

The Political Environment and Citizen Competence

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The political-heuristics school has credited the political environment with providing easily used informational crutches that enable even poorly informed citizens to make competent political judgments. We develop a more general approach to the environment, arguing that it can either enhance or fail to enhance political judgment and that it shapes performance through the interaction of two factors: information and motivation. Using survey experiments that test citizens' ability to make tradeoffs among competing goals for health-care reform, we find that performance depends heavily on environmental conditions. A combination of general information with increased motivation to act responsibly improves aggregate performance. An extremely favorable informational environment not only enhances performance, but it even eliminates the effects of individual differences in education and political sophistication. The analysis points toward reforming structures that shape the political environment as the most plausible route to improved democratic governance.

From the late 1950s to the mid-1980s, the study of citizen decision making focused almost exclusively on the individual citizen's cognitive capabilities and political knowledge. With few exceptions, this research reached the familiar verdict that most citizens know little about politics, do not care to know much about it, and often make ill-considered and superficial judgments (Converse 1964; Sniderman 1993). An important corollary was that the well educated and politically sophisticated—the cognitively engaged, to use Zaller's (1992) term—outperform other citizens on judgment tasks (see Luskin 1987 for an excellent review).

More recently, some scholars have argued that the political environment serves as an “informational crutch” that assists citizens when they are making political judgments (Lupia 2000). The optimistic outlook of the political-heuristics literature, in particular, rests on the view that the environment gives people simple judgment tasks to perform and generally provides reliable cues to help citizens perform them (Carmines and Kuklinski 1990; Lupia 1994; Lupia and McCubbins 1998; Mondak 1993; Popkin 1991; Sniderman 2000; Sniderman, Brody, and Tetlock 1991; Wittman 1995). From this perspective, the cognitively highly engaged still outperform the less engaged, but even the latter usually make reasonable choices. Critics contend that the environment of contemporary American politics provides considerably less assistance than champions of heuristics have portrayed (see Bartels 1996; Kuklinski and Quirk 2000; and Luskin 2000 for critiques). Nevertheless, the idea that political environments might enhance citizen performance is an important advance in public opinion research.

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This article develops a more general idea: that the environment can either enhance or *fail to enhance* the quality of political judgments. We argue that the environment's influence works through two channels: information and motivation. Using survey experiments designed to simulate various environmental conditions, we empirically test how these two factors and their interaction shape performance. We also examine whether the political environment can reduce or even eliminate the advantage that normally comes with personal attributes such as education and political sophistication.

The specific decision-making task we consider is making tradeoffs among competing goals that cannot all be fully achieved. We ask whether people limit their demands on some of these goals¹ and find that tradeoff performance depends heavily on environmental conditions. When people are invited to express demands concerning multiple and conflicting goals in an environment that provides neither guidance about goal conflicts nor motivation to take the decision task seriously, they perform as poorly as we would expect. Most overlook tradeoffs and ask for nearly full achievement of every goal. Moreover, the more highly educated and politically sophisticated perform better than the less educated and unsophisticated.

The right combination of changes in the environment alters these patterns. Introducing general information about the need for tradeoffs by itself has no effect. Nor does, by itself, introducing an incentive to take the decision-making task seriously. When the cue and incentive are introduced simultaneously, however, people perform considerably better. Even so, many still overlook tradeoffs, and education and sophistication continue to have an independent effect. Finally, when people are given specific and credible information about goal conflicts and options for resolving them—in a word, when they are given highly diagnostic information—most of them rise to the occasion and make tradeoffs. Moreover, in this extremely favorable information environment, motivation no longer has a significant effect on the making of tradeoffs. Nor does education or political sophisti-

cation. In an environment that explicitly states the limits of the feasible, neither induced motivation nor cognitive advantage appears to be necessary to tradeoff-conscious behavior.

More generally, our findings document a theoretically interesting relationship between information and motivation as they condition citizen decision making. Motivation has an important effect on decision making only in an intermediate range of the information's diagnostic value: when the environment provides some cues about the need for tradeoffs but does not explicitly and fully spell out the feasible options. Without such informational cues, enhanced motivation makes no difference; without the ambiguity, it is not needed.

The Political Environment

Some of the influence of the political-heuristics literature arises from its normatively appealing claim that citizens can perform reasonably well by taking cues from parties, politicians, and interest groups. After several decades of research that portrayed citizens as lacking capability for political decision making, this view polished up scholars' image of the citizenry and reestablished the citizen as a meaningful actor in democratic governance.

The analytical legacy of this research lies in its sustained attention to environmental influences on the nature and competence of citizen decision making.² An earlier perspective associated with Nie, Verba, and Petrocik's *The Changing American Voter* (1976; also see Page 1978) had credited the intensely conflicted political environment of the 1960s with making voters more interested in issues and more able to respond in ideological terms.³ But the heuristics school went beyond such historically conditioned observations and acknowledged as a general matter what now seems self-evident: that citizens decide in a political context that shapes the way they reach their decisions and thus the decisions themselves. Even so, it has not answered the obvious general question: do citizens evaluate complex issues more effectively under some environmental conditions than under others? How,

¹There is a considerable literature, much of it published before 1985, on how well ordinary citizens make policy tradeoffs. Relevant works include Buchanan and Wagner (1977), Citrin (1979), Free and Cantril (1967), Ladd (1979), Modigliani and Modigliani (1987), Mueller (1963), Sears and Citrin (1982), Welch (1985), and Wilson (1983). This research, which generally concludes that people cannot make tradeoffs, does little more than measure peoples' attitudes. More recent studies, far more limited in number (Hansen 1998 and Rasinski, Smith, and Zuckerman 1994), ask people to make tradeoffs and then measure how well they perform. Our research is in the second tradition.

²Henceforth, we construe the political environment roughly (and loosely) as students of heuristics have: as the totality of politically relevant communication to which citizens are exposed. It includes all the statements and information that the media, public officials, interest groups, and other relevant actors provide with respect to a given issue or policy debate. Nearly all of the information is mediated (Mutz 1998).

³Of course, countless scholars have considered how the environment influences the direction of opinions and preferences.

if at all, do *variations* in environmental conditions shape citizen performance?

There are compelling analytic, empirical, and even practical reasons for exploring the effects of a wide range of environmental conditions. To begin with, environmental conditions in real-world political settings undoubtedly exhibit significant variation; analyzing the effects of such variations can contribute to explaining differences in real-world citizen competence. Scholars can use existing settings—from New England Town Meetings, to initiative and referendum processes in many states, to public debates about major legislation in the U.S. and other countries—as laboratories for learning how differences in information, inducements, or both affect the quality of citizen decision making.

In addition, studying the effects of environmental conditions that rarely exist in the real world—such as the presence of extremely strong inducements or highly specific, reliable guidance—is essential for understanding how the most basic, fixed features of the contemporary political environment affect citizen performance. Attending only to currently existing conditions is like studying the U.S. alone to determine the effects of the separation of powers. Only comparisons to contrasting circumstances can provide the needed perspective. Finally, research might find that some alternative environmental conditions substantially enhance citizen performance. Not even enthusiastic proponents of heuristics suggest that the typical real-world environment is optimal. To discover that some environments boost competence significantly would show that the well-documented deficiencies in citizen performance do not reflect inherent limitations. It might point to institutional change as a route to more effective and meaningful citizen participation and shift the burden of improving politics from individual citizens to political structures.

Construing the political environment as a variable requires spelling out how environments vary and with what effects. The two dimensions of variation we consider here are the diagnostic value of the information that the environment provides to citizens and the strength of the incentives that it gives them to take their tasks seriously.

