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Political Expertise and Affect: Effects on News Processing
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What is This?

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Political Expertise and Affect

Effects on News Processing[1]

An experiment was conducted to investigate the various conditions under which political expertise (or prior knowledge in the general political domain) and affect (positive or negative feelings) might interact with each other in shaping the cognitive strategies that people employ in forming reactions to newspaper stories. Two hundred six subjects from a major midwestern university were randomly assigned to a positive affect or a negative affect condition to read an article about either a proposed change in the state of Michigan's student loan program or the proposed deputization of campus police. A thought-listing procedure was employed to analyze subjects' reactions to the articles. In line with expectations, political expertise emerged as an important contributor to analytic processing of the news articles (measured by the generation of total thoughts, issue-relevant thoughts, and arguments). Predicted main effects of affective valence were not observed, but an interaction between expertise and affect was found. Political experts, but not novices, generated more issue-relevant thoughts in the negative affect condition. Implications of these results for political communication research (e.g., campaign effects) are discussed.

In recent years, mass communication researchers have increasingly adopted a cognitive perspective in studying the processes and effects of political information exposure. These research efforts come at a time when there is growing dissatisfaction with older approaches to voter psychology, such as those based on party identification and group norms (Perloff & Kraus, 1985). In place of traditional sociodemographic variables, studies in social cognition, political cognition, and mass communication have focused on *expertise* or prior knowledge as a critical factor in shaping information processing strategies and effects (see Fiske & Kinder, 1981; Lau, 1986; Lau & Sears, 1986).

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Studies of expertise and information processing, however, have largely ignored the potential role of affect. Scholars have tended implicitly to de-emphasize affect in their efforts to demonstrate the utility of information processing models for communication (Sypher & Higgins, 1988). This is so in spite of the fact that researchers have long been concerned with affect or emotion and their use in public discourse, television, newspapers, films, popular humor, and persuasive messages (Donohew, Finn, & Christ, 1987). There is thus considerable interest in—but a lack of knowledge about—the role that affect plays in shaping responses to the mass media.

To address these issues, the present research investigates the ways in which individuals' processing of political information may be jointly influenced by their political expertise and current affective states. In particular, the study examines the various conditions under which individuals' political expertise and the valence of their affective states (i.e., positive or negative feelings) might, independently and in interaction with each other, shape the cognitive strategies involved in processing political news.

Political Expertise and Processing: A Schematic Approach

The concept of expertise has been examined in several decision-making and problem-solving domains, including chess, physics, taxi driving, and medical diagnosis (Krosnick, 1990). Put simply, an expert is a person who is especially good at performance in some domain (Johnson, 1988; Posner, 1988). Thus a chess expert wins lots of games, and an expert taxi driver gets you to your destination as quickly as possible.

In the study of mass politics, a "performance" criterion for expertise is difficult to develop. There is no readily obvious domain of political performance for average citizens, so there is no clear criterion for assessing excellence. Political expertise is associated with numerous factors (Wicks, 1992). Innate intelligence or curiosity about certain people, institutions, themes, or events can all lead to political expertise. The amount of effort devoted to learning about a topic can also contribute. Research on the uses and gratifications of mass media indicates that people choose to attend to certain types of messages (e.g., public affairs programming rather than entertainment) and thus become more proficient with those particular messages (Blumler & Katz, 1974; Rosengren, Wenner, & Palmgreen, 1985).

Most researchers have adopted a view that political expertise is a constellation of qualities (Krosnick, 1990). Political experts are presumed to be keenly interested in political affairs, to expose themselves to lots of political information (both directly through behavioral participation in political

events and indirectly through the mass media), to pay close attention to the political information they encounter, and to reflect on the meaning and implications of that information long after it is acquired. Several studies have suggested that the best operational definition of political expertise is the *amount of factual political knowledge* a person possesses (e.g., Fiske, Lau, & Smith, 1990; Zaller, 1986, 1990). Fiske et al. (1990), for example, compared several predictors of efficient news processing and recall, and found that general knowledge of public affairs emerged as superior to knowledge in a specific topical domain (e.g., economic knowledge), political participation, self-reported media use, and political self-concepts. Price and Zaller (in press) likewise found that general political knowledge proved more effective in predicting news recall—across a wide range of news stories—than education, self-reported media use, and measures of domain-specific interest.

As in information processing research generally, studies investigating differences between political experts and novices in message processing reflect the basic underpinnings of schema theory. A schema is a knowledge structure, based on experience, that organizes people's perceptions of the world (Fiske & Taylor, 1984). Schema theory assumes that people actively construct reality. Once activated, schemata become ongoing information processing routines that allow the perceiver to provide and to achieve meaning and understanding (Markus & Zajonc, 1985). Schema availability and use are both shaped by practice in that domain. Through prolonged practice, experts acquire more and more complexly organized knowledge; hence they are sometimes termed "schematics" (Fiske & Kinder, 1981). The influences of political expertise at the stages of *encoding* and *memory* (storage and retrieval) in news processing are especially relevant to the present study.

The *schematic encoding principle* implies that being schematic (i.e., an expert) on a particular dimension allows a person to filter incoming informa-tion about that dimension (Fiske & Taylor, 1984). This is particularly ger-mane to the encoding of political information. For political novices—maybe the bulk of American citizens—schemata about current political happenings rarely encompass strong feelings and prized concerns (Graber, 1988). Such people do not generally exclude irrelevant information or search out relevant information when processing the news. Active searches for especially rele-vant information come into play only when people care deeply about issues or when self-image protection is involved, namely, when people have relative expertise in the domain of concern. Nimmo (1990) has shown that political experts not only develop selection principles distinct from those of novices but use those principles to choose which of several news sources they are most likely to monitor for political information. Along this line, Sniderman,

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Glasser, and Griffin (1990) contend that people with substantial knowledge of political issues are more easily able to encode and organize new information in terms of concepts they have formed on the basis of this knowledge.

