ANXIETY, ENTHUSIASM, AND THE VOTE: THE EMOTIONAL UNDERPINNINGS OF LEARNING AND INVOLVEMENT DURING PRESIDENTIAL CAMPAIGNS

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By incorporating emotionality, we propose to enrich information-processing models of citizens' behavior during election campaigns. We demonstrate that two distinct dynamic emotional responses play influential roles during election campaigns: anxiety and enthusiasm. Anxiety, responding to threat and novelty, stimulates attention toward the campaign and political learning and discourages reliance on habitual cues for voting. Enthusiasm powerfully influences candidate preferences and stimulates interest and involvement in the campaign. The findings support a theoretical perspective that regards cognitive and emotional processes as mutually engaged and mutually supportive rather than as antagonistic. We suggest that the democratic process may not be undermined by emotionality as is generally presupposed. Instead, we believe that people use emotions as tools for efficient information processing and thus enhance their abilities to engage in meaningful political deliberation.

> Fear is associated with the expectation that something destructive will happen to us. . . . People do not believe this when they are, or think they are, in the midst of great prosperity, and are in consequence insolent, contemptuous, and reckless . . . nor yet when they have experienced every kind of horror already and have grown callous about the future [for] there must be some faint expectation of escape.
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> . . . Fear sets us thinking what can be done, which of course nobody does when things are hopeless. Consequently, when it is advisable that the audience should be frightened, the orator must make them feel that they are really in danger. —Aristotle, *Rhetoric* 2.5.1383

We would like to suggest that emotion is a catalyst for political learning. In particular, the analyses we shall present argue that threat powerfully motivates citizens to learn about politics. On the face of it, our proposition makes too much sense to ignore. Generally inattentive to political matters, citizens may require sharp notice before they become motivated to learn anything new. And at least at the intuitive level, threat seems as good a spur to action as any. In addition, we suggest that the ability of political leaders to generate enthusiasm stimulates political involvement. This second claim has a long-standing and long recognized status (e.g., Schattschneider 1960). More deeply, we believe that a mounting body of evidence in neurophysiology, psychology, and political science points toward the distinctive roles that different emotions play in stimulating political attentiveness.[1] We offer a view that shows how emotionality aids, rather than disrupts, political reasoning and enhances, rather than diminishes, the quality of democratic life.

We shall report a series of empirical tests that establish the importance of anxiety and enthusiasm for political learning and involvement, respectively. First, we demonstrate that fear (anxiety) and enthusiasm are distinctive emotional responses to political candidates and thereby eliminate a simple "valence" view of emotions. Second, we observe that people's anxiety and enthusiasm varies with political events and is not a permanent feature of individual personalities. Third, we consider evidence that anxiety and enthusiasm play distinctive parts in the voting decision. Fourth, we show explicitly that anxiety, rather than enthusiasm, moves people to learn policy-related information about candidates. More generally, we argue that anxiety works cooperatively with learning to shift attention to political matters and to diminish reliance on habit in voting decisions. Finally, in a parallel analysis, we show that enthusiasm, rather than anxiety, has a distinct effect on political involvement.

THEORETICAL BACKGROUND

The idea of threat as an attention-getting device makes common sense. Hit it over the head with a two-by-four and you can get the attention of even a mule. Nothing focuses the mind so well as the prospect of one's own hanging. And so on.

Anxiety also occupies a prominent place in the contemporary psychology of emotions. Over the past decade, psychologists have developed a two-dimensional typology of emotional response that clearly distinguishes anxiety from such emotions as depression (e.g., Ax 1953; Diener and Emmons 1985; Plutchik 1980; Russell 1980; Tellegen 1985; Watson and Tellegen 1985; Zevon and Tellegen 1982). At the same time, the two-dimensional character of emotional response has proven a powerful schema for the analysis of citizen response to political candidates

(Abelson et al. 1982; Marcus 1988b; Masters and Sullivan 1989; Sullivan and Masters 1988).

Parallel evidence lies in current neurophysiology. It is now widely understood that the human brain's limbic system has two subsystems, each of which generates distinctive emotional responses (Eccles 1989; Fonberg 1986; Gray 1981, 1987a, 1987b). One subsystem generates emotions that fall in the class of excitement, elation, and enthusiasm; the other subsystem generates emotions that fall in the class of anxiety, stress, and fear. The combined outputs of these systems generate the mood state (forming what is most often described as a *circumplex*). We have elsewhere described more fully the circumplex model and the supporting literature in psychology (Marcus 1991; Marcus and Rahn 1990). It is important to emphasize that this model describes mood—and changes in mood—as two-dimensional. Mood states are an *amalgam* formed by two distinct physiologically based systems of arousal, each of which influences specific gradations of mood that we readily recognize and to which we assign everyday labels (Storm and Storm 1987).[2]

Especially intriguing is the neurophysiological work on the strategic functions played by distinct emotional responses. Each of the two systems—that of anxiety and that of enthusiasm—appears linked to behaviorally different sorts of psychic orientation.