The Environment as Informer

The environment is the source of information on which citizens must rely to perform a political judgment task. It is natural to think solely in terms of the sheer volume of information—facts, arguments, policy details, and so on—that the environment provides, on the assumption that more information is better than less. However, this

approach misses the point. A small amount of highly pertinent information will often enhance citizen competence far more than a mountain of peripherally relevant facts and arguments.

Rather than the volume, then, it is the *diagnostic value* of information that influences how well citizens are able to cope with policy choices. Information has high diagnostic value, in our terms, when it clearly and fully conveys the central considerations relevant to a decision or judgment task. The diagnostic value of information is especially high when it denotes both what factors to think about and how to think about them.⁴

Consider the case of information for making tradeoffs. At one extreme is the environment that not only states the need to make tradeoffs, in general terms, but also indicates what those tradeoffs are in the given decision. Citizens know precisely what alternatives they really have. At the other extreme is the environment that provides literally no cues about tradeoffs. It neither explicates what the tradeoffs are nor even reminds citizens that they need to make them; it might even tell them, misleadingly, that no tradeoffs are necessary. If people mentally make tradeoffs as they strive to reach a decision, it is because they (probably unconsciously) infer the need to do so from general knowledge and not because the political environment tells them about it. Between the two extremes is an environment that sensitizes the

⁴ The notion of diagnostic information is central to some literatures in expert systems, cognitive psychology, and artificial intelligence (Beyth-Maron and Fischhoff 1983; de Groot 1965; Feltovich, Ford, and Hoffman 1997; Leake 1996; Simon and Chase 1973). The general idea is to present a situation to someone. He or she is then asked what is wrong and how to remedy the situation. The quality of the diagnosis and remedy depends on the ability to solicit and use appropriate information. It also depends on one's ability to recognize what information is *not* relevant to the task (Minsky 1997). We are assuming, of course, that citizens do not solicit information. Rather, we are interested in whether they effectively use diagnostic information when the environment provides it to them.

In the research just cited, disinterested observers typically agree on the diagnostic value of the information. Not so in politics, where what is diagnostically valuable is often controversial. Nonetheless, it would be counterproductive to assume that objectivity is totally absent from the evaluation of public policy. To do so would be to treat diagnostic value as a matter of whether the information makes the individual confident in his or her decision (contrast Popkin 1991 and Sniderman, Brody, and Tetlock 1991 with Kuklinski and Quirk 2000). Although useful for some purposes, this approach reduces the issue of performance to one of self-satisfaction. To give an absurd example, an astrological chart would provide diagnostic information in this sense for some citizens.

We do not assume that value is found only in substantive information. In some circumstances, endorsements or other non-substantive cues can ease the decision tasks for citizens (see Lupia and McCubbins 1998). However, at least as we are using the term, these sorts of cues, while useful, do not normally provide diagnostic information.

citizenry to the need to make tradeoffs without explicating what those tradeoffs are. Essentially, citizens are told that they cannot have it all. Then they themselves must identify the goals that are in conflict and find a way to balance them.

The notion of diagnostic information, in this context, assumes that well-informed observers generally agree on what the tradeoffs are. This assumption does not always hold: critics of trade with China see a tradeoff between achieving economic benefits and promoting human rights; advocates think that such trade will best promote both goals; and even expert commentators who are above the political fray do not agree on the matter. Most of the time, however, informed observers not allied with political advocates largely agree on what goals are in conflict, even if they disagree on their relative importance (Margolis 1996).⁵ Without some agreement on the nature of tradeoffs among the highly informed, there would be no basis, indeed no reason, for evaluating citizen performance in making tradeoffs.

The Environment as Motivator

When students of public opinion discuss the political environment at all, it is in terms of information. They have almost entirely overlooked issues of effort and responsibility, as opposed to information and skill, in political judgment. But in principle the environment can evoke more or less motivation among citizens to take their decisions seriously.⁶

Psychologists have found that inducing motivation improves decision making. In Sanbonmatsu and Fazio's words, the motivation an individual brings to a decision task determines "the 'care,' attentiveness to detail, and thoroughness with which ... judgments are made" (1990, 614; also see Fazio 1990). When people lack motivation, they do minimal analysis of the matter at hand and instead rely heavily on global beliefs or attitudes. They give up accuracy to avoid effort and stress.

The realm of politics raises two special questions about motivation, one concerning the form of the in-

ducements, the other their ability to have a significant effect. Psychologists typically induce motivation by asking subjects to form an accurate impression, say, about the quality of a supposed student's essay that they are asked to read. Following this lead, a few political scientists (Lodge 1995; Rahn 1995; McGraw and Steenbergen 1995) have induced people to form an accurate impression of candidates. At least when it comes to evaluating policy, however, stressing accuracy is problematic. There is usually no objectively "right" or "accurate" judgment in evaluating policy, since predictions of outcomes and choices of values are ultimately subject to disagreement.

The most relevant motivation in the context of evaluating policy, then, is simply the inclination to evaluate policies thoughtfully and seriously. Then, just as political environments can vary in the quality of the information they provide, so can they vary in the extent to which they encourage thoughtful evaluation. At one extreme is the environment that does nothing to induce serious consideration of the task at hand. The contemporary American political system, for example, often conducts political debate largely through quips, wisecracks, and colorful metaphors that are unlikely to induce serious reflection (compare Schlesinger and Lau 2000 on the value of metaphors in political discourse). Citizens are rarely, if ever, exhorted to pay attention or to take their responsibilities seriously. (Politicians and the media take the view that "all the citizens are above average.") At the other extreme is an environment that hammers home the importance of attending to and thinking about the implications of one's preference before expressing it publicly. A political system that promotes an ideology of strenuous participation (as in New England Town Meetings or classical Republicanism) will lean heavily on individual citizens to do a scrupulous job in their tasks. And, of course, in between there can be a variety of levels of motivational inducement. The American political environment provides a modest boost to motivation, perhaps, through the pomp, circumstance, and elaborate attention to fair procedure that characterize formal presidential debates. Such circumstances may give some citizens a sense of obligation to listen and evaluate carefully.

Note that, unlike information, which often relates to a particular task, motivation as we construe it is not task-specific. In particular, it is unlikely that a political environment provides inducements for citizens to take decisions about tradeoffs seriously, apart from whatever inducements it provides to take other decisions seriously. As we shall suggest momentarily, however, the impact of this general state of mind depends on the nature of the task-specific information that is available to citizens.

⁵ Of course, any conflict between two goals has a *ceteris paribus* assumption. A government could provide the best-possible national health care and not raise taxes if it were willing to weaken national defense.

⁶ The strong emphasis on cognition during the 1970s and 1980s led psychologists and political scientists alike to abandon the study of motivation, which had once been a central concept in social and cognitive psychology (e.g., Festinger 1957). In the last decade or so, psychologists have once again turned to the study of motivation (Kunda 1990; Sorrentino and Higgins 1986). Motivation is also central to Lodge's recent work in political science (Lodge and Taber 2000; Lodge, Taber, and Galonsky 1999).

The second distinctive question for a political context is whether any existing or possible political environment can successfully motivate citizens of a mass democracy to act responsibly. On the one hand, political motivation, unlike motivation induced in the laboratory, is in principle susceptible to the same collective-action problem that voting is (Downs 1957). The individual who tries seriously to evaluate a proposed policy will not affect the policy outcome any more than a single voter will determine the outcome of an election. A citizen's response to an exhortation to weigh issues carefully could be, "for what?" Yet, on the other hand, and contrary to the predictions of instrumentally oriented rational-choice theory, people do vote; and thus they might respond to urgings to decide responsibly. Moreover, there is evidence that people can be motivated to contemplate distant political phenomena (Lau, Smith, and Fiske 1991).