Expertise influences not only encoding but also how people remember (i.e., store and retrieve) information. Social cognition literature has suggested that people remember best those stimulus events that fit their prevailing schemata (Fiske & Taylor, 1991; Markus & Zajonc, 1985). This occurs because well-established schemata bias memory toward consistency with one's prior expectation or judgment. Research on social hypothesis-testing processes has demonstrated that there is a strong preference for seeking and using hypothesis-confirming evidence when testing hypotheses about other people. This is more likely to be true for novices than for experts (Borgida & DeBono, 1989).

Research in political cognition (Fiske, 1986; Fiske, Kinder, & Larter, 1983; Lau, 1986) has also shown that, whereas the general public remembers information that is consistent with their activated schemata—mostly in human-interest, person-related, and empathy categories (Graber, 1988)—and tends to forget schema-inconsistent information, political experts remember schema-inconsistent as well as schema-consistent information. For example, Fiske et al. (1983) examined the recall of political experts and novices who had read an article about the political institutions in a country previously unknown to them. They found that experts recalled more information than did novices. Experts also recalled more information that was inconsistent with their prior expectations. The only type of information not favored by schematic memory is schema-irrelevant information, which has the advantage of neither existing nor newly created linkages in memory.

In sum, expertise helps a person decide which information is relevant. If a message is relevant to existing schemata, encoding and memory depend on its consistency with the activated schemata. Both experts and novices can encode and remember consistent political information, but experts, being more involved or having more complexly organized schemata in the political domain, can also encode and remember inconsistent information. Because novices do not have the cognitive capacity to engage in schematic processing if the political message does not fit their existing political schemata, they tend to rely on peripheral or nonmessage cues (such as a candidate's personality or affective associations) in generating their cognitive responses.

The Role of Affect: A Warmer Approach

The schema-based approach to studying expert-novice differences in information processing has enriched our conceptualization of mass communica-

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tion effects and inspired new lines of research. However, a closer review of the political cognition research (Lau & Erber, 1985) reveals that individuals are generally regarded in most schema-based analyses as rational thinkers. The assumptions made in the schematic processing approach thus reflect a "cold" perspective on cognition research predominant in the 1970s (Garramone, 1992). Other "hot" factors, such as motives, values, or moods, which have to do in various ways with individuals' affective or emotional states, have been largely overlooked. Indeed, the inability of information theories to handle affect or affective states with as much sophistication as they offer for memory and perception has been considered the biggest shortcoming of political cognition studies (Lau & Sears, 1986).

If our principal interests concern people's preferences and evaluations of political information, then affect is probably central. Even when dealing with the "purely" cognitive processes of recognition and categorization, affect may be critical. One's affective orientations may influence the kinds of schemata applied to stimuli, for example, and strong arousal appears to interfere with one's effective employment of complex schemata (Crockett, 1988). If affect forms such a crucial component in social and political settings, it would seem useful to develop a "warmer" (if not entirely hot) approach to the study of political information processing, by including an examination of the roles that affect may play—the ways in which the usual effects of expertise may be mediated, interrupted, and facilitated by affect—in guiding the processing of political information.

Generally, *affect* is a generic term for a whole range of feelings and emotions. *Feelings* include relatively mild subjective reactions that are essentially either pleasant or unpleasant, such as attraction, liking, and disliking. They might also be called *moods* when referring to pervasive, global, generalized affective states that influence seemingly nonspecific affective events. *Emotions*, on the other hand, refer to a more complex assortment of affects than simply good and bad feelings, such as sadness, anger, delight, and serenity. They are thought of as more intense and short term, having physical as well as mental manifestations (Fiske & Taylor, 1991; Isen, 1984).

Most existing research on the functioning of affect has focused on the valence of affective states, namely, positive versus negative affect. Overall, the influences of positive affect on cognitive processes are more pronounced and relatively direct, whereas the influences of negative affect are more complex and harder to predict (Crockett, 1988; Isen, 1984). In a series of studies, Isen and her colleagues (Isen & Diamond, 1989; Isen & Means, 1983) found that positive affect helps maintain a positive state and, further, that

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induced positive affective states promote the use of heuristics to simplify decision making in problem-solving situations. There is also evidence indicating that positive affect is associated with increased sociability and benevolence to both the self and others (Isen, 1984). In further explaining the impact of positive affect on cognition, Isen and Diamond (1989) argue that positive affect may be involved in promoting chunking, or a process similar to chunking, which involves a change in categorization, classification, or grouping of material. People in positive affect conditions are able to see ways in which categories of people might fit into positive superordinate categories. This process is important for social categorization and judgment. People who are feeling happy may include, in positive categories, groups of people not typically included in those categories.

