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# Framing Policy Debates

## Issue Dualism, Journalistic Frames, and Opinions on Controversial Policy Issues

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This study examines how the news frames that journalists use to present contentious policy debates shape reasoning processes and opinion outcomes. Drawing on the notion that framing is a cognitive process in which the message affects how individuals weigh existing considerations (i.e., political orientations and relevant attitudes/beliefs) to make a judgment, the authors conducted two experiments in which they presented participants with news stories in which policy conflicts were described as either a clash of underlying values and principles (i.e., a value frame) or as a clash of political interests and strategies (i.e., a strategy frame). The results suggest that the framed news stories failed to change issue opinions directly but did alter the importance of the considerations used to make judgments on relevant issues. Specifically, individuals tend to react to strategy frames by discounting partisan affiliation as a primary consideration, turning to other salient alternatives when making judgments.

**Keywords:** *framing effects; strategy frames; value frames; issue dualism; stem cell issue; immigration policy; policy reasoning*

Public policy processes in a democratic system often involve conflict and struggle among groups and individuals with competing interests. Mass media often play a role in presenting policy conflicts to the public for consideration (Bennett, 1988; Patterson, 1994). In the process of covering policy disputes, journalists have established a routine practice called “issue dualism,” journalists’ tendency to seek a balance between competing positions (Bennett, 1988; Terkildsen, Schnell, & Ling, 1998; Tuchman, 1972). That is, journalists tend to reduce a complex and many-sided issue to two opposing positions upheld by “two familiar, predictable, and legitimate groups or actors” (Bennett, 1988, p. 119) and give both sides relatively equal time or space to register their positions, interpretations, and proposed solutions on problems on the issue in question. Many media critics have cited this practice of issue dualism and its heavy emphasis on conflict as being responsible for such political ills as the erosion of public trust and the marginalization of minority voices in the issue debates (Hallin, 1994; Patterson, 1994). Nonetheless, issue dualism has provided journalists with strong

grounds to defend the fairness and independence of their coverage as part of the journalistic rituals by which the illusion of objectivity is maintained (Tuchman, 1972). On this basis, journalists have portrayed their profession as a “neutral transmitter,” conveying policy actors’ competing voices faithfully and thus empowering the public to finally judge which issue positions are desirable and thus preferable.

A growing body of framing research, however, suggests that journalists, even within the bounds of issue dualism, exercise a substantial degree of freedom to define issue conflicts by applying frames of understanding. A *frame* here means a particular logic or organizing principle with which a given policy conflict is described in media reports, suggesting particular themes, interpretations, and terms by which such conflict should be understood (Entman, 1993; Gamson & Modigliani, 1987; Neuman, Just, & Crigler, 1992). For instance, policy controversies may be presented as a clash of political interests and competing political strategies (i.e., a strategy frame), as a clash of moral principles or basic values (i.e., a value frame), as an assessment of economic consequences (i.e., a material frame), or as rationales behind various policy alternatives (i.e., an issue frame). Depending on which particular aspects of conflict are highlighted in news stories, framing research has shown that individuals respond differently to news coverage (e.g., Cappella & Jamieson, 1997; Price, Tewksbury, & Powers, 1997; Shah, Domke, & Wackman, 1996, 2001).

The use of stimulus messages that follow the journalistic practice of issue dualism has two important advantages for the examination of framing effects. First, issue dualism, which emphasizes balance between supporting and opposing arguments in a given policy confrontation, enables researchers to isolate framing effects. This is significant because some past research confounded two sources of media effects: the content of the frame and the valence of the frame. Such research not only manipulated the frame but used frames that were valenced toward opposite sides of a conflict. For instance, Nelson, Clawson, and Oxley (1997) manipulated whether a story about a KKK rally was framed as either a “free speech” or a “public order” story. The problem is that their stimulus messages not only manipulated the story frame but also whether the story was valenced in favor of (i.e., free speech) or in opposition to (i.e., public order) the KKK marchers. The advantage of using news stories that adopt the journalistic convention of issue dualism is that they ideally involve valence-neutral stimulus messages, thereby doing a better job of isolating framing effects.

Second, because any directional changes in opinion positions may be difficult to infer directly from the nature of frame manipulations, framing effects on attitudes and opinions may not be very pronounced, nor consistent in their direction, leading to the conclusion that framing effects are minimal. Perhaps, it would make more sense to examine other kinds of framing outcomes under the message condition of issue dualism. For instance, such framing effects may be more consequential when it comes to the reasoning process that individuals use to derive their opinions from what they already know, what they believe, and what they value.

Another important distinction in framing effects research pertains to whether the frames apply strictly to the specific issue conflict featured in the story or whether the frames can be applied to a variety of different conflicts. For instance, Richardson (2005) manipulated whether an editorial on the use of race in university admissions decisions was framed around the issue of promoting diversity or remedial action. This framing distinction is largely relevant only to stories about affirmative action. By contrast, Iyengar's (1991) distinction between episodic and thematic frames can be applied to a variety of different types of issue conflicts. The value of using more broadly applicable frames is that one can examine the extent to which framing effects are consistent across different issue contexts. Demonstrating consistent framing effects across issues is important to establishing that we have isolated generalizable framing effects, not just effects that are a manifestation of a particular issue context.

In investigating the effects of the journalistic practice of issue dualism to determine whether effects can be generalized across issues, we conducted two experiments that shared a similar design but featured different policy conflicts: federal funding for stem cell research and immigration policy. In both of these studies, we presented participants with two-sided news stories (i.e., adhering to the principle of issue dualism) in which policy conflicts were described as either value conflicts (a value frame) or political strategy conflicts (a strategy frame).

Unlike past research on value and strategy framing, our primary interest lies in the question of how frames prioritize different modes of reasoning. Drawing on research that suggests that framing is a cognitive process in which the message affects how individuals weigh existing considerations (i.e., relevant attitudes/beliefs and political orientations) to make judgments, this study examines framing effects not only in terms of opinion changes but also in terms of the relative importance of relevant considerations used in making such judgment. By analyzing data from multiple framing experiments, we explore whether the reasoning patterns associated with particular frames can be generalized to multiple issue domains.