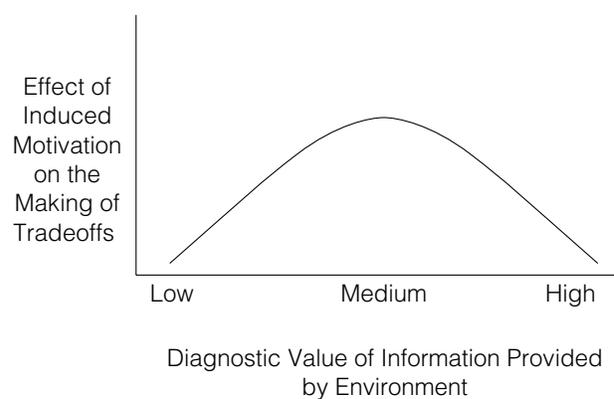
The Information-Motivation Interaction Hypothesis

We have considered two factors, the diagnostic value of information and the strength of the induced motivation. This leaves one outstanding consideration: how these two factors might work together to influence the quality of citizen decision making. We suggest that there are grounds for expecting an interaction between them, rather than straightforward additive effects.

Suppose that environmental differences can induce citizens to take either a more relaxed and self-indulgent or a more serious and responsible approach to decision making. The difference that motivation will make should depend on informational circumstances. Consider the case where the environment provides no information about the need for tradeoffs. Even if strongly motivated, most people may fail to notice that responsible decision making requires balancing desired goals. If people do not even know what to attend to or to accomplish by effort, motivation will make no difference. Next consider the opposite case, where the environment identifies the relevant tradeoffs and defines the alternative choices clearly and explicitly. Even if fairly unmotivated, most citizens should respond to the need to make tradeoffs when an exceptionally informing environment has done all of the cognitive work for them. If the real alternatives are made plain as day, most people, whether motivated or not, will face up to them.

Finally, consider an intermediate informational condition. It is when the environment provides partial clarification of the decision task—indicating to citizens that tradeoffs are necessary without explicating what those tradeoffs are—that enhanced motivation should have the

FIGURE 1 Hypothesized Effect of Induced Motivation on Quality of Decision Making at Varying Levels of Diagnostic Value of Information



greatest effect. If the environment can induce an increased disposition toward seriousness and responsibility, it should lead citizens to focus on and elaborate the sketchy information that the environment has provided, producing an overall decline in the demand that all goals be fully met.

More generally, the effect of inducing motivation should be a curvilinear function of the diagnostic value of the provided information (Figure 1). When the environment provides no information or provides highly diagnostic information, motivation should affect decision making little if at all. In the one case, motivation alone is not sufficient and in the other it is not necessary.

Policy Tradeoffs as a Test

Citizens make a variety of decisions. They vote for candidates in primaries and general elections, vote on initiatives and referenda, express preferences about general directions of policy (more help for low income people or less), and evaluate proposed bills (a Republican welfare bill) and even specific provisions of bills (a two-year limit on benefits). We could have chosen any one of these tasks as an empirical test of our general thesis. Indeed, all of them are more familiar to citizens than making policy tradeoffs, which citizens rarely are asked to do explicitly. Why, then, consider how changes in the political environment affect the making of tradeoffs? We believe there are three compelling reasons.

First, making tradeoffs is more fundamental than any of the other tasks enumerated above. In fact, it pervades them all. In choosing among policy options, citi-

zens and the public officials they elect inevitably must balance conflicting goals that everyone values and desires, to varying degrees. Making tradeoffs is as central to the judgment of policy as voting is to electoral democracy. The difference is that citizens know much more about voting than they do about the need to resolve goal conflicts.

Second and closely related, to the extent that citizens can express tradeoffs explicitly and realistically, they will give policymakers informative signals about their priorities. Sending such signals is what enables them to have an effective collective voice in the democratic process.

Advocates of political heuristics would argue that sending signals about tradeoffs is not necessary: "Let the parties make the tradeoffs, and simply support the policy option that 'your' party advocates."⁷ However, when citizens are not able to deal with tradeoffs, they stand to induce perverse behavior by policymakers. On the one hand, perceiving resistance to tradeoffs, policymakers might use misleading rhetoric or adopt dubious policy designs to maintain the posture of giving citizens everything they want.⁸ The debate on health-care reform in the mid-1990s is a case in point (for a critique of this debate, see Jacobs and Shapiro 2000). President Clinton announced his commitment to six general principles for health-care reform—choice, savings, security, quality, simplicity, and responsibility—and promised that his plan would satisfy all of them. Republican and industry opponents attacked the plan on various grounds, but they rarely acknowledged that their alternatives sacrificed the goal of achieving universal coverage in the foreseeable future. Neither side addressed tradeoffs directly. On the other hand, if policymakers perceive that they cannot deliver what the public demands, they might refrain from acting at all. The result might be policy stale-

mate on issues where citizens' tradeoff-cognizant preferences, if expressed, would support policy change. In short, citizens will pay for their inability to make and accept tradeoffs by suffering the effects of unworkable policies or policy stalemate.

The final reason for focusing on tradeoffs is that it represents a demanding test of the capacity of the environment to enhance the quality of citizen decision making. Making tradeoffs is cognitively more difficult than most other decision tasks. Many studies have documented citizens' inability to understand and resolve goal conflicts (Buchanan and Wagner 1977; Citrin 1979; Free and Cantril 1967; Ladd 1979; Modigliani and Modigliani 1987; Mueller 1963; Sears and Citrin 1982; Welch 1985; and Wilson 1983).⁹ In addition, balancing valued goals is mentally discomforting. Rather than deal with the relevant tradeoffs, citizens will normally be inclined to ignore them or to rationalize them away. It is much easier to overlook tradeoffs through a form of wishful thinking than to confront them directly. In sum, if better information and increased motivation can improve citizen performance on tradeoffs, they should have similar if not even stronger effects on other types of decision tasks

Data

This study is based on a survey of 1160 randomly selected Illinois adults, administered in January 1996, about a year after Congress defeated the Clinton health-care plan.¹⁰ Despite the dramatic defeat, the media were still carrying prominent news stories on national health care at the time of the study. For example, the *New York Times* published twelve articles on health-care policy between December 20 1995 and January 20 1996, which is the month-long period bracketing the data collection.

The survey employed an elaborate, integrated set of question batteries and experimental manipulations designed to explore several aspects of tradeoff performance on health-care reform. We explain the various elements of the study design as we report the results.

⁷Another possibility is that citizens use on-line processing (Lodge, McGraw, and Stroh 1989; Lodge, Steenbergen, and Brau 1995) to deal with tradeoffs. As people learned how a certain policy affects various goals, they would form evaluations of the policy. They would store only the policy evaluations. When they received additional information about goal effects, they would update the evaluation. But they would never have to compare one goal explicitly with another, and they would not be able to retrieve the goal effects or implicit goal comparisons that shaped their evaluation. Such a process would enable citizens' policy judgments to register their relative concern about each of several goals. It would suffice to ensure competent judgment if the political environment presented only feasible options. But as we have already suggested, this is not likely to be the case.

⁸Such rhetoric does not mean that politicians fail to make tradeoffs when it comes to final action. Political rhetoric and political action need not be the same. However, this would seem only to emphasize the importance of citizen awareness of the tradeoffs that inhere in a policy decision.

