

On the Relationship Between Attitude Involvement and Attitude Accessibility: Toward a Cognitive-Motivational Model of Political Information Processing

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A model of the relationship between attitude involvement and attitude accessibility was developed and tested. The model specifies that attitude involvement leads to selective (biased) issue-related information-gathering strategies, which in turn produce extreme and univalent (unambivalent) attitudes. Finally, attitudes associated with univalent and extreme underlying structures should occasion relatively little decision conflict and thus should be highly accessible. Questionnaire response data gathered in a national telephone survey and from two samples of undergraduates revealed that both attitude extremity and attitude ambivalence on selected political issues mediated the relationship between attitude involvement and attitude accessibility. Some findings indicated that selective processing mediated the relationship between attitude involvement and attitude extremity and ambivalence. Discussion focuses on the processes linking involvement to accessibility, the factors that moderate the ambivalence-accessibility relationship, and the relevance of the model to media-based priming effects and to the nature of public opinion and the survey response.

KEY WORDS: attitude accessibility, attitude involvement, political information processing.

Increasingly, political psychologists are devoting attention to the cognitive mechanisms that underlie political behavior. As a result, new theoretical perspectives and methodological techniques that focus on cognitive structure and process have been developed (or appropriated from allied disciplines, primarily cognitive psychology; see, e.g., Meyer & Schvaneveldt, 1971; Neisser, 1976). Investigators

using cognitive perspectives have already produced valuable insights into several key topics of interest to political psychologists, including opinion measurement (e.g., Zaller & Feldman, 1992), candidate appraisal (e.g., Fazio & Williams, 1986; Lau, 1989; Lodge, McGraw, & Stroh, 1989; Rahn, Aldrich, Borgida, & Sullivan, 1990), and the organization of political belief systems (Judd, Drake, Downing, & Krosnick, 1991; Lavine, Thomsen, & Gonzales, 1997).

Response latency, or reaction time, is among the most promising and widely used methodological innovations for exploring the cognitive underpinnings of political behavior and judgment (e.g., Bassili, 1996; Fazio & Williams, 1986; for a review, see Lavine, 1997). Reaction time has been used to measure various aspects of cognitive functioning, such as construct accessibility and spreading activation, and it has contributed importantly to our understanding of politically relevant social phenomena such as impression formation (Smith & Miller, 1983), stereotyping and prejudice (Dovidio, Evans, & Tyler, 1986), and the relationship between attitudes and behavior (Fazio, Chen, McDonel, & Sherman, 1982).

Within political psychology, response latency has been most often used to assess the construct of *attitude accessibility* (e.g., Bassili, 1995, 1996, 1998; Fazio & Williams, 1986; Krosnick, 1989; Lavine, Sullivan, Borgida, & Thomsen, 1996). Attitude accessibility refers to the ease and quickness with which a person can retrieve an attitude from memory and use that attitude in making a judgment or decision (for a theoretical review, see Fazio, 1986). Research in social and political cognition indicates that a given construct (e.g., a personality trait, a government policy attitude) must be both available in memory and cognitively accessible to guide information processing and influence judgment and decision-making (Aldrich, Sullivan, & Borgida, 1989; Higgins & King, 1981). A number of studies in the political realm have provided strong evidence that accessible attitudes exert more powerful effects on judgment and decision-making than do relatively inaccessible attitudes. For example, Fazio and Williams (1986) found that voters with highly accessible attitudes toward Reagan and Mondale (i.e., voters who could respond quickly to inquiries about their attitudes toward the candidates) were more likely to vote in the 1984 presidential election in a manner consistent with those attitudes than were respondents with less accessible attitudes toward the candidates (see also Bassili, 1995). In related research, Lau (1989) assessed the accessibility of voters' candidate, issue, group, and party schemas by counting the frequency with which voters offered information from each of these categories (in an open-ended interview) for liking and disliking presidential candidates and political parties. Lau showed that the accessibility of these schemas was stable over 4-year periods and that such schemas exerted a greater impact on candidate evaluation and voting behavior when they were highly accessible.

An important conclusion of these studies is that political attitudes and other relevant constructs (e.g., personality traits, party identifications) are likely to guide political judgments such as candidate evaluation (e.g., Bassili, 1998; Fazio & Williams, 1986; Lavine et al., 1996) and presidential performance (e.g., Iyengar &

Kinder, 1987; Iyengar, Kinder, Peters, & Krosnick, 1984) to a greater extent when they are easily retrievable from memory—that is, when they are highly accessible. What is less well understood is *how* attitudes become cognitively accessible. That is, relatively little theory and research in political psychology has been devoted to the cognitive and motivational origins of attitude accessibility. This is an important theoretical question for political psychologists, for if we can better understand how and why certain political ideas come to dominate the belief systems of individuals—that is, if we can gain some insight into the origins of attitude accessibility—we stand to deepen our understanding of at least some of the psychological roots of mass political behavior. What factors lead people to become involved in political issues, and how does involvement lead to attitude accessibility?

From Attitude Involvement to Attitude Accessibility: A Cognitive-Motivational Model

According to construct accessibility theory (Higgins & King, 1981), an attitude's accessibility is determined by the frequency and recency with which it is thought about or expressed, its relation to people's ongoing needs and goals, and the extent to which the attitude is linked in memory to other constructs (e.g., beliefs, attitudes, values). As Krosnick (1989) and Lavine et al. (1996) have noted, each of these attributes is associated with attitudes marked by high levels of involvement. Highly involving attitudes are closely linked with people's tangible goals, core values, and socially important individuals and groups (Boninger, Krosnick, & Berent, 1995), and thus are the targets of frequent conscious thought. In turn, attitude-relevant thought strengthens the association in memory between an attitude object and its evaluation, thereby heightening attitude accessibility (Fazio et al., 1982). Highly involving attitudes are also more likely to be embedded in a larger structure of other attitudes, beliefs, and values (Judd & Krosnick, 1989; Lavine, 1994; Lavine et al., 1997; Thomsen, Lavine, & Kounios, 1996), thus promoting accessibility indirectly through the direct activation of linked constructs.