## **Framing and Policy Reasoning**

In a variety of political contexts and message domains, framing has been used rather loosely to describe a phenomenon in which a particular way of organizing a media message shapes the way individuals interpret and evaluate the issues and events featured in the message. Along these lines, we define a message frame as a central organizing principle of a media message—the way that facts and ideas are assembled into messages (e.g., episodic versus thematic frames from Iyengar [1991], issue versus strategy frames from Cappella & Jamieson [1997], or protest paradigm versus debate frames from McLeod & Hertog [1999]). Research has shown that message frames influence such diverse outcomes as causal attributions about social problems and levels of political cynicism (e.g., Cappella & Jamieson, 1997; Iyengar, 1991).

Despite a wide range of framing contexts and potential outcomes, a growing body of research situates framing effects as part of the reasoning process by which citizens formulate political opinions (e.g., Nelson, Oxley, & Clawson, 1997; Price & Tewksbury, 1997). That is, framing structures the reasoning process by activating certain constructs that are used to make judgments or form opinions. Thus, framing is a cognitive process in which journalists' choices of news frames privilege the activation of certain cognitions (i.e., schemas, concepts, or considerations), which audience members use as heuristics, premises, or guiding principles in information processing and judgment tasks. A sizable body of research focuses on cognitive responses (e.g., schema activation, cognitive complexity, reflection) as mediators of framing outcomes (e.g., Hwang, Gotlieb, Nah, & McLeod, 2007; Nelson, Oxley, et al., 1997; Price et al., 1997; Shah, Kwak, Schmierbach, & Zubric, 2004).

### Cognitive Processes Underlying Framing Effects

Although scholars agree that framing involves knowledge activation and use in the reasoning process, they diverge on the specific psychological mechanisms underlying framing effects. They disagree on what is activated by exposure to frames, how frames influence the subsequent decisions, and to what extent individuals engage in careful cognitive elaboration in the framing process. To illustrate these differences, we summarize some common elements highlighted in past research on cognitive processes of framing effects (see Higgins, 1996; Hwang et al., 2007; Pan & Kosicki, 2005; Price & Tewksbury, 1997) as follows:

Exposure to a stimulus → (availability, accessibility, applicability) → Knowledge activation → (judged usability) → Use of activated knowledge for a given judgment task

The above model illustrates that the framing process consists of two related sub-processes, knowledge activation and knowledge use. Factors affecting those sub-processes are listed in parentheses. Availability, accessibility, and applicability influence activation, whereas knowledge use is shaped by its judged usability, along with the factors involved in activation. According to this model, knowledge availability (i.e., its storage in long-term memory) is a necessary condition for activation (Higgins, 1996). Such knowledge is more likely activated if it is more accessible and/or more applicable. Accessibility refers to "the activation potential of available knowledge" (Higgins, 1996, p. 134), whereas applicability concerns "the 'goodness of fit' between some stored knowledge and the attended features of a stimulus" (Higgins, 1996, p. 136). Knowledge will be highly accessible if that knowledge is primed (activated) recently or frequently prior to stimulus exposure, and/or is chronically accessible. Applicability increases when there are greater overlaps between stored knowledge and the message stimulus. If applicability and accessibility are sufficient, knowledge will be activated. However, not all activated knowledge will be

used in processing stimulus information and reaching judgments. Judged usability moderates the relationship between knowledge activation and use, in a relatively conscious judgment about the relevance of activated knowledge for making subsequent judgments (Higgins, 1996; Pan & Kosicki, 2005).

Early attempts to identify the psychological mechanisms underlying framing effects relied primarily on accessibility bias. Such research postulated that frames, by selectively highlighting particular aspects of policy issues while ignoring others, makes certain constructs particularly accessible, increasing their likelihood of being activated and used in making judgments (e.g., Iyengar, 1991). This accessibility explanation of framing, however, raises many questions, including whether framing is a distinct psychological phenomenon from such media effects as agenda-setting and priming (Pan & Kosicki, 2005; Price & Tewksbury, 1997).

Price and Tewksbury (1997) presented the first formal attempt to distinguish the framing process from other related media effects. They viewed framing as an applicability effect while considering priming (and agenda-setting) as an accessibility effect. That is, framing occurs during initial stimulus processing and renders certain elements of knowledge more applicable, thus enhancing the likelihood of activation and use in making evaluations. Priming involves making activated knowledge temporarily accessible for use in judgment tasks. Therefore, framing affects judgments by constraining "the mix of considerations" in the evaluation process.

More recently, however, Pan and Kosicki (2005) pushed the locus of framing effects back to the end of the sequential chain of knowledge activation and use. Whereas Price and Tewksbury (1997) viewed framing as knowledge activation, Pan and Kosicki contended that it has more to do with the process of selecting and integrating activated considerations on the basis of suitability judgment. Their distinction between applicability and judged usability is hardly trivial. The former concerns an involuntary matching process between features of stored knowledge and attended features of a framing stimulus, whereas the latter involves an active and conscious judgment about the importance and relevance of each activated consideration.<sup>1</sup> The question of whether framing should be conceptualized in terms of knowledge activation effects (e.g., Price & Tewksbury, 1997) or in terms of knowledge integration effects (e.g., Nelson, Oxley, et al., 1997; Pan & Kosicki, 2005) is not easily answered by empirical testing as these processes are not easily observed.

## **Implications for Empirical Explorations of Framing**

The above discussion suggests that framing effect research should extend beyond knowledge activation to how activated knowledge is organized into a coherent judgment, as frames constrain not only the cognitions available to individuals but also how they are used in subsequent judgments. Expanding framing research to encompass the knowledge integration has several important implications for empirical

research. First, because framing processes include some level of conscious assessment, framing effects are highly contingent on contextually relevant individual factors including personal experience, motivations, processing ability, and processing objectives. That is, news frames interact with audience characteristics such that their effects are not uniform.

Second, research should be designed to capture not only activated thoughts but also how they are organized into an overall judgment. Many past framing studies employed “thought listing” to identify salient constructs at the time of message exposure. Whereas this method can detect activated thoughts, it is difficult to determine “which value(s) or principle(s) may be applied to integrate the activated thoughts in forming judgments or evaluations” (Pan & Kosicki, 2005, p. 186). Alternatively, framing effects can be observed in the configurations (or rather reconfigurations) of relevant considerations, as framed messages affect “importance ratings” of those considerations (Nelson, Oxley, et al., 1997; Pan & Kosicki, 2005).

Finally, the expanded framing conception highlights the notion that individuals are able to suppress the use of certain considerations if they judge them irrelevant or inappropriate for the judgment task. Past framing research has examined construct activation and use of frame-consistent considerations, while ignoring the possibility that a frame discourages the use of particular considerations. When frames suppress typically applicable considerations, individuals may search for other relevant considerations to render a judgment. To what extent an individual seeks alternative considerations will depend on motivations for further processing and various situational factors (Price & Tewksbury, 1997).