⁹Hansen (1998) forces respondents to set priorities between pairs of goals to learn whether they have the ability to rank priorities consistently (that is, transitively) across several goals. He finds that citizens perform quite well on this task.

¹⁰Specific details about the survey are reported in Kuklinski et al. (2000). The Survey Research Office of the University of Illinois at Springfield conducted the survey. The response rate was 47.5 percent. Forty-seven percent of the respondents are men, 53 percent women. The mean education level is consistent with that for the state population. Eleven percent of the sample is African-American, compared to 15 percent in the state.

Making Tradeoffs under Different Environmental Conditions

Efforts to reform health care inevitably require making tradeoffs among conflicting goals. Providing coverage for everyone, for example, would almost certainly require raising taxes or insurance premiums. Maintaining the quality of the best care would militate against achieving equal quality of care for all. And requiring employers to cover their employees' health care likely would cause some workers to lose their jobs. Not everyone will agree on the severity of a conflict between any two particular goals. Indeed, almost any two goals can be reconciled with sufficient sacrifices in other areas. But few, if any, policy experts would dismiss the need to make tradeoffs in health care overall.

No Information, No Induced Motivation

Our first analysis considers whether citizens show any inclination toward making tradeoffs when the environment, as we present it, neither provides information relevant to tradeoffs nor motivates citizens to take their decision-making tasks seriously. In other words, we ask whether citizens will make tradeoffs when they must do so essentially on their own. This is a demanding task, yet one that is commonly found in the real world. We expect to find little evidence of tradeoffs under this most difficult of all situations.

To learn how people respond in an environment devoid of information and incentive, we presented seven goals that health-policy experts consider central to debates about health-care policy. These are: universal coverage, no loss of jobs, uniform quality of care, no growth in government, no increases in taxes or premiums, free choice of doctors and hospitals, and employer payment of health coverage. Respondents were asked how much of each goal a health-care plan had to achieve for them to find it acceptable. The ten-point scales ranged from none to all of it. Note how the questions are worded. We did not ask respondents simply to rate the importance of the goal; they could reasonably feel that all the goals were very important. Rather, we asked how much they would require each goal to be attained for a health policy to be acceptable to them. We imposed no constraint on the total ratings; respondents could rate every goal a 10 if they wished. That no single program can realistically attain all goals was left implicit.¹¹

¹¹We use the within-subject mean rating across the seven goals as our dependent variable because the most direct empirical expectation is that making tradeoffs will lower it, compared with demanding full or nearly full achievement of all goals. Although a trade-off

The distributions of responses to the seven goals appear in Figure 2. All are skewed toward the high end. The means vary from 6.43 to 8.28, and on six of the items the modal response is 10. More revealing are the aggregated mean and modal responses across all seven items: 7.41 and 10, respectively. On any particular goal, in other words, most people say that it must be attained completely or almost completely for a health plan to be acceptable. And most of those same people also say that the other goals must be fully attained as well.¹² Lacking information on the need for tradeoffs and given no motivation to make responsible decisions, many people ask for more than policymakers can deliver.¹³ Although this behavior is not surprising, its existence underlines the potential danger of interpreting citizens' publicly expressed opinions in a political environment devoid of information and incentive. In such an environment, the natural and understandable tendency is to overlook, indeed not even to think about, tradeoffs among goals.

In this environmental circumstance, individual attributes play a large role. Despite the poor performance overall, some citizens do better than others. The regression analysis in Table 1 shows that the more highly educated and politically sophisticated demand less, overall, than those who are less well educated and less politically sophisticated.¹⁴ With political ideology held constant, for example, the most educated and sophisticated score about 1.35 less on the global mean than the least educated and sophisticated. Considering that our scale ranges from one to ten and that most people score near the high end of it, this difference is noteworthy. When the environment provides little guidance, the individual's level of cognitive engagement strongly shapes decision-making performance.

cognizant, competent respondent in principle could accept equal sacrifices across several goals (score all items at 5, for example), it is likely that making tradeoffs will increase the within-subject dispersion across ratings. Therefore, we duplicated all of the analyses reported in the text using standard deviations instead of means as the performance measure. The results mirror those reported in the text. Respondents who scored lower on the means also tended to differentiate more fully. These analyses are available from the authors.

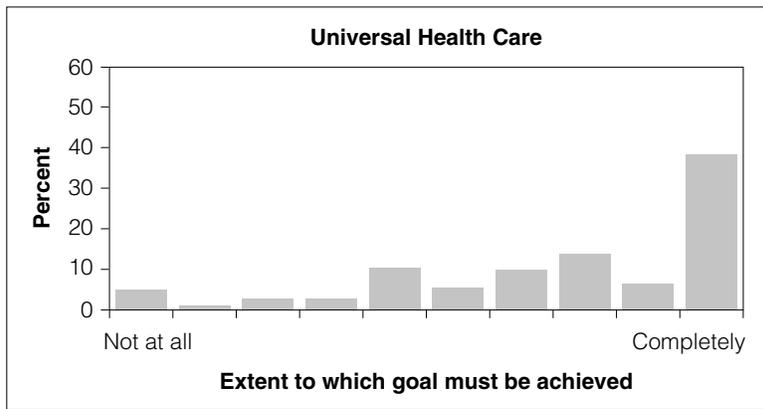
¹²The average correlation across the items is .31.

¹³The magnitudes of the means are a function of the items we chose. These are the items that two academic social-policy experts recommended to us as the major competing goals on health-care reform.

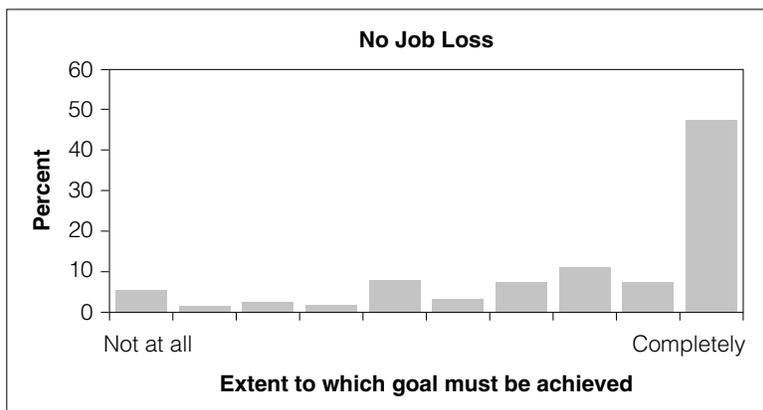
¹⁴Our education variable consists of six categories: less than high school, high school graduate, some college, college graduate, some graduate education, and graduate degree. In accord with previous research, we measured the level of political sophistication as the number of correct answers the respondent gave to three informational questions: the number of Supreme Court justices, the name of the Vice President, and the name of the Speaker of the House.