Consider first the threat-attendant system that generates moods ranging from safety to anxiety. Feeling calm, placid, and secure indicates the absence of threat; feeling apprehensive, fearful, or in dread indicates the presence of threat. According to Gray's (1987b) model of anxiety, this system operates to interrupt ongoing activity. It does not control subsequent behavior; rather, it arrests ongoing activity and enables other control systems—cognitive and emotional—to respond (cf. Simon 1967). More specifically, the *behavioral inhibition system* continually matches incoming sensory stimuli against contemporary plans and expectations. As long as the comparisons continue to confirm the safety of the environment, moods of calmness and safety prevail and ongoing actions are left undisturbed. However, if a "mismatch" occurs, then ongoing activity is inhibited, attention is shifted toward the intrusive source, and increased arousal occurs. Put more plainly, the appearance of a novel or threatening intrusion causes us to stop, look, listen, and get ready for action.

Anxiety, as we use the term, is not the sort of primitive emotion that underlies the fight/flight system (Gray 1987b).[3] In the realm of electoral politics, candidates and parties may anger, disgust, and threaten fundamental values and beliefs of voters. Yet they do not present physical dangers that engage the instinctive, reptile-brain-centered responses that operate independent of cognition. Instead, these threats endanger symbolic worlds, environs of values and beliefs, the stuff of contemporary mass politics (Edelman 1964). Thus, the emotional responses that we label "anxiety" reflect mechanisms that already join cognitions with emotions. Indeed, the two emotionality systems are cognitive systems that make apprehensions manifest as feelings.[4]

Experiments in cognitive psychology demonstrate that negative events increase attention and that emotional reactions are crucial to the stimulation of attention (Derryberry 1991; Pratto and John 1991). Thus, current work in psychology and in neurophysiology supports a theoretical view about how people come to learn about politics: they abandon complacency and start to pay attention when the world signals that something is not right.

The second class of emotional arousal monitors current behavior. This system generates moods of enthusiasm or elation as our personal tasks and social activity succeed and generates moods of melancholy or depression as we experience failure. The *behavioral approach system* provides active feedback of our ongoing behavior and marshals the physical and mental resources necessary for success. These moods are essential for the proper performance of learned behavior. The variance in moods generated by the behavioral approach system provides an important marker for the strengthening or wavering of motivation. Thus, for politics, we ought to find that variations in enthusiasm ought to predict variations in political involvement. More precisely, during political campaigns, candidates must generate enthusiasm for themselves among voters in order to gain their support and to create active interest in the election. When voters respond to a candidate with enthusiasm, they are not merely evincing passive sympathetic reactions but sharing convictions and commitment to common endeavors. Rather than stopping, looking, and listening, enthusiasts throw themselves into the cause.

During the past two decades, political science, as well as psychology, has concentrated on matters of cognition. We have studied opinions, beliefs, and values and refined concepts such as ideology, belief system, and schema. The basic presumption has been that understanding what people know and how they come to know it will explain what people do. To be fair, this sustained effort has produced a substantial increase in our fundamental understanding about political cognition. Yet the returns from further elaboration of the information-processing model appear to be diminishing (Kuklinski, Luskin, and Bolland 1991; Markus 1986). To move forward, we need to extend the information-processing model beyond the contemporary restriction to cognition. Thus, we turn to matters of emotion—in particular, the roles of anxiety and enthusiasm.

We suggest that people rely on their feelings to provide them with important strategic information. More than coloring cognitions with values, changes in mood constitute a critical part of information-processing mechanisms (Cacioppo et al. 1986). We aim to demonstrate that this particular view (which emphasizes the role of *anxiety* in information processing) uniquely contributes to our understanding of political matters. We shall develop and test hypotheses about political information processing that depend crucially on emotional response.

TWO TYPES OF EMOTIONAL RESPONSE

The empirical work in both mood psychology and neurophysiology indicates that we should expect two types of emotional response, which we call "anxiety" and "enthusiasm." Our first empirical steps show that political candidates elicit these two sorts of responses in the mass public. Here we extend work already done (Abelson et al. 1982; Marcus 1988b) by adding two new twists. First, we observe that the "dual-system" view of emotional response stands up under different measurement techniques. In so doing, we eliminate the alternative "valence" hypothesis about the structure of emotional response. Second, we observe that this dual system is not stable but instead reacts to the psychic pressure of the campaign. Thus we support an understanding that emotional responses are functionally focused, with one system alert to intrusive signals of novelty and threat and the other system monitoring the success of current behavior.

In order to test the dimensionality and the dynamics of emotional response, we examine two data sets. The first is the familiar American National Election Studies (ANES) panel of 1980, with interviews taken in January, June, and October. The second, a commercial survey, represents the views of Missourians during the 1988 presidential campaign in a series of three cross sections taken during June, July, and October. We are fortunate in that the ANES staff included seven emotional response items in the 1980 panel, eliciting a variety of emotional responses. In each wave, respondents were asked: "I am going to name a political figure, and I want you to tell me whether that person, or something he has done has made you have certain feelings like "anger" or "pride," or others I will mention. Think about Jimmy Carter. Now, has Carter—because of the kind of person he is, or because of something he has done—ever made you feel: angry?" The respondent was then asked whether Carter had made him or her feel "hopeful," "afraid of him," "proud," "disgusted," "sympathetic toward him," and "uneasy." The same sequence was repeated for Reagan (and then other candidates). While "anxiety" is not included as one of the response items, we expect that the terms *afraid, uneasy, anger* and *disgust* will serve as appropriate markers. Similarly, though "enthusiasm" is not included, we expect that the terms *proud, hope,* and *sympathy* will be appropriate markers for this dimension.