## **Defining Policy Conflict: Strategy and Value Frames**

Our point of departure is the journalistic practice of issue dualism, which often leads to news stories that adopt a “conflict frame.” News stories adopting conflict frames are organized around various parties in contention over issues of public concern. Conflict frames can be further subdivided according to how journalists portray the conflict. For example, the conflict may be framed as a clash of values or as a strategic battle between competing actors. In our research, the stimulus news stories focused on the motivations behind the parties in conflict over the issues of embryonic stem cell funding and immigration. We manipulated whether motivations were grounded in underlying values (i.e., the values frame) or political strategizing (i.e., the strategy frame). These frames have been used in past research by Cappella and Jamieson (1997), who compared strategy frames to issue frames, and by Shah et al. (1996), who distinguished between value and material frames.

A strategy frame organizes a policy conflict as a clash of political interests and competing strategies (Lawrence, 2000), typically highlighting political machinations of the contending parties, related to their objectives, strategies, and tactics. Policy initiatives

are often treated as means to political ends, such as courting a particular voting block. Much scholarly interest in strategy framing is attributable to concerns about the potentially destructive consequences of horse-race-style election coverage, which now tends to overshadow substantive issue-based coverage (Cappella & Jamieson, 1997; Patterson, 1994). Many critics charge that by emphasizing winning and losing, and the motives and strategic maneuvering of the candidates, strategic election coverage relegates "political leaders down to their worst stereotypes, people possessing no motive but political advantage" (Schudson, 2003, p. 50; Patterson, 1994). Research on strategy frames suggests that they activate public cynicism about the political processes, promote distrust of government institutions and political leaders (Cappella & Jamieson, 1997; de Vreese & Semetko, 2002), and encourage political disengagement under some conditions (Valentino, Beckmann, & Buhr, 2001).

Value frames, on the other hand, involve linking values or "value-choices" to the construction of issue debates to provide a comprehensible and compelling interpretive framework in which a given policy conflict will be understood (Ball-Rokeach & Loges, 1996; Ball-Rokeach, Power, Guthrie, & Waring, 1990). Value frames typically depict policy debates as clashes of moral principles or basic values, with parties to the conflict countering each other on the basis of a particular set of values. What is at stake is the "legitimacy of one definition of morality and/or competence over another in the struggle to win or control scarce resources" (Ball-Rokeach et al., 1990, p. 254). Although journalists rarely initiate such moral arguments, news stories routinely feature this "legitimacy contest" indirectly through quotations and inferences (Neuman et al., 1992). Once featured, these value frames have been shown to be powerful and efficient in shaping audience reasoning processes, as values provide individuals with easily accessible heuristics that guide the understanding of complex policy issues without recourse to detailed information on the issues (Shah et al., 1996).

Despite the prominence of strategy and value frames in news discourse about policy debates, research has rarely examined framing effects on policy reasoning processes. Most studies have focused on cynicism, government trust, and political disengagement, in the case of strategy frames; and value salience and persuasive appeals, in the case of value frames. There are some exceptions, however, in the form of experimental studies that analyzed open-ended responses after exposure to either value or strategy frames in order to examine how individuals interpret issue controversies (e.g., Brewer, 2002; Rhee, 1997; Shah et al., 1996). These studies demonstrated that each frame encourages the activation and the use of frame-consistent thoughts and ideas in the process of issue interpretation such that exposure to strategic frames leads to a strategic interpretation of political candidates and issues, whereas value frames induce individuals to interpret an issue in moral or ethical terms.

This study extends research by drawing on the cognitive effects literature, which suggests that frames evoke not only frame-congruent considerations but also heuristics that guide how frame-activated thoughts are organized and evaluated in terms of



their relevance and appropriateness to a given judgment task. Specifically, we contend that value/strategy frames activate different constellations of judgment considerations (Pan & Kosicki, 2005). Although such processes cannot be directly observed, they can be inferred indirectly on the basis of how individuals configure their considerations.

## Research Questions and Hypotheses

This study examines how variations in message frames about two controversial policy issues (federal funding for stem cell research and immigration policy) affect the reasoning processes through which individuals form opinions. Because these are widely publicized issues, many participants likely had strong preexisting opinions, making them more resistant to framing effects. Therefore, we consider our study a conservative test of framing effects.

In addition, the salience of stem cell and immigration issues to recent political discourse naturally elevates partisanship as one of the most important considerations for formulating summary opinions. The partisan division is deeply infused in these issues and, accordingly, the underlying partisan conflicts were represented in our framing stimuli. However, the degree to which partisanship is activated is likely to differ depending on the message frame.

We expect that value frames encourage partisanship-based reasoning by increasing the relevance of ideology to subsequent judgments. Value-framed news stories typically depict partisan actors espousing relevant underlying values (e.g., values supporting or critiquing embryonic stem cell research). As shown by past research, such value frames resonate with individuals' preexisting value orientations, reinforcing partisan attitudes (Shah et al., 1996).

By contrast, research has demonstrated that cynical responses toward political leaders and government are stimulated by strategy frames that depict issues in terms of a "political game" between self-interested political actors (Cappella & Jamieson, 1997; de Vreese & Semetko, 2002). When an individual sees politicians from both political parties engaging in gamesmanship, the resultant cynicism may diminish partisanship as a simple heuristic cue, elevating other relevant considerations.

On this basis, we predict that value frames will boost the effect of partisanship on summary opinions, whereas strategy frames will suppress that effect. Thus, we test the following hypotheses about the relationship between framing and the partisanship-based policy reasoning:

*Hypothesis 1a:* The strategy frame will attenuate the strength of the relationship between partisanship and issue positions on both the stem cell issue and the immigration issue.

*Hypothesis 1b:* The value frame will amplify the strength of the relationship between partisanship and issue positions on both the stem cell issue and the immigration issue.

It is well documented that individuals have a limited capacity to process information such that the number of considerations that are simultaneously used in judgment processes are constrained (Lang, 2000). Previous research suggests that this limited capacity results in what has been called a “hydraulic pattern” of framing effects (Price et al., 1997). That is, when one frame-induced consideration has been accentuated, other relevant considerations will be suppressed in the process of making subsequent judgments. By the same token, when one consideration is deactivated, other considerations are likely to be elevated.