The effects of negative affect on cognition, by comparison, are less consistent. On the one hand, people in negative states may tend to see the negative side of things and remain pessimistic (mood maintenance); on the other hand, they may be stimulated to change or eliminate the unpleasantness (mood repair). These mood-repair attempts may involve engaging in rather positive behavior and thinking (Crockett, 1988; Isen, 1984). As far as the use of analytic processing strategies is concerned, however, it has generally been shown that negative affect increases motivation for analytic processing, as the individual attempts to change or eliminate the source of unpleasantness. First, individuals may be motivated to distract themselves from a negative state by engaging in extensive processing, particularly of pleasant or agreeable information (see Isen, 1984, 1987). Second, if negative affect informs a person of potential problems in the environment, he or she may increase processing to understand and thus gain control over the potentially harmful or threatening event. Schwarz (1990) indicates that negative affective states foster the use of more elaborated, detail-oriented, analytic processing strategies, whereas positive affective states foster the use of less elaborated and heuristic strategies. As individuals in negative affective states are more likely to focus their attention on the specific features of the situation that elicited their feelings, they are less likely to encode incidental information and less likely to get distracted by other tasks (Isen, 1984). According to these motivational explanations, other things being equal, positive affect generally *decreases* systematic processing, whereas negative affect *increases* analytic processing.

Expertise and Affect: Specific Aims of the Research

The present study examines the general proposition that political expertise and affective states, independently and jointly, lead to predictable news

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processing strategies. First, in line with research on the influences of expertise at the encoding and memory stages of information processing, we propose that experts can exclude irrelevant information or search out relevant information when processing the news. Experts also recall more information than novices do, and recall more information that is inconsistent with their prior expectations. Thus we predict:

Hypothesis 1: Given the same valenced affective state, political experts are more likely than political novices to employ more analytic processing strategies in evaluating messages.

Analytic thinking in this context involves the generation of cognitive responses to a news message and, especially, the generation of issue-relevant responses. Analytic thinking further involves consideration of both schema-consistent and schema-inconsistent information and, consequently, the use of reasoned arguments rather than mere evaluations. Experts process messages carefully and ruminate over the positions or views presented in the messages, whereas novices are less inclined to do so. In relation to political information processing, the more complex a person's political schemata are, the more likely he or she will be to employ efficient cognitive strategies in filtering and retrieving information.

Individuals' overall positive or negative affective states may also influence their modes of cognitive processing. In line with the motivational approach to studying affective states, as reviewed above, negative affect is seen to be accompanied by increased readiness to use more effortful and analytic cognitive strategies. Individuals in positive affective states, conversely, are informed that their current environment is pleasant or secure and may thus see little need to engage in cognitive effort. Accordingly, individuals in positive affective states may be more likely to prefer simple over more effortful and analytic strategies. This leads to the second hypothesis:

Hypothesis 2: Given the same extent of political expertise, people experiencing negative affect will use more analytic strategies in processing political information than when experiencing positive affect.

The influence of affect may vary systematically across people, especially between experts and novices. Schwarz's (1990) *informative-functions* hypothesis suggests that individuals base evaluative judgments on the information provided by their affective responses. This seems particularly plausible when little other information is available, when the judgment is overly complex, or when it is too cumbersome to make a judgment on the basis of piecemeal

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information processing. In other words, affective states should serve an informative function for novices, for whom news about the political world will generally cue very little stored knowledge. This logic implies that the impact of an individual's affective state decreases as the availability of competing information, as can be encoded by experts, increases. Similar assumptions can be found in the *sophistication-interaction* hypothesis—the notion that the more ignorant and less sophisticated tend to lean on their emotions, using them as a crutch to figure out, dependably and economically, their preferences on public policies (Sniderman, Brody, & Tetlock, 1991). It has likewise been suggested that experts may be less influenced overall by their affective states (Sniderman et al., 1991) and that people high in cognitive complexity (i.e., experts) experience smaller mood swings and vacillations in self-appraisal following failure or success (Linville, 1982). These lines of research suggest our third hypothesis:

> *Hypothesis 3*: Whereas both political experts and novices can be influenced by the valence of their affective states in processing political messages, political novices are more likely than political experts to be influenced by the valence of their affective states.

Therefore, whereas both experts and novices may engage in more analytic thinking in a negative mood than when in a positive mood, such differences should be more pronounced among novices than among experts.

Method

To test these hypotheses, an experiment was conducted in which the effects of political expertise and affective states on information processing strategies could be directly observed. This was done by manipulating subjects' affective states and then observing subjects' reactions to newspaper stories concerning political topics. The study employed fabricated newspaper articles so that information presented in the articles could be designed to meet the needs of the experiment.

Subjects

The study employed 206 University of Michigan undergraduates as subjects (94 males and 112 females). They were recruited from large lecture classes and were told by the experimenter that the study involved reading a few newspaper articles, recording reactions to the news stories, and indicating attitudes toward some current news events. Each subject was provided with

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two Michigan instant-win lottery tickets as compensation for their voluntary participation.

Design

The experiment consisted of a $2 \times 2 \times 2$ design. The variables were political expertise (novice vs. expert), affective state (positive vs. negative), and issue (student loans vs. campus police). Subjects were distributed as follows: political novice/positive affect (loan issue, $n = 25$; campus police issue, $n = 25$); political expert/positive affect (loan issue, $n = 29$; campus police issue, $n = 25$); political novice/negative affect (loan issue, $n = 22$; campus police issue, $n = 23$); and political expert/negative affect (loan issue, $n = 29$; campus police issue, $n = 28$).

The Experimental Messages

Two issues of relevance to the subject population were selected for use in the experiment: one on student loans and the other on campus deputization. The student loan issue focused on a plan of the Michigan Educational Trust board to abandon a prepaid tuition program (known as the MET program) in favor of a savings-bond program proposed by Governor John Engler. The campus deputization issue concerned a decision by the University of Michigan Board of Regents to establish a campus police force, despite a series of strong student protests on campus.