In our view (Thomsen, Borgida, & Lavine, 1995; see also Boninger et al., 1995), a political issue should be important or involving to a person to the extent that it impinges on, reflects, or is otherwise associated with the self. When an issue or event implicates the self, involvement in that issue (i.e., the subjective perception that the issue is personally important) should be aroused. A political issue or event can implicate a variety of aspects of the self-concept. Perhaps the earliest discussion of the aspects of the self-concept is William James' (1890) tripartite theory. James argued that the self includes material aspects (e.g., one's body, material possessions), social aspects (e.g., one's spouse, children), and spiritual aspects (e.g., one's values, religious and political beliefs). Political issues or events that impinge on any of these dimensions of the self may occasion involvement. Indeed, recent attempts to explicate the origins of attitude involvement have resulted in taxonomies that can be mapped onto James' tripartite model (Boninger et al., 1995; Fiske

& Neuberg, 1990; Greenwald & Breckler, 1985; Johnson & Eagly, 1989; Katz, 1960; Smith, Bruner, & White, 1956; for a review, see Thomsen et al., 1995). Accordingly, a person should deeply care about a political issue to the extent that it is seen as relevant to his or her tangible or material goals (*self-interest*), to the extent that people and groups that are important to the person are seen as caring about or affected by the issue (*social identification*), and to the extent that the issue is viewed as being linked to the attainment of cherished values (*value relevance*). Recent studies have provided strong evidence that self-interest, social identification, and value relevance independently predict attitude involvement (Boninger et al., 1995; Thomsen et al., 1995).

We argue that the degree of involvement aroused in an issue is an important determinant of the *type* of motivation that characterizes the individual's subsequent information processing related to that issue (Figure 1). When message recipients first encounter an issue that they perceive to be relevant to their self-concepts, motivation to process information about that issue should increase. Moreover, because recipients know little about the issue and its potential consequences, they are likely to adopt an objective or "validity-seeking" approach to gaining information about the issue (e.g., Chaiken, Liberman, & Eagly, 1989; Petty & Cacioppo, 1986). That is, people should be initially equally receptive to positive and negative information about the issue in an effort to develop an attitude that "squares with the relevant facts" (Petty & Cacioppo, 1986). This reasoning is consistent with the

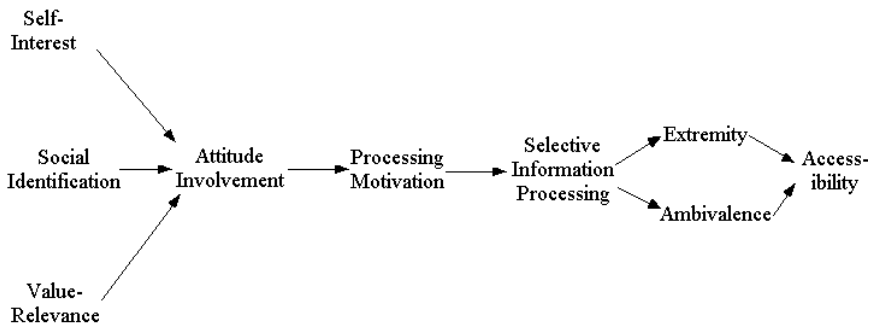


Figure 1. A model of the involvement-accessibility relationship.

findings of persuasion research conducted within the dual-process frameworks (Chaiken et al., 1989; Petty & Cacioppo, 1986).¹

However, as involving attitudes solidify and crystallize over time, they should become positively associated with issue-relevant knowledge and with the motivation for attitudinal defense (e.g., McGraw, Fischle, Stenner, & Lodge, 1996). Issue-related information-seeking strategies are thus likely to shift from being relatively objective at the outset to being biased in favor of congenial information (i.e., information that supports the person's attitude) once the attitude is crystallized. That is, as attitudes become increasingly connected with the self—as they become more closely linked with our plans, goals, and cherished values—we should be more likely to experience their negative implications as highly threatening, and thus should be more motivated to refute or counterargue (or go out of our way to avoid) such incongruent information (for reviews, see Frey, 1986). For example, a woman who cares a great deal about the issue of legalized abortion and has a positive attitude toward the issue is likely to be motivated to “defend” her pro-legalization attitude rather than objectively integrate the positive and negative implications of her position in favor of abortion rights (for a discussion of validity-seeking and defense motivation within and beyond the persuasion context, see Chaiken et al., 1989; see also Eagly & Chaiken, 1998). This reasoning is consistent with persuasion theory and research showing that with respect to prior attitudes (i.e., those existing before the experiment), involvement produces both resistance to change (e.g., Gorn, 1975; Rhine & Severance, 1970; Zuwerink & Devine, 1996; for a review, see Johnson & Eagly, 1989) and biased message processing (e.g., Borgida & Howard-Pitney, 1983; Howard-Pitney, Borgida, & Omoto, 1986; Sherif & Hovland, 1961).

To the extent that individuals are motivated to defend their attitudes rather than objectively evaluate them, how might they accomplish this goal? At least two selective information-seeking strategies are available (for a review, see Eagly & Chaiken, 1993). First, when highly involving attitudes are at stake, attitudinal defense can be achieved by selectively attending to and processing information that confirms rather than challenges the validity of one's opinions (e.g., Festinger, 1964; for a review, see Frey, 1986). For example, a person with a committed position on the death penalty should—all else equal (e.g., Freedman & Sears, 1965)—prefer to read about a study that supports rather than refutes his or her beliefs about the deterrence effect of the policy. Theoretically, selective exposure occurs as people attempt to reduce cognitive dissonance associated with the acceptance of incongruent information (Festinger, 1957, 1964). Although early research (summarized

¹ This “validity-seeking” orientation is conceptually similar to the predecisional openmindedness of information seeking noted by cognitive dissonance theorists (Brehm & Cohen, 1962; Festinger, 1957, 1964). Selective (dissonance-reducing) information seeking is hypothesized to occur only *after* decisions are enacted (see Frey, 1986).

by Freedman & Sears, 1965) was largely unfavorable to the selective exposure hypothesis, more recent studies (summarized by Frey, 1986) suggest that a preference for exposure to congenial information reliably occurs when people are highly committed to their attitudes and decisions (i.e., when involvement is high; e.g., Brock & Balloun, 1967; Frey & Stahlberg, 1986; Schwarz, Frey, & Kumpf, 1980). For example, Pomerantz, Chaiken, and Tordesillas (1995) found that a measure of attitude “embeddedness” (a factor representing an issue’s centrality to the self, personal importance, value relevance, and the respondent’s issue-relevant knowledge) on the issue of capital punishment predicted greater levels of selective exposure to attitude-congruent versus incongruent information (measured by surreptitiously timing respondents’ attention to congruent vs. incongruent information).