Though partisanship is typically central to the expression of policy opinions regarding the issues under examination here, its relationship with issue judgments is likely to be subject to frame-induced fluctuations leading to hydraulic effects in connection with other judgment considerations. In other words, when a news story frame (e.g., a value frame) makes partisanship more salient, other considerations are likely to be diminished. However, when partisanship has been muted (e.g., as a result of exposure to a strategically framed news story), individuals are likely to apply other relevant considerations that are either activated by a frame or chronically accessible prior to message exposure. For example, abortion attitudes and attitudes toward science are among the logical candidates that individuals might rely on when formulating judgments about the issue of embryonic stem cell funding. For immigration policy judgments, such related considerations are likely to include attitudes toward multiculturalism and feelings toward minorities such as Hispanic Americans and Asian Americans.

On the basis of this argument regarding hydraulic patterns of framing effects, we predicted that the increased relevance of partisanship in the value frame condition will suppress the use of other closely related considerations in the evaluation process. Likewise, if the hydraulic pattern holds, we can expect that the suppression of partisanship in the strategy frame condition, in turn, results in an increase in the importance of other related considerations. As such, we formulated the following hypotheses:

*Hypothesis 2a:* Abortion attitudes and attitudes toward science will be more highly related to opinions on the stem cell issue in the strategy frame condition than in the value frame condition.

*Hypothesis 2b:* Feelings toward ethnic minorities and attitudes toward multiculturalism will be more highly related to opinions on the immigration issue in the strategy frame condition than in the value frame condition.

We expected the primary outcome of exposure to the frames under examination would be either a decrease or an increase in the relevance of partisanship to the opinion judgments. Of these two potential scenarios, the suppression of partisanship leads an individual to seek alternative considerations to reach a judgment. In such a situation, an individual’s motivation to process information may moderate the way that the individual copes with this task of finding alternative considerations. Here we consider need for cognition (NC), the tendency to “engage in and enjoy thinking”

(Cacioppo & Petty, 1982, p. 1), as a potential moderator of the search for alternative considerations. It is likely that individuals high in NC, who are predisposed to think extensively and pursue effortful cognitive endeavors, will avoid the immediate use of the next relevant alternative but, instead, engage in an extensive review of other relevant considerations. By contrast, individuals low in NC, who exert less mental effort, will not search further when they find the next prominent consideration. As a result, we expect that individuals high in NC will consider a relatively broad range of alternative considerations, but those low in NC will rely heavily on a smaller set of salient considerations. Neither this reasoning nor the literature, however, provides insights sufficient to formulate specific hypotheses to identify which particular considerations will be used. Therefore, we pose the following research question about the moderating effects of NC, which applies only to the strategy frame condition:

*Research Question 1:* Does need for cognition moderate the effects of frames on the weights that people place on the existing attitudes relevant to the issues?

## Method

The data for this analysis were collected by two separate experiments that were embedded in a Web-based survey of respondents enrolled in undergraduate courses at a large Midwestern university. The first experiment (stem cell study) was conducted in the fall of 2005 and the second study (immigration study) in the fall of 2006. In both studies, course instructors offered extra credit for participating in this research experience. All potential participants were contacted by e-mail and given the Web site of the online survey. Aside from the policy issues featured in the studies, the two studies share a similar study design. The subjects consisted of 461 students in stem cell study and of 338 students in the immigration study.

### Study 1: Stem Cell Study

*Design and procedure.* In the stem cell study, we employed a  $3 \times 2$  experimental design. In addition to pretest and posttest questions, respondents were exposed to two experimentally manipulated factors: a quote from a fictional expert on stem cells, which was presented in different frames; and a montage of video clips from CNN coverage of the stem cell controversy. Respondents were randomly assigned to a manipulation using a stratified assignment algorithm.

Our first experimental factor manipulated the frames of a quote from a fictional expert on stem cells, purportedly the author of a book titled *Stem Cells and Society*. This quote offered a nonvalenced perspective on the nature of the debate over stem cells (see the appendix for the exact wording of the quotes). In one condition, respondents saw a quote claiming that the debate is an ethical and moral one (value

frame condition). In the second condition, respondents read a quote claiming that the debate is a political one (strategy frame condition). The two quotes have the same length and structure, but they frame the stem cell debate differently. In both quotes, the expert presents arguments both for and against stem cells. We varied the order of presentation of arguments for and against and found no order effects on a variety of outcome variables. The third condition used no quote at all (control condition).

In the second manipulation, some respondents saw the CNN video montage and others did not. The video clips were chosen from several hours of coverage on CNN on the date of a speech by the president about stem cell research funding policy. The montage totaled 3 minutes and 13 seconds and was edited so that the segments flowed smoothly together. The clips were chosen to convey scientific information without political or ethical content. The content for this video did not contain value or strategy framing information. As this factor was not the focus of this study, it was controlled in subsequent analysis.

*Measurement.* The outcome variable examined in this study was opinion on stem cell research. Stem cell opinion was measured by three items tapping support for stem cell funding and research. These items were measured on an 11-point scale ranging from 0 to 10 and were averaged into an index of support for stem cell research (Cronbach's  $\alpha = .90$ ,  $M = 7.35$ ,  $SD = 2.19$ ).

We treated partisanship, abortion attitudes, and attitudes toward science as general antecedent attitudes that underlie opinions on the stem cell issue. First, partisanship ( $M = 4.77$ ,  $SD = 1.56$ ) was measured by a standard 7-point scale of partisan attachment (1 = *strong Republican* to 7 = *strong Democrat*). Second, we measured opinions on abortion with three items. The first item asked respondents to identify when, during a pregnancy, an abortion should be legal. Choices ranged from *never* (1) to *the baby is born* (7) ( $M = 3.24$ ,  $SD = 1.36$ ). The other two items asked respondents to identify, on an 11-point scale, their approval for first-trimester abortions ( $M = 7.25$ ,  $SD = 3.44$ ) and for second-trimester abortions ( $M = 4.19$ ,  $SD = 3.46$ ). Because different scales were used, we standardized each score and then averaged the standardized scores into an index of abortion attitudes (Cronbach's  $\alpha = .86$ ). High scores on this index represented more permissive abortion attitudes. Finally, attitudes toward science were assessed by two items on an 11-point agree-disagree scale: one was about science's potential to solve human health problems and the other was about the credibility of scientific journals' published results. Items were coded so that high scores indicated more favorable attitudes. We averaged these items to create an index (interitem correlation  $r = .46$ ,  $M = 6.71$ ,  $SD = 1.74$ ).