While the seven items were not explicitly designed to distinguish anxiety from enthusiasm, they represent the data base for previous work on dimensionality (see Abelson et al. 1982; Kinder et al. 1980; Marcus, MacKuen, and Glassberg 1989), and they surely approximate our intent.

We begin our work by examining how people reacted to the candidates. If our dual-system understanding of emotional response is correct, then we should see some evidence of the candidates' stimulating a *combination* of emotional responses. On the other hand, if the conventional "valence" understanding is correct, then the candidates should produce a single emotional response (like vs. dislike). Thus, we want to see if Carter and Reagan got people to experience (1) a *combination* of enthusiasm and anxiety or (2) a sense of enthusiasm as *opposed* to anxiety.

A factor analysis of the seven items moves us forward in two ways. First, it permits us to see whether the enthusiasm items hang together and the anxiety items hang together. This is a measurement issue, a matter of fundamental importance. Second, the factor analysis provides a weak test of the valence versus dual-system view of emotional response. The valence model predicts that the enthusiasm and anxiety items will line up in polar opposites; the dual-system model predicts that enthusiasm and anxiety need not be—and are unlikely to be—polar opposites.

A straightforward factor analysis of the seven items (here from the January reading, i.e., before the campaign began) suggests the plausibility of a two-dimensional view. Figure 1 presents the factor space. The data clearly sustain our measurement requirement that the enthusiasm items and the anxiety items separate into distinctive clusters. Further, the pattern clearly defeats the valence theoretical view: the enthusiasm and anxiety clusters do not line up as polar opposites.

Yet the nature of the 1980 ANES survey questions does not allow us to eliminate an alternative understanding. The data could still prove consistent with the valence model under a subtle but plausible interpretation. It is possible that individuals respond in conventional valence terms (positive opposed to negative) while the second dimension represents the intensity of the emotional response (see Larsen, Diener, and Cropanzano 1987; MacKuen 1987; Russell 1980).

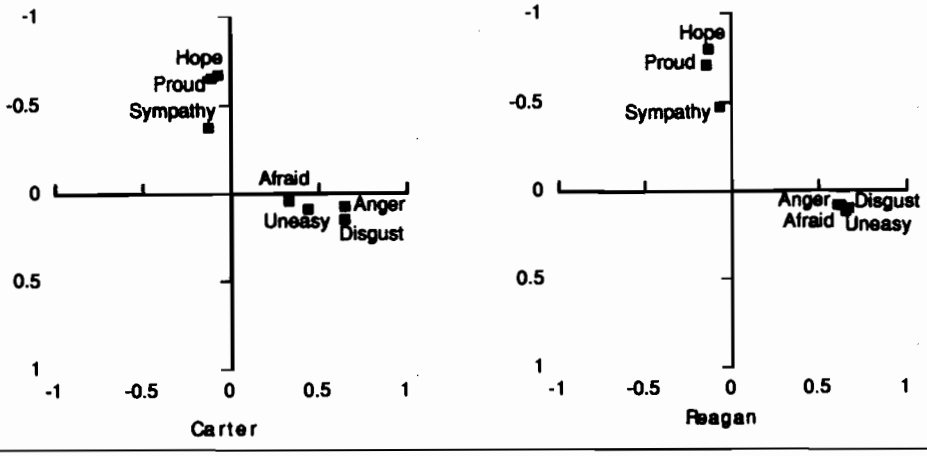
In order to bring evidence to bear on this matter, we designed a special-purpose question wording to tap each of the two dimensions. We chose appropriate word markers to elicit responses most closely associated with each of the two dimensions (Watson, Clark, and Tellegen 1988). Importantly, we ensure that a respondent can report (1) an absence of emotional response toward a candidate on one or both dimensions of emotionality and (2) intermediate degrees of response, for example, a sense that the candidate was somewhat (or very) calming or boring.[5]

We presented the respondent with a modified feeling thermometer anchored by pairs of words connoting anxiety versus safety or, alternatively, enthusiasm versus depression. In order to obtain a minimal validation test, we chose two pairs for each dimension. The enthusiasm pairs were (*enthusiastic* vs. *unenthusiastic*) and (*interested* vs. *indifferent*) and the anxiety pairs were (*upset* vs. *comfortable*) and (*anxious* vs. *safe*). For an enthusiasm example, consider the following:

> When we talk to people about the major Presidential candidates, they use different words to describe how they feel about them. For both Vice President Bush and Governor Dukakis, I'd like to read you some pairs of

FIGURE 1

Factor Space of Seven Affect Terms Used To Map Emotional Responses to the 1980 Presidential Candidates



Source: 1980 ANES data.
Note: The figures represent a varimax rotation of a principal factor solution for the correlation matrix among the seven items for each candidate. The dimensionality of a factor space is not, of course, a simple statistical inference. Here, it appears that two dimensions capture the bulk of the common variance. The eigenvalues for Carter are 1.48, .74, and .14. For Reagan, the eigenvalues are 2.07, 1.03, and .35.

words. For each pair, let's use one [1] for the lowest possible rating and 100 as the highest possible rating.