Attitudes can also be defended by cognitively responding to issue-relevant information in a selectively critical manner. Specifically, information that refutes preferred positions can be subject to greater scrutiny and counterargumentation than information that supports preferred positions. In a classic study of selective judgment, Lord, Ross, and Lepper (1979) presented participants who held extreme attitudes for or against capital punishment with two ostensible empirical reports on the efficacy of the policy as a deterrent to murder. One report provided evidence in support of capital punishment; the other suggested that capital punishment leads to more murders. Lord et al. found a “biased assimilation” effect on participants’ judgments of the perceived quality of the empirical studies: Respondents with positive attitudes toward capital punishment found the study supporting the efficacy of the policy to be more convincing and better conducted than the study opposing the efficacy of capital punishment, and the reverse was true for respondents with negative attitudes toward capital punishment (see also Houston & Fazio, 1989; Sherif & Hovland, 1961).² Moreover, Lord et al.’s (1979) participants reported that their attitudes polarized (i.e., became more extreme) after reading the two empirical studies. Research supports the notion that selective processing (e.g., of exposure or judgment) in the defense of prior attitudes is associated with attitudes that have “strength-related” properties such as involvement (e.g., Houston & Fazio, 1989; Lord et al., 1979; Pomerantz et al., 1995; Sherif & Hovland, 1961).

The nature of information processing—whether it is validity-seeking or defensive—should in turn determine the mix of considerations (i.e., reasons for supporting or opposing a policy; Zaller & Feldman, 1992) underlying the attitude. When the processing motivation is objective, people are likely to be exposed to and to accept a mix of issue-related considerations that support opposing sides of a policy debate. For example, a person might simultaneously believe that capital punishment is morally wrong but that it is effective in deterring violent crime. Under these

² Attitudinal defense may also be facilitated by selective recall of information that comports rather than conflicts with one’s opinions. However, the selectivity effects of recall appear less consistent than those associated with exposure or judgment (see Eagly, Chen, Chaiken, & Shaw-Barnes, 1999).

processing conditions, the attitude's supporting belief structure should exhibit (at least some) evaluative inconsistency. In contrast, when people have directional goals—that is, when they are motivated to defend the validity of preexisting attitudes—they are likely to be predominantly exposed to and to accept congenial considerations. Thus, under biased processing conditions, the attitude's underlying structure of feelings and beliefs should exhibit relatively high levels of evaluative consistency.

The recognition that people often simultaneously hold positive and negative beliefs about a political issue or candidate suggests a different way of understanding how such attitudes are represented in the cognitive system. Until recently, attitude theorists have almost universally made the implicit assumption that opinions are represented in terms of a single, bipolar (positive-negative) dimension (for a review, see Eagly & Chaiken, 1993). Increasingly, however, investigators have acknowledged that many attitudes are characterized by the coexistence of both positive and negative evaluations (e.g., Alvarez & Brehm, 1995; Cacioppo & Berntson, 1994; Cacioppo, Gardner, & Berntson, 1997; Feldman & Zaller, 1992; Hochschild, 1981; Lavine, Huff, Wagner, & Sweeney, 1998; Lavine, Thomsen, Zanna, & Borgida, 1998; Thompson, Zanna, & Griffin, 1995; Zaller & Feldman, 1992). This suggests that attitudes are instead represented in terms of two separate unipolar dimensions (i.e., one negative and one positive).

Variation in information-processing goals should thus have two key structural consequences relevant to the unipolar, bidimensional view of attitudes. First, the use of selective processing should result in attitudes with *univalent* structures, or structures in which positive *or* negative evaluations of the issue—but not both—are present (or strong). By contrast, unselective processing should produce attitudes with relatively *ambivalent* structures, or those in which both positive *and* negative evaluations are present. Second, relative to objective processing, selective processing should produce attitudes that are evaluatively extreme. Recent research suggests that attitudes are based on the canvassing and integration of accessible considerations or beliefs about the issue in long-term memory (Lavine, Huff, et al., 1998; Tourangeau & Rasinski, 1988; Zaller & Feldman, 1992). To the extent that the considerations are evaluatively similar, they should integrate to produce extreme overall attitudes. However, when the underlying base of considerations is evaluatively mixed, integration of the opposing implications should produce relatively moderate attitudes (see Anderson, 1971; Fishbein & Ajzen, 1975; Tetlock, 1986).

To simplify: Attitudes that receive selective processing should result in structures in which the attitude object (e.g., a political issue) is strongly linked with one type of evaluation (positive or negative), but not both. We refer to such univalent attitudes as *single-evaluation attitude structures*. In contrast, attitudes that are not the targets of selective processing are likely to develop links to both types of evaluation, possessing what we refer to as *dual-evaluation attitude structures*.

Whether an attitude can be characterized by a single- or a dual-evaluation structure has direct implications for that attitude's accessibility in memory. Specifically, with respect to attitudes that have dual-evaluation structures, responding to a speeded attitudinal inquiry (i.e., a response latency task) should require the integration of positive and negative evaluative components. In other words, the retrieval of ambivalent or dual-evaluation attitudes is likely to be met with at least a modicum of decision conflict based on the underlying evaluative inconsistency. The extra time required to carry out this information integration or inconsistency resolution task should cause these attitudes to be less cognitively accessible than their univalent or single-evaluation counterparts. In contrast, attitudes characterized by single-evaluation structures should occasion relatively little decision conflict, and are thus more likely to be directly retrieved from memory.

In sum, we propose that involvement in a political issue is based on the degree to which the issue has implications for one's goals and plans or the facilitation of one's core values, or is of concern to individuals and social groups with which one strongly identifies (see also Boninger et al., 1995). If involvement is sufficiently aroused, one should be motivated to defend one's attitude (rather than to objectively seek the most "valid" attitude) and to selectively seek (or judge) information about the issue that affirms the correctness or efficacy of one's position (and to avoid or counterargue information that disaffirms one's position). These selective information-gathering strategies should produce attitudes with univalent (e.g., single-evaluation) structures. Such univalent attitudes are characterized by a relative absence of decision conflict (and clear behavioral cues), and should thus be highly accessible in memory.

The Present Studies

To provide a preliminary test of the involvement-accessibility model, we conducted a series of surveys. In study 1, we used national survey data to examine the origins of attitude accessibility toward the issue of women's rights. In study 2, we used a college student sample to assess attitudes toward 14 political issues, and examined whether respondents held more extreme, less ambivalent, and more accessible attitudes toward issues that they rated as most important than toward issues that they rated as less important. In study 3, we used a college student sample to examine whether the relationship between involvement (in the issue of affirmative action) on the one hand, and attitude extremity and ambivalence on the other, is mediated by selective exposure to attitude-consistent information.