Initial pretests employing convenience samples of University of Michigan undergraduates were conducted to select issues for the study. Next, pretest subjects were randomly assigned to read draft versions of news articles about either the student loan or campus deputization controversies. Results showed that both issues were of moderate personal importance to the students (M for student loans = 3.60; M for campus deputization = 3.89; $t[52] = -.64$, $p > .50$, both on a scale from $1 = $ *not at all important* to $7 = $ *very important*). Pretest subjects held relatively moderate opinions about both issues (M for student loans = -1.17; M for campus deputization = -1.37; $t[52] = .33$, $p > .10$; both on a scale from $-5 = $ *strongly oppose* to $+5 = $ *strongly favor*). Students reported that they had heard about and had thought somewhat more about the campus police controversy than the student loan issue (on a 0-2 scale, M issue salience for campus deputization = .70; M for student loans = .41; $t[52] = -7.92$, $p < .001$).[2] Pretest subjects assigned to read the campus deputization article were also significantly more certain about their opinions (M for campus deputization = 4.67; M for student loans = 3.80; $t[52] = 1.98$, $p = .05$, both on a scale from $1 = $ *very unsure* to $7 = $ *very sure*).

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In the main study, the news article on student loans began with the explanations of both the new and old student loan programs and then reported the various concerns expressed by local politicians over the education board's decision to abandon the old MET program. The story on campus deputization focused on opinions aired at various public hearings, with some applauding a campus force as responsive to university needs and others saying police were unnecessary and would discriminate against minorities. Both stories presented the pros and cons of the issues in question. They were prepared to look like clippings from the *Ann Arbor News*, a major local newspaper in the Ann Arbor community, to avoid artificiality and to generate natural cognitive responses from the subjects. Despite the fact that the articles were fabricated, students indicated in debriefing that they found them to be quite authentic.

Procedure

The experiment was conducted in the classrooms where subjects were recruited and lasted about 50 min. Subjects completed a three-part questionnaire booklet. The first part of the questionnaire included a general introduction to the experiment, a set of initial news stories as the affect induction (three short stories for the positive affect condition and two longer stories for the negative condition), and checks of the affect manipulation. The two affect conditions were distributed randomly, and the order of the affect-inducing stories in each condition was rotated across subjects. In the second part of the booklet, subjects were asked to read and react to a target newspaper article concerning either a change in Michigan's student loan programs or campus deputization. Again, the two issues were randomly distributed across the questionnaires. After reading the story, subjects were asked to list all thoughts that occurred to them while reading the article, one thought per line. Later, some questionnaire items asked subjects about their general impressions of the news article and their opinions of the issue. Following this set of questions, subjects were asked to complete a third and final part of the questionnaire, including items on general political expertise and background information such as age, sex, academic major, and class level.

Measurement of Independent Variables

POLITICAL EXPERTISE

In line with current research practice in political communication (as noted above), this independent variable was measured by items concerning

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subjects' general level of background political information. In view of the local issues involved, these items tested knowledge of both national and local politics, prominent individuals (e.g., politicians and candidates), groups (e.g., liberals and conservatives), and political parties. Specifically, political expertise was measured by 18 multiple-choice and matching questions concerning which political party controlled the U.S. Senate and the House; identifications of positions held by Yasser Arafat, James Baker, Detroit Mayor Coleman Young, Dick Cheney, Colin Powell, Yitzhak Shamir, Lech Walesa, and Thomas Foley; knowledge of the presidential primaries and candidates' issue stands; and knowledge of current events, such as local-area General Motors plant shutdowns, a Haitian military coup, and the civil war in Yugoslavia. These 18 items were chosen from a larger collection of questions examined in two pretests, and together they proved to be of solid reliability (coefficient α = .82, n = 206). The scale ranged from 0 to 18 (M = 9.31, SD = 4.03). Those who scored at or above the median (9) were classified as political experts, whereas those who scored below the median were categorized as political novices (expert M = 12.43; novice M = 5.65; $t[206]$ = 22.00, p < .001).

VALENCE OF AFFECTIVE STATE

Subjects were randomly assigned to either a positive or a negative affect condition. In each case, they were first presented with a few affect-inducing news stories and were asked to rate their current mood states, *before* exposure to one of the experimentally prepared articles on student loan programs or the campus police debate. The study thus manipulated affect independently of the articles that served as the targets of information processing; this was done purposely to avoid confounding subjects' induced mood states with their attitudinal (like/dislike) reactions to the topics treated in the target articles (i.e., student loan programs or the campus police).

To select stories that would best elicit subjects' positive or negative feelings, multiple news stories were pretested on a separate independent sample of 41 students. Affect-rating scales were adapted from the Mood Adjective Check List (MACL; Nowlis, 1965), a method used widely and effectively in a number of psychological studies to measure moods (see Lorr, 1989, for a review). Following exposure to the affect-inducing articles, pretest subjects were presented with a list of 20 adjectives describing various mood states, each to be rated on a 5-point scale from 1 = *definitely do not feel* to 5 = *definitely feel*. The 10 adjectives used to measure positive affective responses were *amused, at ease, calm, cheerful, content, delighted, happy, pleased, relaxed*, and *satisfied*. The measures of negative affective responses, on the

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other hand, were *angry, ashamed, bored, depressed, embarrassed, fearful, gloomy, miserable, sad,* and *worried.* The positive and negative affect adjectives were mixed together to avoid order effects. Responses were combined and averaged to create separate positive and negative affect indexes, each ranging from 0 to 5.