We took into account two control variables: sex and personal relevance of the stem cell issue. The respondents were 72.9% female. We measured personal relevance by asking whether respondents, or someone close to them, had been affected by one of the diseases or injuries that may be treatable by scientific advances in stem cell research (62.7% were not).

## Study 2: Immigration Study

*Design and procedure.* The immigration study employed a single-factor (frame manipulation) experimental design. After answering the pretest questions, respondents were randomly assigned to one of three experimental conditions (i.e., strategy frame, value frame, and control conditions). Whereas the stem cell study used a quote from a fictional expert as a framing stimulus, the immigration study employed simulated newspaper articles. These news articles presented the immigration issue using either a value or a strategy frame. The news stories were structured identically: both appeared to have been taken from the *Boston Globe*, mirrored each other in length, and had the same lead and concluding paragraphs. The stories adhered to norms of objectivity and balance by providing quotes from both sides of the issue.

The value-framed story presented both the predominant Democratic and Republican positions on the immigration issue as a battle over inherent values with which each party identifies. Direct quotes from politicians on either side attacked the other party's position as demonstrating values incompatible with those of the American public. Conversely, in the strategically framed news story, the parties' positions were presented as part of political maneuvering before the upcoming midterm elections. Quotes attacked the opposing party's position as being based entirely on posturing to gain votes for the election. Although the stories used different quotes and arguments to emphasize the manipulated frame, the stories used similar wording and phrasing as much as possible.<sup>2</sup>

After the manipulation, each participant saw a video sequence of CNN coverage of the immigration issue, which was held constant across conditions. The video clips that composed the sequence were taken from a national immigration rally that was held on May 1, 2006, called "A Day Without Immigrants." The video sequence focused on the boycotts and rallies occurring across the country by both immigrants and citizens and discussed both the economic implications of the rally and its effectiveness in achieving its goals. The video sequence ran for 2 minutes and 37 seconds and was edited so that segments flowed smoothly together.

*Measurement.* Similar to the stem cell study, our outcome variable was a summary measure of opinions on immigration policy. Opinions on immigration policy were measured by two items asking about the extent of support for a restrictive immigration policy. These two items, which were correlated at  $r = .68$ , were averaged to form an index ( $M = 5.39$ ,  $SD = 2.41$ ). Higher values on this index represent opinions that prefer a more restrictive immigration policy.

We included partisanship, feelings toward ethnic minorities, and attitudes toward multiculturalism as antecedent attitudes that underlie opinions on immigration policy. First, partisanship ( $M = 4.71$ ,  $SD = 1.56$ ) was measured by the same 7-point scale used in the stem cell study (1 = *strong Republican* to 7 = *strong Democrat*). We measured feelings toward ethnic minorities by asking, "How would you feel about

these groups gaining more political influence in the U.S.?" This question was applied to four ethnic groups: Hispanic Americans, Arab Americans, Asian Americans, and African Americans. The answer choice ranged from *extremely negative* (0) to *extremely positive* (10). The four responses were averaged to construct an index for feelings toward ethnic minorities (Cronbach's  $\alpha = .87$ ,  $M = 6.67$ ,  $SD = 1.92$ ). Finally, attitude toward multiculturalisms was assessed by a single item asking the degree of agreement on an 11-point scale with the statement, "Multiculturalism poses a threat to American culture." Responses were reverse-coded so that high scores indicated more favorable attitudes toward multiculturalism ( $M = 8.40$ ,  $SD = 1.88$ ).

Two controls were taken into account: gender and immigrant family. The respondents were 68.4% female. As a proxy for the personal relevance of the immigration issue, we asked whether respondents' extended family included any immigrants (31.3% responded yes).

### Moderating Variable

In both studies, we included one moderating variable: need for cognition (NC). NC was measured using two items asking the degree of agreement with the following statements: (a) "I really enjoy a task that involves coming up with new solutions to problems" and (b) "I prefer complex problems to simple ones." Measured on 11-point scales ranging from 0 to 10, the two items were averaged to create an index of NC (interitem  $r = .51$ ,  $M = 5.74$ ,  $SD = 1.97$  in the stem study; interitem  $r = .44$ ,  $M = 6.01$ ,  $SD = 1.74$  in the immigration study).

## Results

Before formally addressing our hypotheses and research questions, we first examined whether the different frames employed in this study created any significant differences in opinions on stem cell research and on immigration policy. To address this question, we ran an analysis of covariance (ANCOVA) model, in which we examined the effects of our experimental factor (i.e., value frame, strategy frame, and no frame) on the outcome variable, after controlling for the blocking variables of sex and personal relevance of the respective issues. As expected, neither the value frames nor the strategy frames, both of which were strictly balanced between supporting and opposing arguments about the issues, generated any statistically significant mean differences in the outcome variables:  $F(2, 456) = 2.56$ ,  $p > .05$  for support for stem cell research; and  $F(2, 324) = 0.96$ ,  $p > .05$  for the support for a restrictive immigration policy.

Given the null findings for the direct main effects of frames on opinions on stem cell research and on immigration policy, the subsequent analyses concerned the possibility that the frames may not change opinions directly but may change the importance given

**Table 1**  
**Results of Regression Models Predicting Support for Stem Cell Research**

	Experimental Conditions		
	Value Frame	Strategy Frame	Control Condition
Blocking variables			
Video/no video (dummy)	.20***	.22****	.09
Sex (female)	-.01	-.14**	-.09
Personal relevance of stem cell issue	-.01	.15***	.13**
Focal variables			
Partisanship (Rep. → Dem.)	.20*** <sub>a</sub>	.03 <sub>b</sub>	.22*** <sub>a</sub>
Abortion attitudes	.21*** <sub>a</sub>	.57*** <sub>b</sub>	.37*** <sub>a</sub>
Attitudes toward science	.30***	.28***	.33***
<i>R</i> <sup>2</sup>	.36	.55	.50
<i>n</i>	145	142	143

Note: Entries are standardized ordinary least squares (OLS) regression coefficients. Cell entries with different subscripts differ in the hypothesized direction at the .05 level, one-tailed. Tests of difference in coefficients across the frame conditions were not performed for the blocking variables.