Let's start with Vice President Bush. Would you say you feel "unenthusiastic" or "enthusiastic" about him? One [1] would be the most unenthusiastic rating and 100 would be the most enthusiastic rating.

We then piggybacked our emotion-thermometer items onto a commercial poll in the state of Missouri during three periods of the 1988 presidential campaign. The first wave, in June, followed the Missouri primary by three months and represents a period of relative calm in the local environment. The second wave, in July, immediately followed the Democratic National Convention and represents the high point for the Dukakis campaign. Finally, the third wave, in late October, measures emotional response at the end of the national campaign.[6]

A similar factor analysis (here for the relatively quiet June period) of the four new items produces Figure 2. Note that the two item pairs fall neatly into two distinct clusters: anxiety and enthusiasm.[7] Further, the distinctiveness of the emotions is apparent. Were anxiety and enthusiasm antipodes, the four items would line up along one dimension, with *enthusiasm* and *interest* at one end and *anxious* and *upset* at the other end. This is obviously not so since the enthusiastic–unenthusiastic and interested–indifferent ratings are nearly orthogonal to the upset–comfortable and anxious–safe ratings. Thus in these new measures, the enthusiasm and anxiety measures are not mere opposites, as the valence view of emotional response would predict; instead, they appear to be separate entities, as the dual-system view expects.

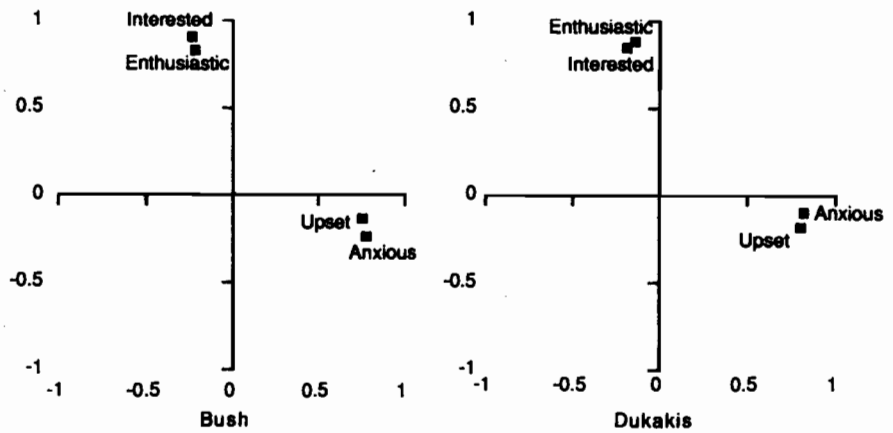
In the end, the factor-structural evidence rejects the hypothesis of a single valence dimension and instead supports the current view that anxiety and enthusiasm are distinctive emotional responses. Yet this evidence should not persuade. So far, we observe only static correlation, a matter of *which* emotional responses go together, rather than evidence of theoretical function. More persuasive evidence would require that we demonstrate that each dimension of emotional arousal has systematic and distinct behavioral consequences congruent with the dual-system theory. That requires that we show that one distinct behavior, learning, is influenced by changes over time in moods of anxiety and that another distinct behavior, political involvement in the campaign, is influenced by changes over time in moods of enthusiasm. We turn to the dynamic relationships between political events, mood responses, political learning, and political involvement.

THE DYNAMICS OF EMOTIONAL RESPONSE

People's emotional responses react to the ongoing campaign. As the winds of the campaign shift one way and the next, so do emotional responses. The evidence on dynamics is crucial for testing the validity of our theoretical view. We posit that emotions enhance people's ability to interact with the environment. To be effective, these emotions cannot be permanent features of an individual's personality or of a candidate's image. Only when emotions reliably react to changes in the informational environment (i.e., to campaign news) can they encourage citizens to become engaged with their favorite candidate's prospects or, more interestingly, interrupt citizens'

FIGURE 2

Factor Space of Four Affect Terms Used To Map Emotional Response to the 1988 Presidential Candidates



Source: 1988 Missouri Data.
Note: The figures represent a varimax rotation of a principal factor solution for the correlation matrix among the four items for each candidate. Again, it appears that two dimensions capture the bulk of the common variance. The eigenvalues for Bush are 2.09, .74, and .04. For Dukakis, the eigenvalues are 1.96, .94, and .02.

ordinary political activity and spur information processing.

That people react emotionally to the campaign is easily shown. Here we create simple scales of anxiety and enthusiasm by taking each individual's responses to the relevant items and norming to a zero–one interval.[8]

Table 1 shows how the public's emotional reactions reflected the events of the 1980 and 1988 campaigns. Each entry is the amount of anxiety or enthusiasm that each candidate (the column heads) elicited from the public. For example, in January 1980, about 40% of the public volunteered terms such as *uneasy* or *disgusted* to describe their reactions to Carter. Following severe failures in both economic and foreign policy (a spectacular inflation scare, rising unemployment, the enduring hostage crisis), this portion climbed to 53% by June and maintained that level for October. Reagan avoided such reactions through June and only began to generate uneasiness when brought under attack during the fall campaign. We observe a similarly transparent pattern in 1988: the July survey, taken directly after the Democratic National Convention, shows a high level of anxiety about Bush. By October the anxiety about Bush has receded, while the survey reveals the public's disquietude about Dukakis after that fall's pointedly "negative" campaign.[9]

None of this is entirely remarkable by itself. Instead, it demonstrates that a sense of anxiety is not a permanent feature of the political landscape but a dynamic one, closely linked to prominent external events.[10] It is, however, weak evidence at best; it merely indicates that the two emotional systems operate independently. We next turn to more crucial and demanding tests.