Generally, the articles used to induce positive affect were human interest in nature, whereas the articles used as negative affect manipulation involved photographs or descriptions of human tragedy. According to the pretest findings, three articles elicited the strongest positive affect: a story about using a state lottery to capture criminals (M for positive affect = 3.56; M for negative affect = 1.37; $t[14]$ = 7.56, p < .001), an article about; a lobster named Oscar, spared by potential diners who then adopted him (M for positive affect = 3.33; M for negative affect = 1.82; $t[15]$ = 4.95, p < .01), and a story about rescuing a child trapped in a 40-quart milk can (M for positive affect = 2.89; M for negative affect = 1.96; $t[15]$ = 3.41, p < .01). These three articles were selected as the positive affect stimuli for the experiment. Two slightly longer articles elicited the strongest negative affect: a story on Gulf War images that included vivid photographs of Iraqi victims (M for positive affect = 1.52; M for negative affect = 3.49; $t[12]$ = –7.52, p < .001) and an article by a survivor of incest who later became a workaholic and alcoholic (M for positive affect = 1.83; M for negative affect = 3.38; $t[10]$ = –4.41, p < .01). These two articles were thus used as negative affect manipulation.

As a manipulation check in the main experiment, subjects were asked to rate their current mood states using the same 20-adjective list, this time employing 9-point scales, ranging from 1 = *definitely do not feel* to 9 = *definitely feel.* Positive and negative affect scales were again created by combining, respectively, ratings for the positive adjectives (coefficient α = .96) and for the negative adjectives (α = .96). The mood manipulation would be considered effective if subjects' affective responses corresponded to the valence of the affective stimuli presented in their assigned conditions.

Measurement of Dependent Variables

The dependent variables measured in the study concerned the extent of analytic thinking evident in subjects' reactions to the assigned news stories. Specifically, the study was interested in *the total number of cognitive responses generated* and two types of analytic strategies: *the generation of issue-relevant thoughts* and *the use of arguments.* The generation of issue-relevant thoughts can be conceptualized as reflecting both the extent to which individuals employ efficient cognitive strategies in filtering relevant

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from irrelevant incoming information and the extent to which they can retrieve relevant prior information from memory. The use of arguments, on the other hand, reflects the extent to which individuals use reasoning to justify or bolster a position, in contrast to the use of thoughts conveying an overall attitude toward the topic in question (i.e., pure evaluations).

All three variables were measured through a thought-listing procedure. After reading the randomly assigned article on either student loans or campus deputization, subjects were asked, on a separate page, to write down whatever thoughts and feelings came to mind while reading the article, including those thoughts and feelings that were not necessarily relevant to the article. They were instructed to write down one thought per line and not to worry about spelling, grammar, punctuation, and the use of complete sentences. Subjects' written responses were then analyzed by two trained coders.

TOTAL NUMBER OF THOUGHTS

The total number of complete and separate thoughts was tallied by the coders. A single sentence could include more than one thought. For example, "The tuition is skyrocketing/ and the [MET] program has the potential to become a huge money loser" was coded as two separate thoughts. Intercoder reliability for the counts of total thoughts was quite high (intercoder agreement = .94; intercoder r = .98). Disagreements were resolved by discussion.

GENERATION OF ISSUE-RELEVANT THOUGHTS

Based on the focus of each complete thought, subjects' cognitive responses to the articles were subsequently coded into over a dozen separate topical categories (more specifically, 10 substantive categories for the student loan issue and 13 for the campus deputization issue).[3] The study hypothesized that more analytic and elaborated processing strategies would involve more thoughts directly relevant to the issue in question, in contrast to those thoughts about various other stimuli or objects mentioned in the article, or to those thoughts having nothing to do with the stimuli in the article. For the student loan issue, issue-relevant thoughts were those referenced in any way to the old (MET) program, the new (savings bond) program, individuals cited in the article, education, tuition, taxpayers, money, or the economy. Thus subjects' cognitive responses such as "Taking burden off taxpayers is a good thing" were coded as issue-relevant thoughts, whereas "I've got a ton of studying to do" were not. The thoughts coded as issue-relevant for the campus

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deputization issue were those categorized as focusing in any way on individuals involved in the deputization hearings, students, campus police, Ann Arbor police, security or crime, money or expenses, minorities, and civil rights. Intercoder reliability for the counts of issue-relevant thoughts was reasonably high (intercoder agreement = .80; intercoder r = .90), and disagreements were resolved by discussion.

USE OF ARGUMENTS

Except for cognitive responses referenced to the issue overall or to respondents' knowledge of the issue in question, subjects' thoughts were each further coded into (a) pure evaluation, (b) argument, and (c) question. The coders then counted the cognitive responses identified as arguments. For example, "The risk is shifted back to the individuals who otherwise can't get an education" (student loan) and "Violence against women should be a main concern" (campus deputization) were each coded as arguments, whereas "MET seems like a good plan" (student loans) and "Politicians stink" (campus deputization) were not. Intercoder reliability for the counts of arguments, although somewhat lower than the other two dependent measures, proved to be adequate (intercoder agreement = .73; intercoder r = .89). Disagreements were again resolved by discussion.