FIGURE 2 Distributions of Demands for Health Care Reform Goals

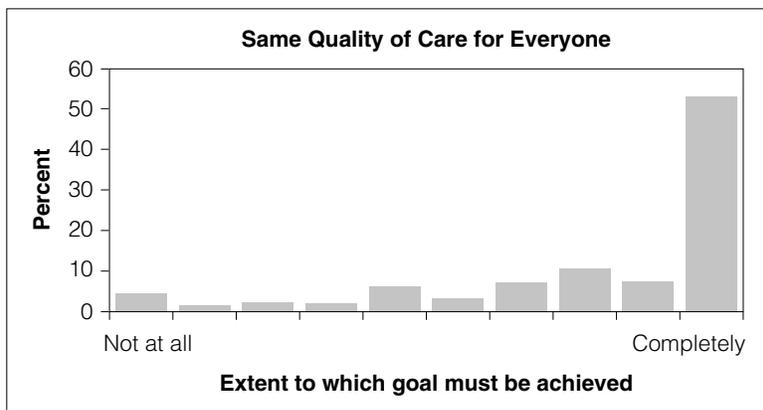
2a



2b



2c



2d

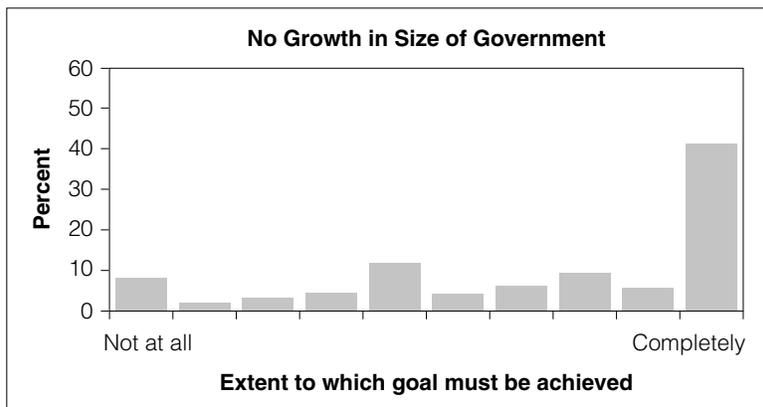
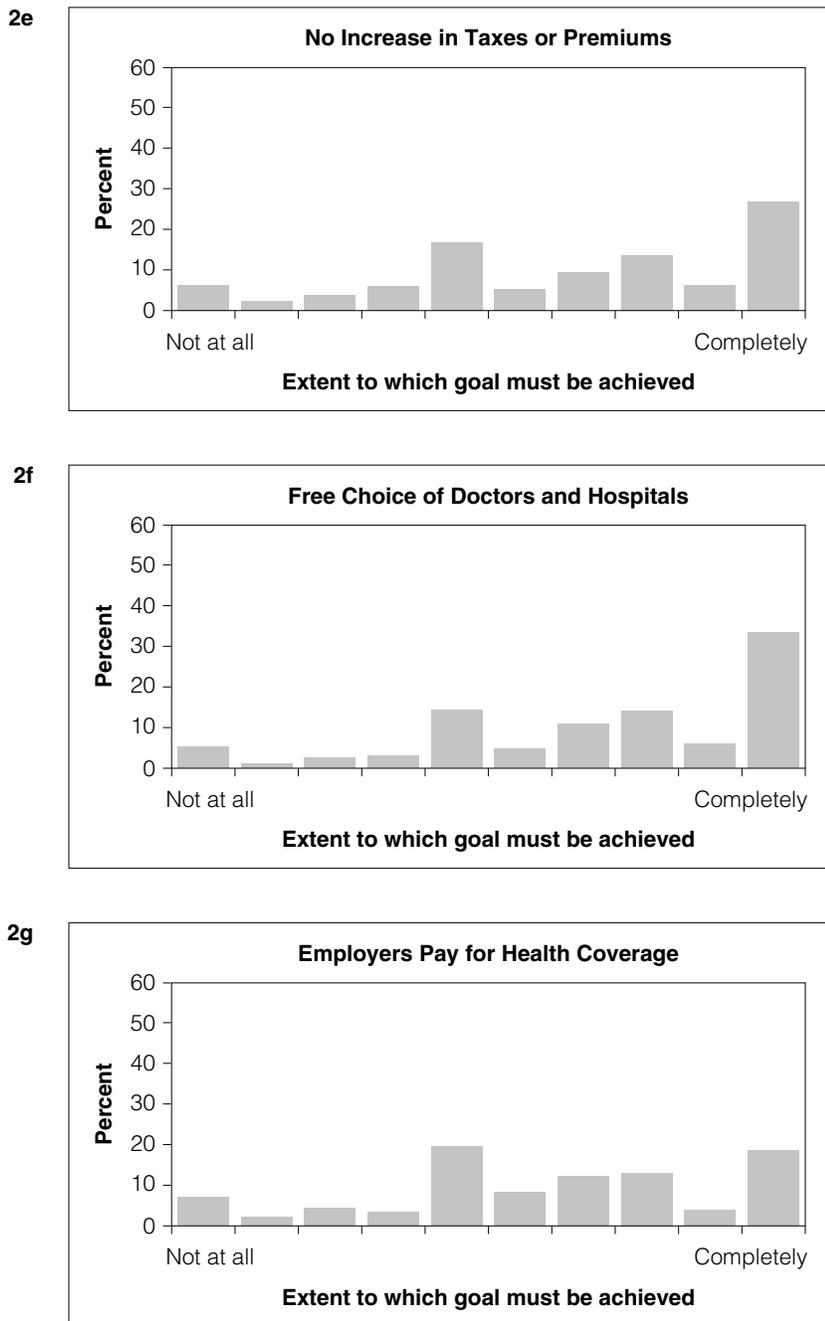


FIGURE 2 Distributions of Demands for Health Care Reform Goals
(continued)



General Information, Induced Motivation

The preceding findings raise several questions. Does the lack of information about the necessity of tradeoffs explain people’s failure to make them? Might people be capable of balancing the various goals but not feel motivated to try? Does it take both incentive and information to induce tradeoffs? Or are citizens simply incapable of

making tradeoffs under any circumstances? We designed our next set of experimental manipulations to determine whether improvements in the political environment can enhance citizen performance, and, if so, what improvements are required.

Prior to being asked how essential each of the seven goal items was to a national health-care program, a ran-

TABLE 1 Goal Demands in an Environment Devoid of Information and Motivation

Independent Variable	Coefficient
Education	-.16 ** (.07)
Political Sophistication	-.18 ** (.09)
Political Ideology	-.23 ** (.11)
Constant	9.04 * (.40)
Adjusted R ²	.03
<i>n</i>	411

OLS estimates with standard errors below. * $p < .01$ ** $p < .05$

domly selected 20 percent of the sample were given information about the need for tradeoffs. They were told that, "Making decisions about governmental programs almost always requires giving up one thing to obtain something else," and then were asked if they thought elected officials recognized this need. Note the general and once-removed nature of the information. It says nothing about any specific tradeoffs or even the area of health care and merely indicates the need for tradeoffs in designing any program.

The first column in Table 2 reports the results of a regression analysis identical to that in Table 1, except that it includes a dummy variable indicating whether or not respondents received the general informational item about tradeoffs. The coefficient of this dummy variable falls far short of statistical significance, evidence that the informational cue provided in this experiment does not by itself enhance decision-making performance. Simply stating that decisions about governmental programs require giving up one thing to get something else does not reduce the overall demand to achieve all of the goals. And as before, the more engaged perform better.¹⁵

To invoke motivation in the survey context, we did the following. A randomly chosen 25 percent were told that "people do best on these types of questions when they take time to think.... Feel free to think awhile before you answer." Another 25 percent were told that people best answer these questions when they "imagine themselves as a responsible public official." Both instructions were designed to increase cognitive processing and induce a greater willingness to overcome the unpleasant-

ness associated with compromising some desired goals. We used the two different instruction sets to ascertain whether the strength of the incentive was related to decision-making behavior. We assume that the "responsible public official" instruction, with its request that the respondent act as if actually in charge of the decision, is the stronger of the two. The remainder of the sample did not receive a motivational instruction.¹⁶

Note, finally, that neither of the motivational instructions includes any information about the need to make tradeoffs. Respondents were free to suppose, for example, that being responsible required making even higher goal demands than they would have made otherwise. The purpose of the instructions was solely to increase the seriousness with which respondents approached their decision task.

