaccurate beliefs (see, for example, Gilliam and Iyengar 1997). Moreover, the political mood of the time may shape people's perceptions of their worlds.
6. Finally, and ultimately of most practical importance, under what conditions can misinformation be overcome? In particular, are there any forms of political debate or media reporting that could better convey accurate beliefs about politics and policy and correct false and systematically biased beliefs when they arise? If improved practices somehow gave people more accurate facts, more clearly and more often, would it actually help overcome the American public's apparent poverty in the currency of citizenship? We would like to believe the answers are affirmative, but, frankly, we are not sure.

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