TABLE 1

Aggregated Means of Emotional Response over the 1980 Presidential Campaigns

TIME OF SURVEY	ENTHUSIASM	ANXIETY	ENTHUSIASM	ANXIETY
1980 Presidential Campaign[a]	Carter		Reagan	
January	.65	.40	.29	.20
June	.58	.53	.38	.25
October	.52	.50	.39	.39
1988 Presidential Campaign[b]	Bush		Dukakis	
June	.40	.52	.49	.48
July	.27	.55	.53	.45
October	.50	.43	.42	.56

[a]*Source*: 1980 ANES.
[b]*Source*: 1988 Missouri data.

TABLE 2

Estimating Presidential Preference 1988 during Three Waves: Multivariate Model

INDEPENDENT VARIABLES	REGRESSION COEFFICIENTS AND STANDARD ERRORS		
	JUNE	JULY	OCTOBER
Comparative enthusiasm	1.16*	1.04*	1.07*
	(.10)	(.09)	(.10)
Comparative anxiety	−.00	−.10	−.05
	(.10)	(.09)	(.09)
Partisanship	.35*	.31*	.35*
	(.07)	(.06)	(.08)
Constant	−.29*	−.15	−.26*
	(.09)	(.08)	(.09)
Number of cases	253	247	246
Adjusted R^2	.59	.68	.64
Root Mean Square Error	.29	.25	.28

Source: 1988 Missouri Data.
Note: Voting preference indicates Dukakis or Bush supporters (scored 1 and 0), "leaners" (.75 or .25), and undecided (.50). All variables are scored to a common range of 0–1. (See Appendix.) The entries are unstandardized regression coefficients with standard errors in parentheses.
*$p \leq .05$, two-tailed test.

EMOTIONAL RESPONSE AND THE VOTING DECISION

Understanding that anxiety and enthusiasm represent structurally and dynamically distinctive emotional responses carries us only part way. We shall show that anxiety and enthusiasm play importantly different roles in the voting decision. In particular, the data indicate that enthusiasm directly affects voting preference (reflecting something very close to the voting decision itself), while anxiety has practically no direct impact on choice. Equally important for our point of view, anxiety appears to give voters pause—to get voters to base their decision on candidate characteristics or campaign information rather than merely stick with their "standing choice."

Consider first the relative power of enthusiasm and anxiety on voting preferences. The standard "valence" view of emotion would predict that emotions will affect voting preference directly. More to the point, this view expects enthusiasm and anxiety to affect those preferences equally. Our theoretical position, that anxiety focuses attention while enthusiasm moves psychic involvement, suggests that enthusiasm will directly affect the voting decision while anxiety's role will be muted. Thus, an evaluation of voting preference as a function of the two distinctive emotions will tell the tale. If both emotions play about equal parts, then the standard view prevails. If enthusiasm is more important than anxiety, then the dual-system view stands stronger.

Table 2 presents simple voting equations, one for each of the three waves in 1988.[11] In each case, presidential preference is regressed on partisanship (in Key's terms, the standing voting decision) and the crucial measures of comparative enthusiasm and comparative anxiety.[12] A quick look tells the story. Enthusiasm matters enormously, anxiety not at all. For all three waves, the parameter for enthusiasm is both substantial and statistically significant. For all three waves, the parameter for anxiety is invisible. Clearly, enthusiasm leads the way in guiding vote choice. Importantly, the data substantiate the pattern of results in a similar (though more elaborate) analysis of voting in the 1984 election (Marcus 1988b).[13] This, of course, does not by itself indicate that the dual-system view prevails. We have merely shown that anxiety plays a decisively different role than does enthusiasm. If our view is correct, then we should expect that the voting calculus will differ for those who perceive threat in the environment than for those who remain calm.

The behavioral inhibition system is rarely intrusive, because we are infrequently confronted by threat or sudden surprise. The effect of the anxiety system will be manifest only when a threatening stimulus is apprehended. This suggests that the influence of negative affect is sporadic, not constant. When threat is low, the behavioral approach system governs action: we go forward when our enthusiasm increases and withdraw when we sense frustration and exhaustion. However, when we feel threatened, we set aside habits and focus attention on the problematic.

Because a political campaign is a struggle between competing partisans, some citizens, though not all, experience the cut-and-thrust of politics as threatening. People unaroused will safely vote their standing choice while those pricked by anxiety will perk up, gather new information, and perhaps abandon their old habits.