The results in the second column of Table 2 mirror those in the first column. Just as the coefficient of the general information variable failed to reach statistical significance, so do the coefficients of both motivational instructions. Asking people to think before they answer or, more strongly, to put themselves in the position of a responsible public official does not induce them to make tradeoffs. And individual characteristics continue to be associated with our measure of tradeoffs.¹⁷

There are two plausible and very different explanations of this insignificant relationship between the motivation instructions and our measure of tradeoffs. The first is that the instructions simply don't work. Since respondents know they are doing no more than answering survey questions, they could easily dismiss exhortations to take their decisions seriously. The second is that the motivation instructions induce greater seriousness on the part of respondents, but, in the absence of information about the need to make tradeoffs, they fail to understand that serious decision making about health-care policy includes making them. Which of these explanations does the evidence support?

Column three in Table 2 includes three dummy variables: one designating whether respondents received the general information prime, another whether they

¹⁶More correctly, another group of respondents was asked to answer quickly, while a fourth group received no prime. We found no difference in behavior between these two groups and thus combined them for purposes of analysis. It is easy, we should note, to imagine stronger manipulations than we have used here. Nonetheless, ours are as strong as those typically used in psychology experiments (where subjects often are simply told they later will have to justify their choices, for example).

¹⁷In line with what we found previously with respect to information, there is no significant interaction effect between either of the two motivation instructions and either education or political sophistication.

¹⁵The coefficients of the information \times education and information \times political sophistication interaction terms were statistically insignificant.

TABLE 2 Goal Demands in Three Types of Political Environment

Independent Variable	Coefficient		
	<i>General Information Only</i>	<i>Motivation Only</i>	<i>General Information & Motivation</i>
Education	-.18 * (.06)	-.16 ** (.05)	-.15 ** (.04)
Political Sophistication	-.17 * (.08)	-.17 * (.07)	-.17 ** (.06)
Political Ideology	-.19 * (.10)	-.26 ** (.08)	-.22 ** (.07)
Tradeoff Prime	.20 (.18)	–	.19 (.19)
“Responsible Official” Treatment	–	-.11 (.15)	-.11 (.15)
“Take Time” Treatment	–	-.22 (.15)	-.22 (.15)
Prime x “Responsible Official”	–	–	-.86 ** (.33)
Prime x “Take Time”	–	–	-.21 (.32)
Constant	9.00 ** (.34)	9.08 ** (.31)	8.98 ** (.27)
Adjusted R ²	.04	.03	.04
<i>n</i>	517	829	1041

OLS estimates with standard errors below. ** $p < .01$ * $p < .05$

received the “think” instruction, and a third whether they received the “responsible official” instruction. In addition, there are two interaction terms: general information \times “think” and general information \times “responsible official.” The coefficients of these terms will reveal whether general information and motivation induce increased tradeoffs when provided together.

None of the coefficients of the three dummy variables is statistically significant, nor is the coefficient of the information \times “think” interaction term. In other words, when people are told that political decisions require tradeoffs, and are also given a modest incentive to take their tasks seriously, they perform no better than when they receive only the information or only the incentive, which is to say, no better than when they receive neither. One set of conditions, however, produces a significant effect: when given the same general information and the stronger motivation to act as a responsible public official, respondents reduce their overall demands.¹⁸

¹⁸ The difference in the score on the dependent variable between those who are given both information and the stronger motivation and all others is, on average, .78.

In other words, general information and induced motivation are both necessary, and together they are sufficient, to increase the quality of citizen decision making. Once again, and as in all the analyses thus far, individual attributes emerge as important: the better educated and more politically sophisticated demand less, overall.¹⁹

Making It Easy

Thus far we have found the following. In an environment largely devoid of information and incentive, people generally do not make tradeoffs. Providing very general information that tradeoffs are necessary does not itself enhance the quality of decision making. Nor does motivating citizens to take their decision task seriously. When both are provided, however, people reduce their overall demands. In all of the environmental conditions we con-

¹⁹ None of the coefficients of all the possible interaction effects involving information, motivation, and personal attributes was significant.

sidered, personal characteristics are associated with tradeoff behavior.

We now explore, in this final analysis, whether an exceptionally informing environment—one that offers considerably more direct guidance than citizens generally encounter in the political world—can improve decision making. To this end, we designed a pair of questions to represent the task of making tradeoffs under conditions of highly diagnostic information.²⁰ Specifically, respondents were told explicitly that there was a conflict and what, precisely, that conflict was. In one case, respondents were told that “experts say we cannot provide health coverage for everyone and at the same time keep taxes down”; in the other, that “experts say we cannot require businesses to pay for their employees’ health coverage and at the same time avoid a loss of jobs.” They were then asked to choose one of four options: achieve one goal (e.g., “provide health care for everyone”), achieve the other (e.g., “keep taxes down”), compromise and achieve some of both, or—the analytically critical option—“disagree with the experts and insist on achieving both.”

This kind of informational environment should considerably ease the cognitive task of making tradeoffs. It provides the relevant information about goal conflicts; offers a simplified choice among three clearly defined, presumably feasible options; and by attribution to experts, gives respondents a normative inducement to choose one of those options. Nevertheless, as in any real-world context, the respondents still could reject those options and demand achievement of both goals. We are interested primarily in the frequency and determinants of this refuse-tradeoffs option, which we interpret as indicating a fairly hard-core inability or unwillingness to make tradeoffs, even under favorable conditions. To explore the effects of motivation in the presence of highly diagnostic information, we repeated the same motivational instruction sets used earlier.

For purposes of analysis, we combined responses to the two items into a single measure, indicating how many times (0–2) the respondent rejected tradeoffs. Only 16 percent rejected both tradeoffs; 27 percent rejected one or the other; and 57 percent accepted tradeoffs both times. In an informing environment, in other words, large majorities accept the idea that tradeoffs are necessary and either give up all of one goal or some of both in order to adopt a feasible option.²¹

²⁰Simplifying the decision task required us to change the dependent variable. Although this change precludes strict comparison with prior results, our primary objective was to determine whether greatly simplifying the cognitive task can reduce individual-level differences in the quality of decision making.

²¹Although it is not our primary concern, we also considered whether liberals tended to opt for the more liberal goals (provide

TABLE 3 Tradeoff Refusal in the Presence of Diagnostic Information

Independent Variable	Coefficient
Education	-.04 (.03)
Political Sophistication	-.03 (.04)
Political Ideology	-.10 * (.05)
“Responsible Official” Treatment	-.14 (.09)
“Take Time” Treatment	-.01 (.09)
τ_1	-.27
τ_2	.56
Log (L)	-959.51
χ^2	8.32
p-value	.14
<i>n</i>	999

Maximum likelihood estimates with standard errors below. τ is the probit threshold between response categories.

* $p < .05$

What, then, about the role of induced motivation and individual characteristics in such an informing environment? Table 3 reports the results of an ordered-probit analysis in which the dependent variable has three categories (0, 1, 2) corresponding to the number of times the respondent rejected the explicitly stated tradeoff. The first interesting result is that, just as in the most information-poor environment, induced motivation does not have a significant effect. Although the coefficients of the weak and strong motivational instructions are both in the right direction, neither achieves statistical significance. In a political environment characterized by an abundance of diagnostic information, people can make choices easily enough that inducing motivation has no independent effect.