Study 1

The survey was a national random-digit computer-assisted telephone interview.³ The survey population was defined as all English-speaking adults (18 years of age or older) residing in households with telephones within the 48 contiguous states. The number of completed surveys was 1,464; the response rate was 65.5%.⁴ The study involved investigators from several different institutions and was focused on attitudes and beliefs about a wide variety of social and political issues. Each team contributed its own context (e.g., question order) experiment within the survey. Our portion of the survey consisted of items pertaining to the issue of women's rights and assessed the constructs of self-interest, value relevance, social identification, attitude involvement, attitude extremity, attitude ambivalence, and attitude accessibility.

Measurement of Constructs

Self-interest. Consistent with previous work (e.g., Crano, 1995), we defined self-interest as an individual's perception of the extent to which a political policy has direct implications for his or her goals, plans, or tangible outcomes. Specifically, using a 4-point scale (1 = a great deal, 3 = some, 5 = a little, 7 = not at all), we asked, "How much have policies related to women's rights directly affected your life?" Responses were reverse-coded so that higher self-interest scores reflected stronger perceptions of self-interest in the women's rights issue.

Value relevance. Value relevance is defined as the extent to which core values are viewed as being relevant to the policy issue. Specifically, we used 4-point scales (1 = very related, 3 = somewhat related, 5 = slightly related, 7 = not at all related) to assess the extent to which the values of equality and self-respect (both pretested to be at least somewhat relevant to the women's rights issue) were related to respondents' attitudes toward women's rights. Responses were reverse-coded and averaged so that higher value-relevance scores reflected greater levels of value relevance.

Social identification. Social identification is defined as the extent to which a person perceives that groups with which he or she identifies regard the issue to be

³ The survey was funded by a National Science Foundation grant to Paul Sniderman, Henry Brady, and Phil Tetlock, and administered by the Survey Research Center at the University of California at Berkeley.

⁴ Consistent with survey research practice, weights were created for each respondent to compensate for differences in probabilities of selection and to adjust the sample to match certain demographic distributions. The weighting procedure adjusted for seven variables: gender, race, age, education, number of eligible adults in the home, number of phone lines in the home, and whether the selected household had a listed or an unlisted telephone number (the survey greatly oversampled homes with listed numbers—by a ratio greater than 9). The weighting procedures did not alter the pattern of means or alter the significance of any of our findings.

important. We assessed group identification by asking respondents to rate the extent to which Catholics, Democrats, gays and lesbians, and women in general (1 = very important, 3 = somewhat important, 5 = not very important, 7 = not at all important) perceive the issue of women's rights to be important. All groups were pretested as being viewed as caring at least slightly about the women's rights issue. Respondents also completed 101-point feeling thermometer ratings of each group. Social identification scores were computed by multiplying the group importance rating by the thermometer rating for each group, and averaging the four products.⁵

Attitude involvement. Attitude involvement is defined as the extent to which a person attaches subjective importance to a given issue (see Krosnick, Boninger, Chuang, Berent, & Carnot, 1993; Lavine, Huff, et al., 1998). Consistent with previous work (e.g., Krosnick et al., 1993; Lavine, Huff, et al., 1998), we asked respondents to rate the extent to which the issue of women's rights is personally important and the extent to which it is important that the government does what the respondent thinks is best on issues related to women's rights (1 = very important, 3 = somewhat important, 5 = not too important, 7 = not at all important). Responses were reverse-coded and averaged so that higher scores reflected higher levels of attitude involvement in the women's rights issue.

Attitude extremity. Attitude extremity refers to the extent to which a person's attitude toward a given issue deviates from the midpoint of the scale in either the negative or positive direction. To assess extremity, we computed the absolute deviation from a 5-point semantic differential attitude scale toward women's rights, where 1 = bad and 5 = good. Scores could thus range from 0 to 2, with higher scores reflecting more extreme attitudes.

Attitude ambivalence. Attitude ambivalence refers to the extent to which a person's attitude toward a given issue contains both positive and negative thoughts or feelings (Lavine, Thomsen, et al., 1998; Priester & Petty, 1996; Thompson et al., 1995). Ambivalence can be assessed either "objectively" by integrating separate unipolar assessments of positive and negative components of the attitude, or subjectively by asking the respondent to report the subjective perception of having "mixed" feelings or beliefs about the issue (see Priester & Petty, 1996; Thompson et al., 1995). In study 1, we assessed ambivalence subjectively by asking respondents to rate the extent to which they held mixed feelings about the issue of women's rights (1 = very certain of opinion, 3 = somewhat certain, 5 = somewhat mixed feelings, 7 = very mixed feelings).

Attitude accessibility. Attitude accessibility refers to the ease or quickness with which an attitude can be retrieved from memory. The time required for respondents to answer the following attitudinal inquiry was recorded and served

⁵ Rather than using thermometer ratings, we would have preferred to ask respondents to rate the extent to which they identified with or cared about each group (see Boninger et al., 1995). However, time constraints on the survey precluded this possibility.

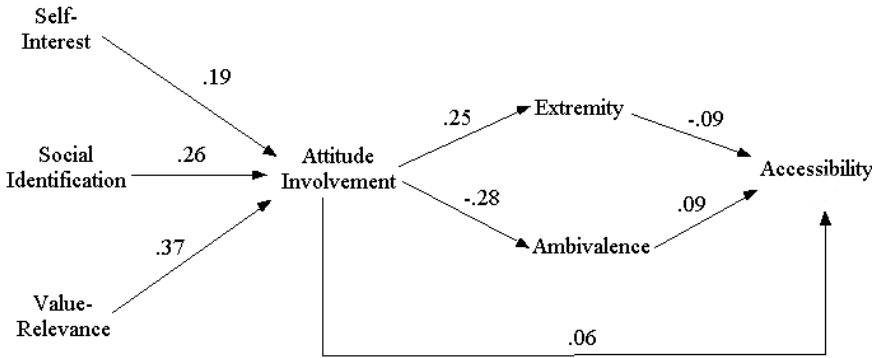


Figure 2. Relations among involvement, ambivalence, extremity, and accessibility (all paths are $p < .01$).

as a measure of attitude accessibility: “Please tell me whether you think the phrase ‘women’s rights’ represents something ‘good’ or something ‘bad’.” Reaction time (in hundredths of a second) was computed by taking the elapsed time between the end of the interviewer’s inquiry and the beginning of the response. Respondents were asked to respond as quickly as possible without sacrificing accuracy.