For evidence, look at Table 3. Here we model vote preference as a function of comparative enthusiasm and partisanship (as in Table 2) as well as anxiety's effect on the role of comparative enthusiasm and partisanship. In this equation, we introduce the respondent's total anxiety meaned over both candidates (as opposed to the comparative anxiety measure in Table 2) to measure the amount of environmental threat. (Note that someone greatly, but equally, uneasy about both candidates will produce a comparative anxiety score of zero but, properly, a high total anxiety score.) Because the behavioral inhibition system responds to threat, our dual-system theory predicts that the presence of anxiety will cause people to drop partisanship as a sure guide to candidate choice and to turn to candidate-specific information for judgment.

We estimate the direct effects and the crucial conditional effects when we write explicit interaction terms (in rows 2 and 4). We see that the presence of anxiety increases the importance of comparative enthusiasm (.62) and diminishes the role of partisanship (−.60). In fact, high anxiety almost eliminates partisanship as a consideration.[14] As the dual-system

TABLE 3

Estimating Presidential Preference 1988: Anxiety's Effect on the Role of Enthusiasm and Partisanship

INDEPENDENT VARIABLES	COEFFICIENTS	STANDARD ERRORS
Comparative enthusiasm	.79*	(.12)
Anxiety * comparative enthusiasm	.62*	(.22)
Partisanship	.64*	(.11)
Anxiety * partisanship	−.60*	(.21)
Constant	−.25*	(.02)
Sample size	746	
Adjusted R^2	.65	
Root Mean Square Error	.27	

Source: 1988 Missouri Data.
Note: For comparability, all variables are scored to a common range of 0 to 1. See Appendix. Voting preference indicates Dukakis or Bush supporters (scored 1 and 0), "leaners" (.75 or .25) and undecided (.50). The anxiety interactions (in rows two and four) represent multiplicative interactions. Anxiety is the voter's mean anxiety (over both candidates). The values are unstandardized regression coefficients with standard errors in parentheses.
*$p \leq .05$, two-tailed test.

theory predicts, a rise in anxiety *weakens* the reliance on partisanship and *strengthens* the reliance on contemporary emotional reactions to the candidates. A drop in anxiety (i.e., an increase in complaisance) strengthens the impact of partisan identification and weakens reliance on concurrent feelings of enthusiasm toward the candidates.

Thus, the two emotions matter for voting but matter in different ways. Comparative enthusiasm affects how closely people are willing to embrace either candidate. Anxiety plays a very different role: it stimulates peoples' attention and releases them from their standing decisions.

DIRECT EVIDENCE ON LEARNING

The evidence suggests that threat stimulates learning.[15] Yet, it is circumstantial evidence. All we have established to this point is that anxious voters are less reliant on habit. For a more direct test, we need to observe how people's political knowledge changes over time. We turn to the 1980 ANES panel.[16]

Over the course of any campaign, citizens acquire and develop views about candidates. From January to October in 1980, the public developed an increasingly rich portrait of the challenger, Reagan. The portion claiming to know something about him rose from 86% to 95%, the portion willing to evaluate his personal characteristics rose from about 60% to 90%, and the portion identifying his position on policy questions rose more modestly from about 50% to 70%. All these gains made Reagan almost, but not quite, as familiar as the incumbent Carter (see also Markus 1982; Miller and Shanks 1982).

Yet cognitive elaboration is not the same thing as learning.[17] Hence, we need a measure of what people know about politics and, more decisively, a measure of what they know that is relevant for their vote choice. Here, we use a device, used elsewhere, that concentrates on what is deemed to be objectively true. To be brief, we measure knowledge by the respondent's ability to say that Ronald Reagan is more conservative than Jimmy Carter. Each individual obtains a "knowledge" score that counts the number of times, on a set of seven-point issue scales, that the individual placed Reagan to the right of Carter.[18]

As measures of political learning, these policy-related cognitions have several useful features. First, they are relatively unambiguous. Compared with prompts about candidate traits or open-ended responses about political objects, respondents who manufacture cognitions can be found out. Second, they represent important and easily available political facts. Information that Reagan was more conservative than Carter could be easily obtained from either the mass media or from conversations with political knowledgeables. The public, when aggregated, had little trouble seeing that Reagan was well to the right of Carter on every one of these issues. Finally, such elementary policy-related knowledge is crucial in the link between voting and public policy. In fact, it is hard to imagine that anyone who paid attention to the 1980 campaign could have escaped this information.

Of course, many did. Table 4 displays the proportion, corrected for guessing, of the public who positioned Reagan to the right of Carter on three central policy questions as well as on the liberal–conservative continuum. The proportions are given for samples taken in January, June, and October of 1980. First, observe the overall levels; substantial numbers of the electorate, even in the end, remained unaware of the candidates' policy differences.

In learning terms, however, note that the public began to see the policy distinctions more and more clearly as the campaign progressed. Most striking, when the campaign began only 13% saw Reagan as more committed to defense spending, but when the season turned to fall, fully 51% realized what was going on. The public similarly gained understanding about the candidates' stances on the spending-and-social-welfare and détente issues as well on the ideological spectrum. The row of numbers across the bottom shows a composite measure, the means for proper placements on the three issues and for ideology. Overall, it looks as though the campaigners' efforts to "inform" the electorate had a salutary, though modest, effect.