A second result is perhaps even more noteworthy with regard to the role of the environment. In every other environmental situation we considered, the more politically engaged were more likely to make tradeoffs. That is not the case here, where neither education nor political sophistication approaches statistical significance. In an

health coverage for everyone, require businesses to pay for coverage) and conservatives for the more conservative ones (keep taxes down, avoid the loss of jobs). This indeed was the case, indicating further that people can make competent decisions when they receive clearly stated information.

environment that provides ample informational assistance, personal attributes are not associated with decision-making performance. People with less education and political sophistication make tradeoffs just as effectively as individuals with more. This is a rare finding in the study of public opinion, and it underlines how making the political game easy for citizens also levels the playing field. The less educated and less politically sophisticated are not simply fated to rendering poorer decisions.

Concluding Comments

To say that citizens make political decisions in a political environment is unexceptionable. To find that the nature of the environment can affect the quality of those decisions is not. Our analysis indicates that these effects can be substantial. We found that the environment not only influences the aggregate level of citizen competence, but also determines the extent to which individual attributes such as education and political sophistication are associated with citizen performance. Most significantly, the availability of highly diagnostic information greatly reduces if not eliminates the advantage that normally accompanies education and political sophistication.

Beyond demonstrating these effects, we have proposed a revised and more elaborate account of what the environment consists of and how it operates. Like scholars before us, we have conceived the environment as a source of information. The environment, of course, provides vast amounts of information to citizens, more of it with each passing year. We have argued the need, however, to focus on the diagnostic value of that information, that is, the clarity and specificity of the guidance it provides for particular judgment tasks, and not on the volume.

In contrast with previous literature, we have also documented the importance of a second role of the environment: the motivational role of inducing citizens to take their tasks seriously, invest effort, and bear the psychic burdens of responsible decision making. The issue concerning motivation is what, if anything, the environment can do to mitigate the logic of collective action and encourage responsible citizenship in a mass democracy. Our study not only revealed the importance of the environment's inducing motivation but also the complex way in which the effect of that motivation depends on the information that people receive. An environment that tries to induce responsible decision making as a means to improve the citizenry's policy judgments will not achieve its goal if it fails to provide some general information. Neither will providing the information alone

suffice. Explicating the necessary combinations of motivation and information for particular decision-making tasks goes far beyond the purview of this article. Nonetheless, we believe that such combinations exist and probably vary considerably from one type of decision task to another.

Adopting an account of the political environment that includes both information and motivation not only points to new topics for research but also casts some existing findings into a new light. In interpreting the deliberative polls that they have conducted in the United States and abroad, for example, Fishkin and Luskin (Luskin, Fishkin, and Jowell 1997; Luskin, Fishkin, and Plane 1999) focus primarily on the effects of exposing people to more and better information. But from our theoretical perspective, the entire process of bringing participants long distances to attend a meeting, putting them up in a hotel, giving them name-tags, and sending them into a group discussion is likely to have another effect—inducing an extraordinary level of motivation. Before they sit down at the conference table, participants will feel that they have a job to do, and one that they are supposed to take seriously. What Fishkin and colleagues have found, in our view, is that a combination of information and motivation changes attitudes, presumably for the better.

To put all these conclusions in context, however, we must recognize the limitations of this study. Our findings come from a set of experiments embedded in a survey and intended to simulate certain features of political environments. Because political scientists cannot manipulate political systems, we settled for offering citizens artificial environments—with different combinations of information and motivation—and observing how they respond. As with most survey experiments, the simulations cannot claim a high degree of realism, and inferences about real-world effects are necessarily tentative.

We have some confidence in the real-world relevance of our findings, however, because of the wide range of conditions that we explored. The mere combination of general information (a reminder about the existence of tradeoffs, with no reference to health care) along with a very modest motivational inducement (a request to act like a responsible official) produced significant improvement in tradeoff performance. With a task as difficult as making tradeoffs across a series of separately expressed goal demands, it is noteworthy that these treatments do anything. And it is hardly a stretch to suppose that some existing and potential real-world environments can match these levels of information and motivation. In contrast, the items providing authoritative, highly specific guidance were designed to approach or even exceed the most diag-

nostic information that any real-world environment could provide. If most respondents had still insisted on overlooking tradeoffs, it would have suggested something like incorrigible resistance to making them. But in fact the effects on performance were quite dramatic.

Of course, we do not expect politicians or even members of the media to present information and induce motivation for the purposes of optimizing citizen performance. It is not even clear how much structural change, directed to this end, is possible. Nevertheless, our findings offer a hopeful implication: that the much lamented limitations of citizen competence are less inherent in the capabilities and dispositions that individuals bring to politics and more a consequence of deficiencies in the political environment than scholars and practitioners often suppose. We are reminded of Key's (1966) remark likening the voice of the citizenry to an echo: the quality of the response reproduces what the environment provides. If so, most of the responsibility for improving democratic performance lies not with the citizens themselves but with the elites who shape, and have opportunity to alter, the political environment.

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References

- Bartels, Larry M. 1996. "Uninformed Votes: Information Effects in Presidential Elections." *American Journal of Political Science* 40:194–230.
- Beyth-Marom, Ruth, and Baruch Fischhoff. 1983. "Diagnosticity and Pseudodiagnosticity." *Journal of Personality and Social Psychology* 45:1185–1195.
- Buchanan, James W., and Richard E. Wagner. 1977. *Democracy in Deficit: The Political Legacy of Lord Keynes*. New York: Academic.
- Carmines, Edward G., and James H. Kuklinski. 1990. "Incentives, Opportunities, and the Logic of Public Opinion in American Political Representation." In *Information and Democratic Processes*, ed. John A. Ferejohn and James H. Kuklinski. Urbana: University of Illinois Press.
- Citrin, Jack. 1979. "Do People Want Something for Nothing: Public Opinion on Taxes and Government Spending." *National Tax Journal* 32:113–130.
- Converse, Philip E. 1964. "The Nature of Belief Systems in Mass Publics." In *Ideology and Discontent*, ed. David E. Apter. New York: Free Press.
- de Groot, Adrianus D. 1965. *Thought and Choice in Chess*. The Hague, Netherlands: Mouton.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper and Row Publishers.
- Fazio, Russell H. 1990. "Multiple Processes by Which Attitudes Guide Behavior: The MODE Model as an Integrative Framework." In *Advances in Experimental Social Psychology*, Vol. 23, ed. Leonard Berkowitz. New York: Academic Press.
- Feltovich, Paul J., Kenneth M. Ford, and Robert R. Hoffman. 1997. *Expertise in Context: Human and Machine*. Cambridge: MIT Press.
- Festinger, Leon. 1957. *A Theory of Cognitive Dissonance*. Palo Alto: Stanford University Press.
- Free, Lloyd A., and Hadley Cantril. 1967. *The Political Beliefs of Americans*. New Brunswick, N.J.: Rutgers University Press.
- Hansen, John Mark. 1998. "Individuals, Institutions and Public Preferences over Public Finance." *American Political Science Review* 92:513–532.
- Key, V.O., Jr. 1966. *The Responsible Electorate: Rationality in Presidential Voting, 1936–1960*. Cambridge: Harvard University Press.
- Jacobs, Lawrence R., and Robert Y. Shapiro. 2000. *Politicians Don't Pander: Political Manipulation and the Loss of Democratic Responsiveness*. Chicago: University of Chicago Press.
- Kuklinski, James H., and Paul J. Quirk. 2000. "Reconsidering the Rational Public: Heuristics, Cognition and Public Opinion." In *Elements of Reason: Understanding and Expanding the Limits of Political Rationality*, ed. Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin. Cambridge: Cambridge University Press.
- Kuklinski, James H., Paul J. Quirk, Jennifer Jerit, David Schwieder, and Robert F. Rich. 2000. "Misinformation and the Currency of Citizenship." *Journal of Politics* 62:791–816.
- Kunda, Ziva. 1990. "The Case for Motivated Reasoning." *Journal of Personality and Social Psychology* 108:480–498.
- Ladd, Everett Carl. 1979. "The Polls: Taxing and Spending." *Public Opinion Quarterly* 43:126–135.
- Lau, Richard R., Richard A. Smith, and Susan T. Fiske. 1991. "Political Beliefs, Policy Interpretations, and Political Persuasion." *Journal of Politics* 53:644–675.
- Leake, David B. 1996. *Case-Based Reasoning: Experiences, Lessons, and Future Directions*. Cambridge: MIT Press.
- Lodge, Milton. 1995. "Toward a Procedural Model of Candidate Evaluation." In *Political Judgment: Structure and Process*, ed. Milton Lodge and Kathleen M. McGraw. Ann Arbor: University of Michigan Press.
- Lodge, Milton, and Charles Taber. 2000. "Three Steps Toward a Theory of Motivated Reasoning." In *Elements of Reason: Understanding and Expanding the Limits of Political Rationality*, ed. Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin. New York: Cambridge University Press.
- Lodge, Milton, Kathleen M. McGraw, and Patrick Stroh. 1989. "An Impression-Driven Model of Candidate Evaluation." *American Political Science Review* 83:400–419.
- Lodge, Milton, Marco R. Steenbergen, and Shawn Brau. 1995. "The Responsive Voter: Campaign Information and the Dynamics of Candidate Evaluation." *American Political Science Review* 89:309–326.
- Lodge, Milton, Charles Taber, and Aron Chase Galonsky. 1999. "The Political Consequences of Motivated Reasoning: Partisan Bias in Information Processing." Presented at the annual meeting of the American Political Science Association, Atlanta.
- Lupia, Arthur. 1994. "Shortcuts Versus Encyclopedias: Information and Voting Behavior in California Insurance Reform Elections." *American Political Science Review* 88:63–76.