Results

Manipulation Checks

Subjects in the positive affect condition rated their mood as significantly more positive than did subjects in the negative affect condition (M on a 9-point, positive-affect scale for positive condition = 5.67; M for negative condition = 1.84; $t[204]$ = 22.50, p < .001). Conversely, subjects assigned to the negative affect condition saw themselves as significantly more negative than in the positive affect condition (M on a 9-point, negative-affect scale for negative condition = 5.71; M for positive condition = 1.84; $t[204]$ = 23.20, p < .001). An overall affect score, formed by subtracting the negative affect scale from the positive affect scale (higher scores reflect stronger positive affect) also indicated that subjects in the positive affect condition felt more positive than did subjects in the negative affect condition ($t[204]$ = 28.24, p < .001), and a dichotomization of this continuous positive affect index into positive versus negative groups at the center point (5) located all but 5 of the 206

subjects in the desired experimental condition. Overall, then, results suggest that the appropriate mood was successfully induced in each affect condition.

Hypotheses

Because of the conceptual interrelatedness of the three dependent variables, effects of the experimental factors were tested using a 2 (Affect) × 2 (Issue) × 2 (Expertise) multiple analysis of variance (MANOVA). Bartlett's test of sphericity (213.10, $p < .001$) indicated that the dependent variables were indeed significantly related and that the use of MANOVA was appropriate. Separate effects on total thoughts, issue-relevant thoughts, and arguments were examined through inspection of standardized discriminant function coefficients, loadings on discriminant functions, and univariate three-way analyses of variance using the Bonferroni correction to safeguard against Type I error (a univariate significance criterion was set at $\alpha = .05/3 = .016$). Means and standard deviations for all experimental conditions on each of the three dependent variables are presented in the Appendix.

The overall pattern of cognitive responses given to the student loan article and the campus police article was generally uniform. By Wilks's criterion, the combined dependent variables were not significantly affected by issue, $\lambda = .97$, $F(3, 193) = 1.52$, $p > .20$, power = .40, or by any two- or three-way interactions involving issue. Overall, subjects provided an average of 6.08 total thoughts, 3.39 issue-relevant thoughts, and 2.43 thoughts coded as arguments.

As predicted by Hypothesis 1, the combined dependent variables were significantly affected by subjects' political expertise, Wilks's $\lambda = .96$, $F(3, 193) = 2.74$, $p < .05$. The results suggested a moderate association between general political expertise and the combined dependent variables, $\eta^2 = .14$. Discriminant analysis results and univariate tests indicated that the effect was mainly due to differences in the total number of thoughts, univariate $F(1, 195) = 6.05$, $p < .016$, $\eta^2 = .03$, and in the number of arguments, univariate $F(1, 195) = 6.05$, $p < .016$, $\eta^2 = .03$. Expert subjects produced more thoughts ($M = 6.53$) than did political novices ($M = 5.55$), as well as a higher number of arguments (expert $M = 2.78$; novice $M = 2.02$).

On the other hand, the predicted increase in systematic processing due to the affect manipulation (Hypothesis 2) was not obtained. Affect was not significantly related to the combined dependent variables, Wilks's $\lambda = .98$, $F(3, 193) = 1.38$, $p > .25$, power = .36, nor were any significant univariate effects observed.
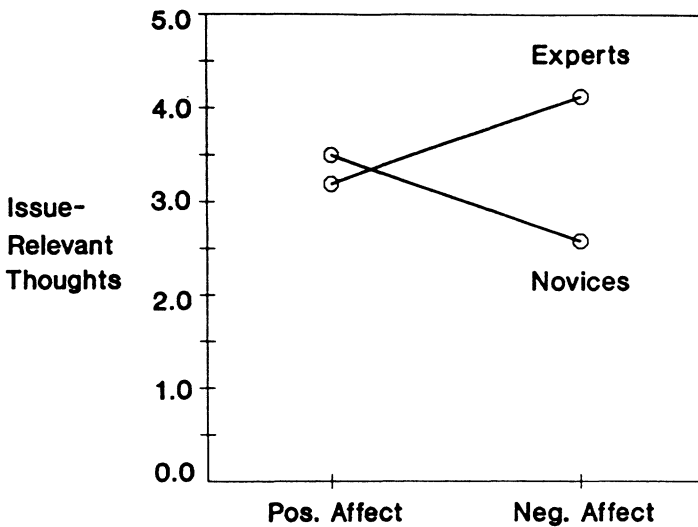
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Figure 1: Issue-relevant thoughts by expertise and affect condition.

Hypothesis 3 predicted that novices would be more heavily influenced by the valence of their affective states, that is, that larger increases in analytic processing due to the affect manipulation would be observed for novices than for experts. The implication is that differences between experts and novices in analytic processing would be mitigated in the negative affect condition, owing to the larger increases among novices. In line with this expectation, the affect-by-expertise interaction produced a marginally significant multivariate effect, Wilks's $\lambda = .97$, $F(3, 193) = 2.19$, $p < .10$, $\eta^2 = .13$, owing to a significant univariate effect on the number of relevant thoughts, univariate $F(1, 195) = 6.40$, $p < .016$, $\eta^2 = .03$. Yet a plot of cell means for issue-relevant thoughts (see Figure 1) illustrates that the interaction differed in important respects from that originally hypothesized. Tukey pairwise comparisons indicated that experts ($M = 4.12$) differed from novices ($M = 2.58$) only in the *negative* affect condition.

Discussion

This study began with the idea that individuals' processing of political news would be jointly influenced by levels of preexisting political knowledge and current affective states. An integrated model was proposed that sought to

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predict the extent of individuals' analytic processing of political messages, built on various combinations of political expertise and affective states, and an experiment designed to test these predictions was conducted. To conclude, we briefly recapitulate the main experimental findings in light of initial expectations, consider various limitations of the experimental investigation, and discuss several implications of the results.