\*\**p* ≤ .05. \*\*\**p* ≤ .01. \*\*\*\**p* ≤ .001.

to other considerations used in the judgment process. For this purpose, we treated the degree to which each summary opinion was predictable from other relevant antecedent attitudes as an indication of how participants, when striving to make a judgment about the issues, differentially weighted those antecedent attitudes (Nelson, Oxley, et al., 1997). In other words, we considered the regression weights of each antecedent attitude on the summary opinions as representing, in a relative sense, the extent to which respondents relied on, or derived their opinions from, those antecedent attitudes.

Table 1 and Table 2 summarize the results from the regression analyses that predict support for stem cell research and support for a restrictive immigration policy, respectively. For each outcome variable, the same regression models were estimated separately for the three experimental conditions. To explicitly test whether each regression coefficient for the variables was significantly different across the three frame conditions, we used *t* tests for the difference in coefficients from separate subgroup regressions (for the formula for this statistic, see Hardy, 1993, pp. 51-52; see also Cohen & Cohen, 1983, p. 56).

### Predicting Support for Stem Cell Research (Study 1)

As Table 1 shows, female participants tended to have less favorable attitudes toward stem cell research than their male counterparts. We found that personal relevance of the stem cell issue was associated with a more supportive attitude toward stem cell research. However, the magnitude of these predictors reached the conventional .05 significance level only in the strategy frame condition.<sup>3</sup>

**Table 2**  
**Results of Regression Models Predicting Support for**  
**Stricter Immigration Policy**

	Experimental Conditions		
	Value Frame	Strategy Frame	Control Condition
Blocking variables			
Sex (female)	-.18**	-.08	-.02
Immigrants in family	-.06	-.13	.08
Focal variables			
Partisanship (Rep. → Dem.)	-.42*** <sub>a</sub>	-.17* <sub>b</sub>	-.41***
Feelings toward minorities	-.11 <sub>a</sub>	-.46*** <sub>b</sub>	.02 <sub>a</sub>
Multiculturalism	-.29***	-.17*	-.27***
$R^2$	.37	.38	.28
$N$	110	100	105

Note: Entries are standardized ordinary least squares (OLS) regression coefficients. Cell entries with different subscripts differ in the hypothesized direction at the .05 level, one-tailed. Tests of difference in coefficients across the frame conditions were not performed for the blocking variables.

\* $p \leq .10$ . \*\* $p \leq .05$ . \*\*\* $p \leq .01$ . \*\*\*\* $p \leq .001$ .

The three general antecedent attitudes (i.e., partisanship, abortion attitude, and science attitude) strongly predicted support for stem cell research, with the only exception being partisanship in the strategy frame condition. Results suggest that participants who hold a more permissive abortion attitude, who are strong Democrats, and who possess a more favorable attitude toward science are more likely to be supportive of stem cell research. Only in the strategy frame condition did partisanship ( $\beta = .03$ ,  $p > .05$ ) fail to predict support for stem cell research, after all the other variables were controlled. This coefficient for partisanship in the strategy frame condition is significantly smaller than either the one ( $\beta = .20$ ) in the value frame condition ( $t = -1.69$ , which tests the difference in regression coefficients,  $p = .046$  for a one-tailed test) or the one ( $\beta = .22$ ) in the control condition ( $t = -1.99$ ,  $p = .024$  for a one-tailed test).<sup>4</sup> This pattern of results provides support for Hypothesis 1a predicting that the use of partisanship will be suppressed in the strategy frame condition. However, Hypothesis 1b, which predicted the coefficient of partisanship being larger in the value frames condition than in the control condition, was not supported because we found no difference between the coefficient of partisanship in the value frame condition and that in the control condition ( $t = 0.15$ ,  $p > .05$ ).

On the basis of Hypothesis 2a, we predicted that the coefficients for abortion attitudes and attitudes toward science attitudes would be larger in the strategy frame condition than in either the value frame condition or the control condition. Consistent with this prediction, the regression coefficient of abortion attitudes in the strategy frame condition ( $\beta = .55$ ) was larger than either the one ( $\beta = .22$ ) in the value frame condition ( $t = 3.19$ ,  $p < .001$  for a one-tailed test) or the one ( $\beta = .36$ ) in the control condition ( $t = 2.21$ ,  $p = .014$ ).



for a one-tailed test). However, we failed to find the similar pattern for the attitudes toward science. The coefficients for science attitudes were not significantly different from each other across the frame conditions (all  $t$  values  $\leq 0.50$ , all  $ps > .05$  for all three comparisons). In sum, we found that the hypothesized hydraulic effects applied only to the importance of abortion attitudes for opinion judgments on the stem cell issue.

## Predicting Support for a Restrictive Immigration Policy (Study 2)

As Table 2 shows, female participants were found to be less supportive of a restrictive immigration policy; however, this predictor was significant only in the value frame condition. Our measure of opinions on immigration policy was not predicted by whether participants were in an immigrant family.

Overall, the pattern of relationships between the antecedent attitudes and opinion was found to be similar to the one we observed in the stem cell study. As expected, partisanship was significantly related to immigration opinions such that Democrats were less likely to support stricter immigration policy than Republicans; however, the strength of that relationship differs across the three frame conditions. The magnitude of the regression coefficients for partisanship turned out to be smaller in the strategy frame condition ( $\beta = -.17$ ) than in the value frame condition ( $\beta = -.42$ ) and the control condition ( $\beta = -.41$ ).

Results from the tests of difference in these coefficients showed that the coefficient of partisanship in the strategy frame condition was significantly smaller, in terms of absolute value, than the one in the value frame condition ( $t = -2.24$ ,  $p = .013$  for a one-tailed test). The difference between the strategy frame condition and the control condition failed to reach the conventional .05 significance level, but it was marginally significant ( $t = -1.51$ ,  $p = .066$  for a one-tailed test).

Taken together, these results provide substantial support for Hypothesis 1a. Similar to the case in the stem cell study, however, the data did not provide enough evidence for the claim that the coefficient in the value frame condition ( $\beta = -.42$ ) is larger than the one ( $\beta = -.41$ ) in the control condition ( $t = 0.97$ ,  $p > .05$  for a one-tailed test). Thus, Hypothesis 1b was not supported.

Analysis testing Hypothesis 2b followed the pattern of Hypothesis 2a for the stem cell study, both of which test the hydraulic pattern of framing effects. We found that the regression coefficient for feelings toward minorities in the strategy frame condition ( $\beta = -.46$ ) was larger, in terms of absolute value than either the one ( $\beta = -.11$ ) in the value frame condition ( $t = 2.73$ ,  $p = .003$  for a one-tailed test) or the one ( $\beta = .02$ ) in the control condition ( $t = 3.61$ ,  $p < .001$  for a one-tailed test). However, the hydraulic effect did not hold for attitudes toward multiculturalism. Although we found that favorable attitudes toward multiculturalism negatively predicted support for a restrictive immigration policy, the corresponding coefficients turned out to be not significantly different from each other across the frame conditions (all  $ts \leq 1.54$ , all  $ps > .05$  for all three comparisons). Taken together, we found supportive evidence

for Hypothesis 2b in the feelings toward minorities, but not in the attitudes toward multiculturalism.