Results and Discussion

To evaluate our prediction that attitude extremity and ambivalence mediate the relationship between involvement and attitude accessibility, we conducted an observed variable path analysis (Figure 2) using LISREL 8 (Jöreskog & Sörbom, 1993). This model provided a good fit to the data (adjusted goodness-of-fit index = .92, comparative fit index = .91). Specifically, extremity and ambivalence were a direct function of involvement, and attitude accessibility was a direct function of extremity and ambivalence (Figure 2). The indirect paths from involvement through extremity and ambivalence to accessibility were significant (β s = .05, $p < .001$). However, above and beyond the indirect (mediated) effects, involvement continued to have a direct effect on accessibility (45.50% of the relationship between involvement and accessibility was mediated by extremity and ambivalence). This suggests that although these two structural properties of attitudes constitute one set of mediators of the involvement-accessibility relationship, the effects are rather small in magnitude, and that additional factors would appear to be important in explaining this relationship. One possibility is that highly involving

attitudes are the targets of frequent activation and behavioral action. The frequency and recency with which an attitude is activated has been shown to influence the ease with which the attitude can be retrieved from memory (e.g., Fazio et al., 1982, experiment 3; see also Higgins & King, 1981; Thomsen et al., 1995; for other possible mediators of the involvement-accessibility mediators, see Krosnick, 1989; Lavine et al., 1996).

Although we tested an involvement \rightarrow accessibility model in study 1, alternative causal flows are possible. For example, people may infer that attitudes that come easily to mind are personally important to them (for an experimental demonstration of the accessibility \rightarrow involvement causal flow, see Roese & Olson, 1994).

Study 2

One of the important theoretical implications of the involvement-accessibility relationship is that it can provide one explanation for why involving issue attitudes typically exert stronger effects on candidate evaluation and voting than do relatively uninvolved attitudes (e.g., Krosnick, 1988a; for a review, see Lavine et al., 1996). If people's most involving attitudes are used to inform their candidate appraisals and political decision-making because such attitudes are the most chronically accessible, we should find that accessibility is greatest for whatever issues a person judges as most salient, and that accessibility declines as the issues become less important to that individual. Therefore, instead of determining whether attitudes are more accessible for a given issue among those who rate the issue as important than among those who rate that issue as unimportant (as we did in study 1), we would need to examine the relationship between attitude involvement and attitude accessibility across a large number of issues within the cognitive systems of individuals. A more critical test of the role of attitude structure (i.e., extremity and ambivalence) in mediating the relationship between attitude involvement and attitude accessibility thus requires an analytic design that allows for the examination of the relationship between involvement, extremity, ambivalence, and accessibility within (rather than between) individuals. In study 2, we used this within-person, between-issue methodology to examine whether the involvement-accessibility relationship can be explained, at least partially, by attitude extremity and attitude ambivalence.⁶

⁶ We previously reported the direct within-person relationship between involvement and accessibility using the data from study 2 (Lavine et al., 1996). However, in that report, we did not examine mediators of that relationship. The purpose of study 2 is to determine the extent to which the involvement-accessibility relationship can be accounted for by extremity and ambivalence.

Method

To evaluate the involvement → extremity/ambivalence → accessibility hypothesis within the cognitive systems of individuals, we assessed the importance, extremity, ambivalence, and accessibility of seven domestic and seven foreign policy issues.⁷ The participants were 84 undergraduates at the University of Minnesota who participated in the study for extra credit. To assess attitude involvement, we asked participants to rank-order the 14 issues in terms of their personal importance (1 = least important issue, 14 = most important issue). We assessed attitude extremity for each issue by taking the absolute deviation from the midpoint of a 7-point semantic differential scale (scores thus ranged from 0 to 3). To assess attitude ambivalence, we used 4-point scales to independently assess the extent to which respondents held positive and negative evaluations toward each of the 14 issues. For example, to assess the positive aspects of respondents' attitudes toward legalized abortion, we asked respondents to consider only their positive feelings and beliefs about the policy of legalized abortion and to ignore their negative feelings and beliefs about the policy. Respondents were then asked whether they were not at all positive toward the issue (0), slightly positive (1), moderately positive (2), or extremely positive (3) toward the issue. We then assessed the degree of negative evaluation in the same manner (for a review of related measures, see Thompson et al., 1995).

Ambivalence scores for each issue were derived using the Griffin formula (see Thompson et al., 1995). For each of the 14 issues, this index involves averaging the positive and negative evaluative components and subtracting the absolute difference between the positive and negative components. This index operationalizes two key theoretical properties of attitude ambivalence. First, ambivalence scores increase as the positive and negative components become increasingly similar in magnitude. Second, scores increase as the two components become more intense (see Breckler, 1994; Meffert, Lodge & Guge, in press; Thompson et al., 1995).

Finally, attitude accessibility was measured by latency of response to a direct attitudinal inquiry. Respondents were presented with verbal representations (e.g., "Legalized Abortion") of each issue on a computer screen and were instructed to respond to each issue as quickly and as accurately as possible in terms of whether it represented something "good" or "bad" by pressing one of two keys on the

⁷ The issues were all on the public agenda during the period of time in which our data were collected (winter/spring 1991). The domestic issues consisted of flag burning, legalized abortion, affirmative action, the women's rights movement, capital punishment, increased taxes, and unemployment. The foreign policy issues were increased defense spending, the arms race, the strategic defense initiative, the Persian Gulf war, Palestinian rights, nuclear war, and the former Soviet Union.

keyboard. The order of presentation of the stimuli was individually randomized for each respondent.

Results and Discussion

If attitudes are most accessible, extreme, and univalent (i.e., unambivalent) toward whatever issues are most involving to a person and least accessible, extreme, and univalent toward whatever issues are judged as least involving to that person, there should be a within-person linear relationship between involvement and each of these three attitude properties. For example, if person A views capital punishment as the most involving issue and welfare spending as the least involving issue, attitudes toward capital punishment should be more accessible, extreme, and univalent than attitudes toward welfare spending for person A. If, however, person B regards welfare spending as more involving than capital punishment, attitudes toward welfare spending should be more accessible, extreme, and univalent than attitudes toward capital punishment for person B. Hence, we performed three 14-level repeated-measures trend analyses with the 14 levels of involvement as the repeated independent variable—one on respondents' extremity scores, one on their ambivalence scores, and a third on their accessibility (i.e., response latency) scores. Thus, extremity, ambivalence, and accessibility scores served as the dependent variable in each analysis, respectively. Each of these linear trends was significant and accounted for a sizable portion of the variance ($\eta^2 = .37$ for extremity, $.25$ for ambivalence, and $.35$ for accessibility; $ps < .001$). That is, as involvement increased, attitudes became more extreme, univalent, and accessible.