- Lupia, Arthur. 2000. "Institutions as Informational Crutches: Experimental Evidence from Laboratory and Field." Presented at the annual meeting of the Midwest Political Science Association.
- Lupia, Arthur, and Mathew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Really Need To Know?* New York: Cambridge University Press.
- Luskin, Robert C. 1987. "Measuring Political Sophistication." *American Journal of Political Science* 31:856–899.
- Luskin, Robert C. 2000. "Political Psychology, Political Behavior, and Politics: Questions of Aggregation, Causal Distance, and Taste." In *Citizens and Politics: Perspectives from Political Psychology, Vol. II.*, ed. James H. Kuklinski. New York: Cambridge University Press.
- Luskin, Robert C., James S. Fishkin, and Roger Jowell. 1997. "Considered Opinions: Deliberative Polling in the U.K." Unpublished manuscript, University of Texas at Austin.
- Luskin, Robert C., James S. Fishkin, and Dennis L. Plane. 1999. "Deliberative Polling and Policy Outcomes: Electric Utility Issues in Texas." Presented at the annual meeting of the Midwest Political Science Association.
- McGraw, Kathleen M., and Marco Steenbergen. 1995. "Pictures in the Head: Memory Representations of Political Candidates." In *Political Judgment: Structure and Process*, ed. Milton Lodge and Kathleen M. McGraw. Ann Arbor: University of Michigan Press.
- Margolis, Howard. 1996. *Dealing with Risk: Why the Public and the Experts Disagree on Environmental Issues*. Chicago: University of Chicago Press.
- Minsky, Marvin. 1997. "Negative Expertise." In *Expertise in Context: Human and Machine*, ed. Paul J. Feltovich, Kenneth M. Ford, and Robert R. Hoffman. Cambridge: MIT Press.
- Modigliani, Andre, and Franco Modigliani. 1987. "The Growth of the Federal Deficit and the Role of Public Attitudes." *Public Opinion Quarterly* 51:459–80.
- Mondak, Jeffery J. 1993. "Source Cues and Policy Approval: The Cognitive Dynamics of Public Support for the Reagan Agenda." *American Journal of Political Science* 37:186–212.
- Mueller, Eva. 1963. "Public Attitudes toward Fiscal Programs." *Quarterly Journal of Economics* 77:210–235.
- Mutz, Diana C. 1998. *Impersonal Influence: How Perceptions of Mass Collectivities Affect Political Activities*. New York: Cambridge University Press.
- Nie, Norman H., Sidney Verba, and John R. Petrocik. 1976. *The Changing American Voter*. Cambridge: Harvard University Press.
- Page, Benjamin I. 1978. *Choices and Echoes in Presidential Elections: Rational Man and Electoral Democracy*. Chicago: University of Chicago Press.
- Popkin, Samuel L. 1991. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. Chicago: University of Chicago Press.
- Rahn, Wendy M. 1995. "Candidate Evaluation in Complex Information Environments: Cognitive Organization and Comparison Process." In *Political Judgment: Structure and Process*, ed. Milton Lodge and Kathleen M. McGraw. Ann Arbor: University of Michigan Press.
- Rasinski, Kenneth, Tom Smith, and Sara Zuckerman. 1994. "Fairness Motivations and Tradeoffs Underlying Public Support for Government Environmental Spending in Nine Nations." *Journal of Social Issues* 50:179–197.
- Sanbonmatsu, David M., and Russell H. Fazio. 1990. "The Role of Attitudes in Memory-Based Decision Making." *Journal of Personality and Social Psychology* 59:614–622.
- Schlesinger, Mark, and Richard R. Lau. 2000. "The Meaning and Measure of Policy Metaphors." *American Political Science Review* 94:611–626.
- Sears, David O., and Jack Citrin. 1982. *Tax Revolt: Something for Nothing in California*. Cambridge: Harvard University Press.
- Simon, Herbert A., and William G. Chase. 1973. "Skill in Chess." *American Scientist* 61:394–403.
- Sniderman, Paul M. 1993. "The New Look in Public Opinion Research." In *Political Science: The State of the Discipline II* ed. Ada Finifter. Washington D.C.: American Political Science Association.
- Sniderman, Paul M. 2000. "Taking Sides: A Fixed Choice Theory of Political Reasoning." In *Elements of Reason: Understanding and Expanding the Limits of Political Rationality*, ed. Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin. New York: Cambridge University Press.
- Sniderman, Paul M., Richard A. Brody, and Phillip E. Tetlock. 1991. *Reasoning and Choice: Explorations in Political Psychology*. New York: Cambridge University Press.
- Sorrentino, Richard M., and Edward Tory Higgins. 1986. *Handbook of Motivation and Cognition: Foundations of Social Behavior*. New York: Guilford Press.
- Welch, Susan. 1985. "The 'More for Less' Paradox: Public Attitudes on Taxing and Spending." *Public Opinion Quarterly* 49:310–316.
- Wilson, L.A. 1983. "Preference Revelation and Public Policy: Making Sense of Citizen Survey Data." *Public Administration Review* 43:335–342.
- Wittman, Donald. 1995. *The Myth of Democratic Failure: Why Political Institutions are Efficient*. Chicago: University of Chicago Press.
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.