### **Moderating Effects of Need for Cognition**

As revealed in the results related to Hypothesis 1a, strategy frames tend to suppress the use of partisanship in the formulation of issue opinions. Our final research question concerns the possibility that the way individuals cope with this situation differs depending on their levels of motivation to engage in further processing and elaboration. To investigate how need for cognition moderates the relationships between antecedent attitudes and summary opinions in the strategy frame condition, the same regression models were estimated separately for the two subgroups demarcated on the basis of need for cognition. Again, this set of analysis was applied only to the strategy frame conditions.

As shown in the top half of Table 3, the relationship between opinions on stem cell research and their antecedent attitudes in both groups followed a pattern that was similar to previous results. However, we found a significant difference in the regression coefficients of abortion attitudes between the two groups. The weights of abortion attitudes were found to be significantly larger in the low-NC group than in the high-NC group ( $t = 2.45$  testing the difference in regression coefficients,  $p = .016$  for a two-tailed test). Likewise, as shown in the bottom half of Table 3, we found that feelings toward ethnic minorities was a stronger predictor of opinions on the immigration issue in the low-NC group than in the high-NC group ( $t = 2.59$ ,  $p = .011$  for a two-tailed test). The difference tests indicate that the other predictors were not significantly different across the two NC groups.

## **Discussion**

Drawing on the notion that framing influences not only the kind of knowledge that is activated but also how such activated knowledge is evaluated and integrated into coherent judgments, this study examined how individuals weigh various considerations (political orientations and relevant attitudes/beliefs) depending on the frames to which they were exposed. Because the value and strategy frames that were examined in the current study are general enough (i.e., not issue-specific) to be applied to many issue domains, it was also important to examine whether there are any common patterns of effects that value and strategy frames have on individuals' reasoning processes across different issue domains. Our data analysis yielded results that are surprisingly consistent between two different issue domains even though we employed news stories that were substantially different except for their common frames. The important patterns of relationships found in the two studies between each set of antecedent attitudes and the summary opinions were found to be almost identical.

**Table 3**  
**Result of Regression Models Predicting Issue Opinions**  
**in the Strategic Frame Condition**

	Need for Cognition	
	Low	High
Support for stem cell research (Study 1)		
Blocking variables		
Video/no video (dummy)	.20**	.28***
Sex (female)	-.05	-.22**
Personal relevance of stem cell issue	.16**	.15*
Focal variables		
Partisanship (Rep. → Dem.)	-.10	.19*
Abortion attitudes	.69**** <sub>a</sub>	.35**** <sub>b</sub>
Attitudes toward science	.29****	.27****
R <sup>2</sup>	.63	.51
n	66	76
Support for a restrictive immigration policy (Study 2)		
Blocking variables		
Sex (female)	-.09	-.16
Immigrants in family	-.20*	-.02
Focal variables		
Partisanship (Rep. → Dem.)	-.14	-.29**
Feeling toward minorities	-.63**** <sub>a</sub>	-.20 <sub>b</sub>
Multiculturalism	-.16	-.20
R <sup>2</sup>	.56	.29
n	47	53

Note: Regression models were estimated only for the strategy frame conditions. Entries are standardized ordinary least squares (OLS) regression coefficients. Cell entries with different subscripts differ at the .05 level, two-tailed. Tests of difference in coefficients across the frame conditions were not performed for the blocking variables.

\* $p \leq .10$ . \*\* $p \leq .05$ . \*\*\* $p \leq .01$ . \*\*\*\* $p \leq .001$ .

Because of this consistency across multiple issue domains, we contend that the patterns we observed may be robust and generalizable to other controversial policy issues. First of all, individuals tend to react to strategically framed media messages about political competition by discounting partisan affiliation as a primary consideration when making judgments. Although our data did not provide enough evidence for the claim that value framing encourages partisan-based reasoning, our results suggest that value framing does not suppress the use of partisanship in the formulation of issue opinions.

Second, the suppression of partisanship induced by strategy frames creates a temporary gap or vacuum, so to speak, in individuals' cognitive decision-making process, which needs to be filled by alternative considerations. We assert that the

heavy reliance on abortion attitudes and on feelings toward minorities that we observed in the strategy frame condition is mainly due to the dismissal of partisanship as a judgment consideration. These two alternative considerations are the ones that are strongly held by individuals and easily accessible but that are not necessarily emphasized by strategy frames. These findings are also in keeping with previous research demonstrating that individuals easily draw a parallel between the stem cell debate and the abortion debate (e.g., Nisbet, 2005) and that emotional reaction to racial minorities is a prominent determinant of opinions on controversial racial issues (e.g., Domke, McCoy, & Torres, 1999).

In addition, we found that the process of dismissing partisanship and turning to alternative considerations that we observed in the strategy frame condition was moderated by the need for cognition, a variable that represents motivations to engage in further information processing and elaboration. In particular, those individuals who are not predisposed to conduct thorough and careful processing tend to align their opinion with other relevant alternatives. By contrast, those high in need for cognition did not exhibit such a dramatic shift from partisanship to the alternatives even when they dismissed the relevance of partisanship for their opinion judgment. Although the data for the present study do not allow us to identify why low-NC respondents readily shifted from partisanship to other relevant considerations, we speculate that they may be less willing to invest mental effort, and thus employ other salient considerations to make their judgments. By contrast, high-NC respondents may engage in more complex and less predictable decision making strategies.

These findings shed new light on the ways in which value and strategy frames shape reasoning processes and opinion outcomes. Our findings clearly suggest that strategy framing suppresses partisanship-based reasoning, whereas value framing neither promotes nor discourages it. Strategy frames seem likely to induce individuals to interpret partisan conflict over issues as a political game, in which political action is dictated by the motivations of partisan actors for gaining political advantage *for themselves*—not necessarily for their party, let alone for the public. The idea that politics is a game and that self-interested politicians are dishonest about their motivations seems to reduce the importance of partisan cues in the judgment process. In this sense, our findings are consistent with Cappella and Jamieson (1997) and several other studies (e.g., de Vreese & Semetko, 2002; Valentino et al., 2001), which assert that the primary consequences of strategy frames is the activation of public cynicism toward politicians and government institutions. However, it is not clear that this cynicism is necessarily a bad thing if it leads to decision making based on the merits of arguments rather than simply on partisan cues.