The primary question we wish to answer in study 2 is whether attitude extremity and ambivalence mediate the relationship between attitude involvement and attitude accessibility. If so, then the involvement-accessibility relationship should be substantially attenuated when it is adjusted for extremity and ambivalence. To examine these mediational hypotheses, we recomputed the involvement-accessibility analysis of variance three times, once controlling for attitude extremity, once controlling for attitude ambivalence, and a third time controlling for both of these properties simultaneously.

Table I. Strength of Within-Person Involvement-Accessibility Relationship With Extremity and Ambivalence as Covariates

Involvement-accessibility relationship	<i>F</i>	η^2	Proportion of covariance accounted for by covariate
No covariate	41.73	.3485	—
Extremity covariate	16.01	.1971	.4327
Ambivalence covariate	27.02	.3035	.1291
Extremity/ambivalence covariate	12.99	.2095	.3989

Note. All $ps < .001$.

The linear effect of extremity accounted for a substantial portion of the involvement-accessibility relationship (Table I). Specifically, when scores were controlled for extremity, the (η^2 for involvement on accessibility dropped from .3485 to .1971, or 43.49%). Ambivalence, however, accounted for much less of the involvement-accessibility relationship. The involvement-accessibility relationship was attenuated only 12.79% when ambivalence scores were held constant (Table I). These results—based on a within-persons analysis of attitude structure—are only partially consistent with those of study 1. As in study 1, the results of study 2 suggest that when people become involved in a political issue, their attitudes become more accessible because involvement leads people to form more evaluatively extreme and univalent attitudes. That is, involvement leads to the formation of attitudes in which the underlying affective and cognitive constituents are predominantly on one side of the issue. This relative absence of underlying evaluative conflict produces attitudes that are relatively easy to retrieve from memory.

Although attitude extremity accounted for a substantial portion of the involvement-accessibility covariance, a substantial portion of the covariance (56.51%) was left unexplained. Again, this suggests that additional factors mediate the involvement-accessibility relationship. One possibility is that other aspects of attitude structure that are not isomorphic with extremity or ambivalence explain additional covariance (e.g., interattitudinal consistency, integrative complexity).

One question that studies 1 and 2 cannot address is *why* involving attitudes tend to be extreme and univalent. In study 3, we directly addressed the role of selective information processing in mediating the involvement-extremity/ambivalence relationship.

Study 3

According to social and political psychological models of reasoning, people are often motivated by the desire to maintain their current perceptions, beliefs, and attitudes (e.g., Giner-Sorolla & Chaiken, 1997; Kunda, 1990; Liberman & Chaiken, 1992; Lodge & Taber, in press; McGraw et al., 1996; Schatz, Staub, & Lavine, 1999). This is especially likely to be the case when an issue strongly impinges on one's tangible goals, values, and social identifications—that is, when an issue provokes high levels of involvement (see Lodge & Taber, in press). In study 3, we examined one mechanism through which attitudinal perseverance might occur, and two structural consequences of that perseverance. Specifically, our intent was to evaluate whether high levels of involvement in an issue are associated with a preference for exposure to attitude-congruent information. If this is indeed the case, then involvement-based differences in selective exposure would provide one psychological explanation for why involving attitudes are associated with extreme and univalent attitude structures. Specifically, as a result of disproportionate exposure to only one set of political arguments, the affective and cognitive constituents on which the attitude is based (i.e., the considerations; see Zaller, 1992)

are likely to be predominantly on one side of the issue (either positive or negative). Attitudes subject to these processes should thus be associated with low levels of ambivalence and high levels of extremity.

In study 3, we directly tested this idea by assessing respondents' levels of involvement in the issue of affirmative action (an issue that has for some time been the subject of heated debate on college campuses and in society at large). We also asked participants to rate their interest in reading various articles that endorsed either a pro- or an anti-affirmative action position. Finally, we assessed the extremity and ambivalence of respondents' attitudes toward the issue. We hypothesized that involvement would be associated with both extreme and univalent attitudes and with a selective exposure effect (favoring congenial information); moreover, we explored whether the involvement-extremity/ambivalence relationship would be mediated by involvement-based differences in the tendency for a preference for attitude-congruent information.

Method

One hundred seventy-nine undergraduates at Northern Illinois University participated in the study for extra credit. Attitudinal involvement was assessed using six 9-point items. Participants were asked how much they cared about the issue, how much time they spent thinking about the issue, and how much they were interested in information about the issue ($\alpha = .87$). Attitude extremity was assessed by averaging the absolute difference from the midpoint of four 9-point semantic differential items (bad-good, harmful-beneficial, foolish-wise, and unnecessary-necessary) ($\alpha = .86$). Attitude ambivalence was assessed using both subjective and objective measures (see Lavine, Huff, et al., 1998; Priester & Petty, 1996; Thompson et al., 1995). The subjective items included asking participants to rate whether their beliefs and feelings about affirmative action were "mixed" or "all on one side of the issue" and to rate the degree of conflict they felt about the issue (see Tourangeau, Rasinski, D'Andrade, & Bradburn, 1989). Three sets of objective unipolar items were used to separately assess the positive and negative components of participants' attitudes. One set of items asked participants to separately rate the degree to which their feelings about affirmative action were positive (0 = no positive emotions, 3 = extremely positive emotions) and negative (0 = no negative emotions, 3 = extremely negative emotions) (*affective ambivalence*). A second set of items asked participants to separately rate the degree to which their beliefs about affirmative action were positive (0 = not at all beneficial, 3 = extremely beneficial) and negative (0 = not at all harmful, 3 = extremely harmful) (*cognitive ambivalence*). The third set of items asked participants to separately rate their positive (0 = not at all good, 3 = extremely good) and negative (0 = not at all bad, 3 = extremely bad) evaluations of affirmative action (*general evaluative ambivalence*). Ambivalence scores were constructed from each set of

items using the Griffin formula (the average of the positive and negative components minus the absolute value of the difference; for a review of numerical indices of ambivalence, see Breckler, 1994; Priester & Petty, 1996; Thompson et al., 1995). Final ambivalence scores were computed by standardizing the three subjective and four objective measures and averaging them ($\alpha = .79$).