Our question is whether this learning was motivated by emotions. After all, other plausible learning mechanisms abound. To proceed, we shall control for powerful alternative hypotheses when we estimate the amount of learning that might be attributed to anxiety.

Start with a cognitive model. As ever, education matters. Surely college-educated, rather than grade-school-educated, people can better extract issue-oriented information from the hurly-burly of campaign rhetoric. To education, add interest. We now under-

TABLE 4

Knowledge about Candidate Policies over Time

POLICY AREA	CORRECTED PROPORTION SAYING REAGAN MORE CONSERVATIVE THAN CARTER[a]		
	JANUARY	JUNE	OCTOBER
Defense spending	.13	.34	.51
Detente with Soviets	.21	.28	.37
Cut spending/social programs	.29	.29	.34
Liberal–conservative continuum	.19	.35	.34
Summary measure[b]	.21	.32	.39

Source: ANES 1980 Data.
Note: The standard errors of the means are about .02.
[a]Proportion placing Reagan to the right of Carter minus the proportion placing Carter to the right of Reagan.
[b]The mean score for all items.

stand that the already well informed and motivated will be most likely to learn (Neuman 1986; Tichenor, Donohue, and Olien 1970). Having a knowledge base both marks a more permanent interest in, and capacity for, politics as well as provides the framework in which new information can be integrated to produce increments in knowledge. After all, information about presidential candidates fills the air: learning requires not a search for information but instead an inclination to pay attention to, and make sense of, what is readily available.

Next, add in partisanship. Strong partisan attachments should enable individuals to make correct inferences about the political world that might otherwise be impossible. Brady and Sniderman (1985) show that individuals use an affect-heuristic that assumes that friends (liked social and political groups) have compatible political views while opponents (disliked others) have different political views. Understanding candidate stances is, for the most part, a matter of inference rather than knowledge. The Brady–Sniderman hypothesis, in a way familiar to "new look" psychology of the 1940s and 1950s (e.g., Heider 1958; Rosenberg and Abelson 1960), suggests that citizens process information in ways consistent with emotional attachments. Thus, strong partisans, Democratic or Republican, should better be able to make inferences about the candidates' policy positions. They simply "balance" their inferences with their own policy preferences and their partisan attachments (of the voluminous research here, see, e.g., Brent and Granberg 1982; Granberg and Brent 1974; Kinder 1978). To the extent that the world makes easy sense (i.e., Democrats liberal, Republicans conservative), this heuristic will aid learning.

Finally, consider emotion. Again, theoretically, we expect that the presence of threat in the environment will spur political learning while enthusiasm will not. An initial answer lies in Table 5, columns 1–2.[19] The estimation equations (each represented by a column) include a "lagged dependent variable"—the respondents' level of knowledge at the previous survey—to control for "regression to the mean" types of effects.[20] Substantively, three variables represent cognition: education (for capacity), campaign interest (for cognitive motivation),[21] and strength of partisanship (for the affect-heuristic model).[22] As much previous work predicts, education helps learning. The difference between a college-educated and a grade-school-educated citizen is .21 and .16 (for January–June and June–October, respectively), a substantial learning differential. Similarly, the difference in learning for the uninterested and the avidly interested is .06 and .14. The partisan-guided-learning hypothesis, however, fails. The strength-of-partisanship variable is statistically insignificant and in any case, it has the wrong sign (−.03 and −.05).

More to the point, examine the coefficients for emotional response. Our expectations are clearly met. In both sequences, a gain in knowledge is strongly associated with prior anxiety and not at all with prior enthusiasm. The gains associated with enthusiasm are minimal and statistically invisible. In power, anxiety measures up well against (though it does not dominate) the cognitive portion of the model. The difference in learning due to anxiety is about .12 (for both the early and late periods), or about the average amount of learning that took place in the campaign. The numbers are both statistically significant and substantively important. Further, the pattern is theoretically correct. Anxiety is positively associated with learning, and enthusiasm is not.[23] The dual-system model is again confirmed.

The duality of emotional response is made even clearer by turning our attention from political learning to political involvement, from citizens' acquiring new information to their engagement in the campaign. Our theory leads us to expect that for matters of already-learned behavior, for getting involved in an ongoing campaign, the key should lie in the positive-feedback mechanisms associated with enthusiasm rather than the attention-interrupt mechanisms of anxiety. Thus, the empirical pattern of the learning model in Table 5 should be reversed when we change our focus to the campaign involvement model.

Our theory predicts that involvement, measured by a change in campaign interest,[24] will vary as a function of changes in enthusiasm (while controlling

TABLE 5

Learning and Campaign Involvement as a Function of Emotion and Cognition during the 1980 Presidential Campaign