The question then becomes, Does this suppression of partisanship-based reasoning lead to more considered and deliberative judgments? Our results suggest the answer to this question may depend on individuals' willingness to devote cognitive energy on further processing and elaboration. Based on our results, we speculate that when partisanship is rendered less salient by a strategy frame, individuals who are

motivated to form judgments carefully seem to avoid the immediate use of the next prominent alternatives but instead to engage in an extensive review of other relevant considerations. By contrast, individuals who lack such motivations tend to narrow down potential alternatives to a limited number of attitudes that are easily accessible and emotionally charged, such as abortion attitudes and feelings about minorities.

The findings in this study also have implications for studies on framing effects. First, this study shows that the use of framing stimuli that adhere to the journalistic convention of issue dualism have a number of advantages that might help scholars overcome the limitations of previous approaches. When constructing the framing stimuli in both of our studies, we made an effort to ensure that the amount and the valence of partisan conflict featured in text messages were equivalent across two frame conditions. So it would be safe to say, for instance, that the dismissal of partisanship in the strategy frame condition is attributable to the strategic way of presenting partisan struggle rather than to the slant or conflictual content of the messages. Due to these features of our framing stimuli, our findings provide evidence that journalistic frames may provide cues about how policy conflict is understood without necessarily changing opinions on the issue.

Perhaps more important, our findings draw attention to what a frame suppresses as much as to what a frame encourages in people's mind when they are contemplating on complex political issues. Previous research on hydraulic patterns of framing effects has focused on only one direction of hydraulic effects, where frame-relevant considerations drive out frame-irrelevant considerations from one's mind (Price et al., 1997). However, the current study showed just the opposite type of hydraulic flow of considerations: that is, a frame pushes out frame-relevant considerations (i.e., partisanship in the strategy frame), thereby pulling in frame-irrelevant considerations (i.e., positions on related issues). This pattern of framing effects suggests important new directions for the study of framing effects. That is, different frames may operate by invoking different patterns of predispositions and considerations for use in the judgment process. Moreover, the connection between the predispositions and considerations invoked may or may not be direct and obvious. For instance, counter to what one might assume, strategy frames do not seem to produce partisan-based decision making.

Our study has a few limitations that need to be addressed in future research. First, this study was conducted only with a student sample. Although there is no compelling reason to believe that college students respond differently to frames than the general public, future research that draws participants from broader populations may better address the question of how far the current findings can be generalized. Second, this study examined only a limited number of considerations that are relevant to the issues. Individuals may rely on a broader range of considerations than this study examined. Future studies should seek to assess a broader array of predispositions and personal values that might respond to news story frames and used in the

judgment process. Moreover, studies should continue to seek new frames and new issues in which to study such effects. In the process, researchers should be aware that frames, issues, predispositions, and other considerations may have unique interrelationships that make it very difficult to establish nomothetic principles that apply across all permutations of the framing effects process. However, given the complex processes involved, it is encouraging that the results of our research exhibited a nearly identical pattern across two different contextual issues.

## Appendix

### Framing Materials and Question Wording

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#### Study 1: Stem Cell Study

##### Value Frame

Ethics is at the heart of the debate over stem cells. On the one hand, some people think that government has an ethical imperative to restrict funding for researchers who pursue science at the expense of human embryos. They say society is obligated to protect these embryos, which they believe are human life. On the other hand, other people think that government has an ethical imperative to fund stem cell researchers who pursue science to find cures for debilitating diseases. They believe that society is obligated to use these cells to save human lives.

##### Strategy Frame

Politics is at the heart of the debate over stem cells. On the other hand, opponents of embryonic stem cell research think that supporters are using two proposed bills in Congress to play party politics. The White House believes that advocates are using this issue as a political football. On the other hand, supporters of increased funding for embryonic stem cell research think that opponents are simply pursuing political gains. They believe that the Bush administration is merely using this issue to curry favor among its base.

##### Abortion Attitudes

I believe that under normal circumstances abortion should be legal until: [1 = the sperm and egg meet (i.e., never), 2 = the cells begin to differentiate, 3 = the fetus's heart beats, 4 = the fetus has brain activity, 5 = the fetus is viable as a life outside the uterus, 6 = the baby is born]

The law should permit abortions in the first trimester of pregnancy

The law should permit abortions in the second trimester of pregnancy

*(continued)*

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## Appendix (continued)

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### Science Attitudes

Science can eventually solve most human health problems.  
I believe the results of research published in scientific and medical journals.

### Support for Stem Cell Research

How strongly do you oppose or support embryonic stem cell research?  
How strongly do you oppose or support federal funding for embryonic stem cell research?  
I support the creation of new stem-cell lines for embryonic stem cell research.

## Study 2: Immigration Study

### Feelings Toward Minorities

How would you feel about these groups gaining more political influence in the U.S.?  
(Hispanic/Latinos, Arab-Americans, Asian-Americans, and African-Americans)

### Attitudes Toward Multiculturalism

Multiculturalism poses a threat to American culture.

### Support for a Restrictive Immigration Policy

Policies toward illegal immigrants should be more restrictive.  
Policies regarding illegal immigration should be made more restrictive.

### Need for Cognition

I really enjoy a task that involves coming up with new solutions to problems.  
I prefer complex problems to simple ones.

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## Notes

1. Some scholars treat these two concepts interchangeably (e.g., Chong & Druckman, 2007). However, Price and Tewksbury (1997) and Higgins (1996), from both of which the idea of framing as applicability effects originated, clearly distinguished the two. Also worthy of note is that applicability is conceptualized to occur before knowledge activation, whereas judged usability intervenes between knowledge activation and knowledge use (Higgins, 1996).

2. For example, the value-framed news story read, "However, Democrats have expressed outrage about Republicans' disregard for basic human rights," whereas the strategically framed story read, "However, Democrats have expressed doubts about the motives underlying the Republican plan."

3. Because the comparisons of the effects of the blocking variables across the frame conditions were not a main focus in the current study, we conducted no formal test of the differences for these blocking variables.

4. We used a one-tailed test for the examination of all directional hypotheses and used two-tailed tests for unplanned difference tests.

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