Support for the Integrated Model

As expected, political expertise emerged as a significant predictor of the extent of subjects' analytic processing. Results indicate that, in processing the news articles, political experts produced a greater number of thoughts and a larger share of arguments than did their novice counterparts.

The predicted main effect of affective state on analytic processing, however, was not supported. The failure to find support for the hypothesized main effect of affect on analytic processing can be attributed to at least two possibilities. The first is that subjects' positive or negative affect induced by the manipulation may have been too *transient* to influence subjects' processing of the subsequent news article. Even if subjects felt positive or negative affect after reading the affect-inducing stories, as our manipulation checks confirmed, the intensity of their affective states may have dissipated rapidly while they read the subsequent student loan or campus deputization article (see Greenberg & Forger, 1988).[4]

More substantively, the weak main effects of affective states observed on analytic processing give cause to examine the potential effects of various *specific* types of affect, particularly negative affect. Recent research (e.g., Shaver, Schwartz, Kirson, & O'Connor, 1987; Watson & Clark, 1992; Watson & Tellegen, 1985) suggests that affect may be organized in a hierarchical fashion, with a distinction between positive and negative at the most abstract and general level, and more distinctive and concrete emotions (such as joy, surprise, anger, sadness, or fear) at subordinate levels. The lower level reflects the specific *content* of the mood descriptors, whereas the upper level—as investigated here—reflects their *valence*. Furthermore, it can be argued that there is more differentiation among negative affective states than among positive states. Higgins (1987) distinguishes between *agitated* and *dejected* negative affect. Agitated states such as fear, threat, or anger should be associated with a motivation to avoid negative outcomes, whereas dejected states like sadness or disappointment should be associated with motivation to approach positive outcomes. Approach and avoid situations are characterized by a basic asymmetry in the amount of analytic reasoning they

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require. When we want to obtain a certain positive outcome, it is usually sufficient to determine *one* of the possible ways of obtaining it; to avoid a certain outcome, on the other hand, we need to determine *all* possible causes of that outcome. Following this reasoning, we can predict that agitated negative states are more likely to trigger an elaborated and analytic processing style, as suggested by Schwarz (1990), than are dejected negative states (Fiske & Taylor, 1991; Sullivan & Conway, 1989). Further refinement of lower-level affective measurements, then, may be necessary.

Perhaps the most interesting finding was the *interaction* obtained between political expertise and affective state. This result suggests the need for integrating both factors in models of political information processing. Overall, however, the data do not support a view of political novices as being more heavily influenced than experts by their affective states. Were this the case, we should have observed especially pronounced increases in analytic processing among novices in the negative affect condition, mitigating differences between experts and novices. Yet expert subjects in the experiment clearly engaged in more analytic processing in the negative affect condition than did their novice counterparts.

Why would negative affect heighten rather than reduce differences between experts and novices? It may be that negative affect can be arousing and stimulate thinking among those who are able to integrate and organize information (i.e., political experts) yet have no comparable effect on others who are less capable (i.e., novices). It might also have been the case that experts were more motivated to process the news stories, both the ones intended to manipulate affect and the stimulus article intended to elicit cognitive responses. A number of factors such as personal relevance and the need for cognition—a general tendency to engage in and enjoy thinking—have been shown experimentally to increase individuals' cognitive elaboration of messages (Petty & Cacioppo, 1986). Although there was no direct measure of subjects' motivation to process the message content in the present study, results did reveal modest, but significant, positive correlations between subjects' political expertise and perceptions of the issues' personal importance ($r = .16$, $p < .05$ for both the campus deputization and student loan conditions). If experts were more motivated to process news stories in general, they could have been more involved in reading the affect-inducing stories and thus more likely than political novices to have been influenced by them.[5]

It may even be possible, contrary to initial expectations, that negative affect *inhibits* analytic processing among novices. In other words, affect may

operate differently on different subgroups. Novices' affective reactions to the negative stimulus may have diverted their cognitive resources in processing the subsequent news story. Experts, with more complex and better organized schema structures, could have drawn on greater cognitive capacities, helping to keep their affective reactions in check. Zillmann's (1988) excitation transfer theory (see also Fiske & Taylor, 1984), although mainly applied in research on sexual or romantic attraction and aggression, seems applicable in this regard. Zillmann argues that excitation can transfer from one source of emotion to another, and a number of studies on affective reactions to television news have shown that news stories immediately following affect-inducing ones are more poorly recalled than others (Mundorf & Zillmann, 1991). It can be argued that, if the negative affect manipulation stories had similar effects here, they might have been more pronounced in diverting novices' than experts' resources for processing the stories.

These matters remain speculative at this point, because it is unclear from the present results whether negative affect increased the production of issue-relevant thoughts among experts, reduced the volume of issue-relevant thoughts among novices, or indeed whether both processes are involved to some extent. It is also noteworthy that the interaction, although discernible as a pattern across all three dependent variables (see Appendix), emerged as significant only in the production of issue-relevant thoughts. Perhaps the primary impact of negative affect—on experts—is not so much to increase the volume of thinking (in terms of total thoughts) or to alter the general quality of thinking (in terms of whether it is argument based or purely evaluative) but, instead, to better focus thinking on the problem at hand (viz., to make thinking more issue-relevant). This notion would be in general accord with Isen's (1984) argument that people in negative affective states are less likely to encode incidental information and less likely to become distracted.