Selective exposure was assessed by asking participants to rate their interest in reading two op-ed type articles, one pro- and one anti-affirmative action, where 1 = "I definitely would not like to read this article" and 7 = "I definitely would like to read this article" (see Eagly & Chaiken, 1993; Frey, 1986; Pomerantz et al., 1995; Schatz et al., 1999). These two target items were embedded within a larger group of eight article titles related to other political issues (e.g., welfare, balancing the budget). To create an index of the extent to which participants favored attitude-congruent over incongruent articles (i.e., selective exposure to attitudinally congenial information), we subtracted the interest rating for the incongruent article from the interest rating for the congruent article.

Results and Discussion

To assess whether selective exposure mediates the relationship between involvement and attitude structure (i.e., attitude extremity and ambivalence), we conducted a path analysis using LISREL 8, where involvement was specified to have both direct (unmediated) and indirect (mediated) effects on attitude extremity and ambivalence. Higher levels of involvement were significantly associated with

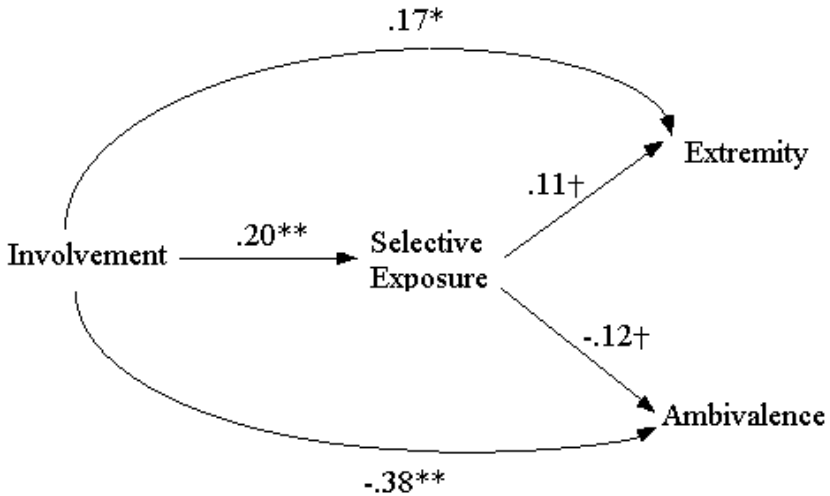


Figure 3. Relations among involvement, selective exposure, ambivalence, and extremity ($\dagger p < .10$, $*p < .05$, $**p < .01$).

a preference for exposure to attitude-congruent information over exposure to incongruent information (Figure 3). Moreover, this selective exposure tendency was marginally significantly associated with holding more extreme and more ambivalent attitudes ($ps < .09$, one-tailed). Finally, the analysis revealed that involvement has both significant direct effects ($ps < .01$) and marginally significant indirect effects ($\beta_s = .02$, $ps < .10$, one-tailed). As these results suggest, other factors beyond selective exposure would appear to be required to fully explain the involvement-extremity/ambivalence relationship. One factor may be selective judgment; that is, involvement may lead people to be more critical and rejecting of attitude-incongruent than congruent information (e.g., Houston & Fazio, 1989; Lord et al., 1979). Involving attitudes may also become associated with relatively univalent attitude structures through group polarization and other interpersonal mechanisms (e.g., Abelson, 1995).

Conclusions

By incorporating the concept of accessibility into research on political behavior, political psychologists have generated important insights into the nature of candidate evaluation and issue voting (e.g., Krosnick, 1988a; Lau, 1989), judgments of presidential performance (e.g., Iyengar et al., 1984), the role of party identification (Bassili, 1995), and the nature and structure of political attitudes (e.g., Judd et al., 1991; Thomsen et al., 1996; Zaller, 1992). Collectively, this work amplifies theory and research in social cognition on the role of construct accessibility in moderating social judgment and decision-making (e.g., Higgins, Rholes, & Jones, 1977; Wyer & Srull, 1981).

We recognize that variation in both contextual and chronic attitude accessibility contributes to our understanding of the nature and influence of public opinion and political processes. But we also believe that deeper psychological insights require a conceptual framework for understanding *how* attitudes become accessible. In this article, we sought to test a model of the cognitive and motivational processes that mediate the relationship between attitude involvement and attitude accessibility. We focused on the involvement-accessibility relationship for two reasons: First, the accessibility of political issues reliably varies as a function of involvement (Krosnick, 1989; Lavine et al., 1996). Second, the theoretical antecedents of accessibility are the hallmarks of involving attitudes. Relative to uninvolved attitudes, involving attitudes are more frequently thought about (Thomsen et al., 1995), more strongly linked to people's ongoing needs, goals, and values (Boninger et al., 1995; Thomsen et al., 1995), and more embedded within a larger system of other attitudes and beliefs (Lavine, 1994).

We suggest that at least three key processes are responsible for connecting subjectively important with easily retrievable attitudes. First, as attitudes become increasingly central to the self-concept, defense-related goals (e.g., attitude maintenance) should exert a stronger influence on issue-related information processing.

Second, defense-related goals are enacted through “motivated reasoning” or selectivity of exposure, elaboration, judgment, and recall (Eagly & Chaiken, 1993; Lodge & Taber, in press; McGraw et al., 1996). For example, we would expect political messages to be cognitively elaborated to the extent that they support favorable positions or refute unfavorable ones. Alternatively, information might be met with greater criticality, skepticism, and refutation when it opposes rather than supports preferred positions. For example, Borgida and his colleagues (Borgida & Howard-Pitney, 1983, experiment 2; Howard-Pitney et al., 1986) have reported that highly involving attitudes tend to be associated with biases in the processing of issue debates. The third key process connecting involvement to accessibility consists of the influence of selective processing on structural properties of the political attitudes that are formed (or changed). As noted above, biased or selective processing should result in the disproportionate acceptance of *either* positive or negative feelings and beliefs about an issue, rendering the attitude extreme and univalent.