Thus the study leaves us with some important questions for further research, which might do well to incorporate, for comparative purposes, different operational measures of analytic thinking and alternative methods of affect induction. Generally, the experimental nature of the study allowed greater precision in observing independent variables, in assessing their effects, and in eliminating or minimizing the intrusiveness of extraneous variables (Aronson, Brewer, & Carlsmith, 1985). However, the experiment also created a very artificial setting, in that subjects were asked to read news articles in a group setting and to write down their thoughts. More naturalistic settings might be located for such research in the future, but unfortunately, recording subjects' cognitive responses is almost unavoidably intrusive.

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Like many psychological experiments, the present study used college undergraduates as subjects. Although care was taken to select issues that were "real" to the particular subject population, the homogeneity and peculiarity of that population is a clear limitation. These subjects were young (M age = 19.14), mostly White (79.4%), mainly from the middle or upper-middle class, and may have tended to think about political issues in similar ways.

Finally, the experiment examined only two issues that, although of relevance to our selected subject pool, are by no means representative of most political news. Generalizations from these findings to "typical" public issues are thus questionable. Future research could select issues that vary along several dimensions, such as national versus international news, economic versus noneconomic news, standard political news versus more "human interest" stories, and the like, to better learn how differences in the issues themselves affect audience processing.

The present study has important implications for media research. The suggestion that affective states differentially affect political experts and novices—with negative affect inducing more analytic processing among experts but perhaps even lowering the extent of analytic processing among novices—has both theoretical and practical implications for campaign practices. There has been growing reliance in political advertisements, for example, on "image" appeals that depend heavily on affect-laden symbols (Kern, 1989) or on negative attacks (Richards & Caywood, 1991). Some research has shown that negative political advertisements do trigger affective responses and that audience reactions are characterized by less cognitive activity and depth of processing (Burns & Bieser, 1973; Geiger & Reeves, 1991; Greenwald & Leavitt, 1985). Yet other studies have demonstrated that negative political advertisements are better *remembered* than positive ones (Kern, 1989; Newhagen, 1992; Shapiro & Rieger, 1992). Although a few studies have revealed that messages with negative emotion elicit more attention (e.g., Reeves, Newhagen, Maibach, Basil, & Kurz, 1989) and greater arousal (e.g., Lang, 1985) and thus enhance recall, no satisfactory efforts have been made to disentangle individual differences in viewers' cognitive activity when processing negative advertisements. Following the outlines of the present study, we could argue that the negative affect elicited by advertisements induces at least some viewers—namely, political experts—to engage in more elaborated and analytic processing. But negative affect may have quite different cognitive processing outcomes among novices. It could be the case that negative advertisements encourage less knowledgeable people to think about campaigns less analytically, even while encouraging more knowledgeable people to react more analytically.

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Overall, whereas political communication researchers have come a long way in addressing the cognitive mechanisms behind mass media processes and effects, there is still a long road to travel. Along the way, individual differences in level of expertise, as well as more transitory affective influences, should not be overlooked. Our discussion here has suggested that future research should aim at sorting out the conditions under which affect and expertise interact in shaping cognitive responses to the news, as well as the direction of that interaction (i.e., whether it is experts or novices who are the most susceptible to affective influences). Studies along these lines should provide new theoretical insights and, one hopes, a better and more precise understanding of political information processing.

Appendix
Means and Standard Deviations Across Experimental Conditions

	Student loan issue		Campus police issue	
	Positive affect	Negative affect	Positive affect	Negative affect
Total thoughts				
Novices	5.60	5.67	5.76	5.14
	(2.94)	(2.45)	(2.15)	(2.12)
Experts	7.10	7.10	5.62	6.11
	(2.72)	(3.37)	(2.39)	(3.24)
Issue-relevant thoughts				
Novices	3.80	2.86	3.20	2.30
	(2.58)	(2.21)	(2.39)	(2.23)
Experts	3.55	4.55	2.76	3.68
	(2.79)	(3.18)	(2.12)	(3.14)
Arguments				
Novices	1.88	2.18	2.24	1.78
	(1.27)	(2.56)	(2.22)	(1.65)
Experts	2.35	3.69	2.32	2.71
	(2.14)	(2.07)	(1.89)	(2.62)

Note. Total $N = 206$. Standard deviations shown in parentheses.

Notes

1. This study was partially funded by a dissertation grant to the first author from the Rackham School of Graduate Studies at the University of Michigan.

2. Issue salience was measured by combining two questions concerning the issues: (a) "Have you read, seen or heard of any news stories about the issue in the past three months?" ($0 = no$, $1 = yes$) and (b) "If yes, how much have you thought about this issue?" (from $1 = not at all$ to $7 = very much$; recoded into $0 = little$ to $1 = a lot$, with a median split at 4).

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3. The complete coding scheme is available from the first author.

4. An investigation of experimental results suggests that the initial differences created by the affect manipulation did indeed dissipate. Later in the experiment, following the full thought-listing procedure, subjects were again administered the MACL and a direct measure of their general feelings. By this time, those measures no longer reflected significant differences between affect conditions.

5. To test this possibility, a two-way (expertise by affect condition) analysis of variance was conducted on subjects' overall affect scores (computed by subtracting their negative affect scores from their positive affect scores, with higher scores indicating more positive feelings). Although there was no significant interaction between expertise and affect condition, a comparison of the cell means shows that general political experts did feel less positive ($M = -1.36$) than their novice counterparts ($M = 3.39$). This was true in both the positive affect condition (expert $M = 30.48$; novice $M = 33.12$) and in the negative condition (expert $M = -31.53$; novice $M = -30.39$).

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