We should, however, acknowledge the piecemeal and suggestive (rather than conclusive) nature of the present studies. We did not directly measure whether processing goals (accuracy vs. defense) are directly caused by involvement, nor did we link processing goals with selective information-processing strategies. Finally, we examined only one type of “biased” processing: selective exposure. As discussed earlier, attitudinal defense can also be accomplished through selective judgment and recall and the selective use of heuristic cues (e.g., Giner-Sorolla & Chaiken, 1997). These selective processing strategies are likely to prevail when counterattitudinal information is perceived as being weak and refutable (see Frey, 1986). Future research should incorporate a broader range of selectivity processes and should link involvement, processing goals and strategies, attitude structure (i.e., extremity and ambivalence), and attitude accessibility in a single study.

As the model specifies, and as the data from studies 1 and 2 confirm, political attitudes with extreme and univalent structures are easier to retrieve from memory than are those with moderate and ambivalent structures. Resolving attitudinal ambivalence is a time- and resource-consuming operation (see Tourangeau & Rasinski, 1988); conflict thus tends to reduce attitude accessibility. However, the mere *availability* of conflicting attitudinal considerations in long-term memory does not necessitate a slowdown in response time to a direct attitudinal inquiry. Even when such “potential” conflict exists, contextual information may disproportionately activate beliefs and feelings on one side of the issue, rendering the attitude highly accessible. In other words, attitudes with ambivalent underlying structures may be accessible under certain conditions. Bassili (1998) has identified an important moderator of the relationship between attitude ambivalence and attitude accessibility. Specifically, Bassili argued that for conflictual beliefs to attenuate an attitude’s accessibility, the positive and negative evaluation of the attitude object must be *simultaneously* activated. He showed that ambivalence was linked to decreased accessibility only when both the positive and negative components of

the attitude were accessible. Bassili's (1998) findings comport well with the constructionist notion that a given attitude object is likely to provoke a range of attitudinal responses, depending on the current activation values of available feelings and beliefs (see Lavine, Huff, et al., 1998).

Finally, by explicating the cognitive and motivational processes through which political attitudes become accessible, we stand to gain a more complete understanding of key political psychological phenomena such as agenda setting and priming (Iyengar & Kinder, 1987) and the nature of public opinion and the survey response (Lavine, Huff, et al., 1998; Zaller & Feldman, 1992).

Media effects and priming. Iyengar and Kinder's (1987; Iyengar et al., 1984) work on the agenda-setting and priming effects of television news indicates that the news media—through stressing some issues while ignoring others—shape citizens' judgments of national priorities and influence the bases of electoral decision-making and presidential performance evaluation. Iyengar and Kinder explained their priming effects on the basis of an "accessibility heuristic"—the idea that political judgments and decisions are based on whatever information happens to come to mind. Their theoretical model thus specifies that political circumstances determine what information will be most salient to citizens and therefore what information drives judgments and decisions. Although Iyengar and Kinder's (1987; Iyengar et al., 1984) studies provide direct evidence for the priming effect, they do not empirically address the processes of *how* exposure to television news facilitates priming. Our involvement-accessibility model can be useful in understanding this process.

According to the agenda-setting aspect of Iyengar and Kinder's model, media coverage of political issues determines the public's views of which problems are the most important to the country. We would argue that media coverage similarly influences the public's judgments of which problems are most important to the *self*. That is, media coverage of issues may invoke involvement by linking political issues to citizens' self-interests, values, and social identifications. According to our model, once citizens are involved in an issue, their media-based information-processing strategies should become more selective; thus, they should manifest a greater interest in attitude-congruent than incongruent news stories and should be selectively critical of incongruent stories. This should produce a set of underlying attitude considerations that are highly consistent with each other, resulting in attitudes that are extreme and univalent, and thus highly accessible. Future research might extend agenda-setting effects to examine citizens' cognitive responses to attitude-congruent and incongruent news stories and link such responses to the structure and accessibility of resulting attitudes.

The nature of political attitudes and the survey response. Recent studies have called into question the traditional view that political attitudes are stable evaluative constructs that are represented in memory in summary (precomputed) form and are directly retrieved from memory when a survey response is required (e.g., Lavine, Huff, et al., 1998; Tourangeau & Rasinski, 1988; Wilson & Hodges, 1992; Zaller

& Feldman, 1992). The new view is that people do not possess any single attitude toward an issue, but rather “carry around in their heads a mix of only partially consistent ideas and considerations” (Zaller & Feldman, 1992, p. 579). When a survey response is requested, respondents are believed to canvass their memories for relevant beliefs and feelings, and then integrate them on the spot to select a survey response. In doing so, people have been shown to oversample from memory information made temporarily accessible by the prior survey context, resulting in item context effects (e.g., Tourangeau et al., 1989). Moreover, the summary judgment (i.e., the attitude) derived from this retrieval/integration process is believed to decay over time. Thus, attitudes are hypothesized to be temporary rather than stable constructs, and survey responses are hypothesized to require computation rather than simple retrieval.

Our model suggests two potentially important limiting conditions on the “temporary constructs” view of political attitudes and the mass survey response. First, as shown in studies 1 and 2, attitudes that are highly connected with the self have underlying structures in which the considerations (beliefs and feelings) are highly consistent. Thus, the computation (retrieval and integration) of such attitudes should result in less within-person attitude variability over time than for attitudes not marked by involvement. Hence, involvement might produce stability in attitudes (see Krosnick, 1988b; Schuman & Presser, 1981) because involving attitudes are associated with highly consistent underlying considerations.

Second, the survey response process itself may differ qualitatively across levels of attitude involvement, extremity, ambivalence, and accessibility. Specifically, although most attitudes are likely to conform (at least in part) to the attitudes-as-temporary-constructions view, attitudes marked by high levels of involvement, extremity, and univalence—and thus accessibility—are likely to conform to the direct-retrieval, attitudes-as-stable-constructs view. In particular, accessibility should be positively related to the probability that the attitude exists in precomputed form, thus bypassing the belief retrieval and integration stages of the survey response process. These ideas are consistent with Lavine, Huff, et al.’s (1998) recent finding that “strong” (e.g., involving) attitudes are less susceptible than “weak” attitudes to item context effects in surveys.

An influential political commentator once declared that any attempt to characterize the nature of public opinion is a task not unlike coming to grips with the Holy Ghost (Key, 1961, p. 8). However, if political psychologists are to provide a more complete understanding of the formation, structure, and dynamic operation of public opinion and electoral behavior, we must direct our attention to the cognitive and motivational processes that make attitudes accessible in memory, and thus politically consequential.

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