INDEPENDENT VARIABLES	LEARNING MODEL[a]		CAMPAIGN INVOLVEMENT MODEL[b]	
	JANUARY–JUNE	JUNE–OCTOBER	JANUARY–JUNE	JUNE–OCTOBER
Enthusiasm$_{(t-1)}$[c]	−.00	−.01	.08	.13*
	(.04)	(.04)	(.05)	(.04)
Anxiety$_{(t-1)}$	.12*	.12*	.06	.03
	(.05)	(.05)	(.05)	(.05)
Strength of partisanship$_{(t-1)}$	−.03	−.05	.15*	.08
	(.04)	(.04)	(.04)	(.04)
Education	.21*	.16*	.03	−.03
	(.04)	(.04)	(.04)	(.04)
Knowledge$_{(t-1)}$	−.42*	−.43*	.14*	−.11*
	(.04)	(.03)	(.04)	(.03)
Campaign interest$_{(t-1)}$	.06*	.14*	−.52*	−.50*
	(.03)	(.03)	(.03)	(.03)
Constant	.02	.03	.11*	.18*
	(.03)	(.04)	(.04)	(.04)
Number of cases	644	639	643	623
Root Mean Square Error	.27	.28	.29	.27
Adjusted R^2	.18	.19	.26	.27

Source: 1980 ANES Data.
Note: The entries are unstandardized regression coefficients with standard errors in parentheses.
[a]Learning is measured by the change in knowledge from one time to the next: [knowledge$_{(t)}$ − knowledge$_{(t-1)}$].
[b]Campaign involvement is measured by the change in campaign interest from one time to the next: [interest$_{(t)}$ − interest$_{(t-1)}$].
[c]For comparability, all variables are scored to a common range of 0–1. See Appendix.
*$p \leq .05$, two-tailed test.

for previous education, partisan intensity, and candidate knowledge). The expectation is confirmed. The empirical equations for the campaign involvement model are presented in Table 5. The key coefficients lie in Table 5, columns 3–4. During the spring primaries (January–June), the emotions are minimally—statistically insignificantly—associated with change in campaign involvement. If anything, partisanship is dominant. It is only during the fall campaign that candidate-induced emotional response spurs involvement. Crucially, the dominant factor becomes enthusiasm, not anxiety.

DISCUSSION

Our empirical work thus sustains a view that emotionality affects how people approach politics. Clearly, emotions are complex and subtle. Just as obviously, the simple valence model of political emotions can no longer stand. At the very least, mood states represent an amalgam of underlying feelings. Of this we are confident.

Our analyses also indicate that we gain theoretical leverage by turning to a dual-system model that produces complex emotions as a mixture of two distinct types: enthusiasm and anxiety. The first, associated with an ongoing emotional monitoring system, governs how far people allow themselves to engage with candidates and with politics more generally. The second, a manifestation of the behavioral inhibition system, spurs people to pay closer and more conscious attention to political matters and to act accordingly.

Our evidence carries weight because it confirms and extends an already-established theoretical view. We here rely on survey interviews about presidential candidates, a data source with well-known strengths and weaknesses. The data allow neither experimental control over the emotional stimuli nor subtle analyses of cause and effect. At best, we know the broad outlines and too little of the details or complexities. Yet we are able to show that a theory grounded in neurophysiology and in psychology can be usefully applied in the realm of politics. While we are in no way certain about the mechanisms that translate elementary processes (the stuff of neural transmitters, etc.) into political emotions and cognitions, we are now encouraged to think that further study will reward. Moreover, we *can* safely conclude that the emotional significance of information clearly affects what, when, and how we react.

In short, enthusiasm increases campaign involvement and anxiety enhances learning. Of course, matters are never so simple. Our data reveal subtle relationships among enthusiasm, anxiety, involvement, and learning. Nevertheless, we believe that the main story lies along these lines: when politics makes people anxious, people sharpen their eyes and pay

careful attention; when politics drums up enthusiasm, people immerse themselves in the symbolic festival.

Understanding this enlarges our view of emotion's role in politics. We may be fairly sure that emotion matters not only in how it colors people's voting choices but also in how it affects the way they regard the electoral contest. This much is important enough. However, this new understanding has implications for how we, as social scientists, think about elections and political life.

First, finding that people's approach to politics depends on their emotional state tells us that the fundamental "voter" model should include a conditional component. That is to say, voters act differently under different conditions; they afford politics closer scrutiny when they are anxious than when they are enthusiastic. By introducing this conditionality, we can combine two views of citizen political involvement. The first divides the public by *stable trait*: active versus passive, attentive versus inattentive (classically, Converse 1962; Luskin 1987; Milbrath and Goel 1977; Neuman 1986; Verba and Nie 1972). The second view suggests that there are *variable states* that people can, at any given moment, fall into, say spectator versus participant (Marcus 1988a; Schattschneider 1960). We here propose a dynamic model of political learning that combines trait and state explanations to produce a richer view of how citizens inform their electoral choice. In states of anxiety, citizens activate their political consciousness; in states of enthusiasm, they engage their hearts in political affairs.

This emphasis on state-conditionality further points the way toward resolving a long-standing controversy about the basic character of citizen voting. Loosely speaking, a "public choice" school emphasizes the rational calculus of policy alternatives, while a "symbolic politics" school emphasizes the power of deeply ingrained normative commitments, such as partisanship, to shape voter preferences. The extent to which one or the other of these views characterizes voting is of obvious importance for democratic theory and has been the subject of years of intellectual debate and empirical investigation (e.g., Downs 1957; Enelow and Hinich 1984; Kinder and Kiewiet 1979; Markus and Converse 1979; Miller 1991; Miller et al. 1976; Rabinowitz and MacDonald 1989; Sears 1990; Sears, Hensler, and Speer 1979; Sears et al. 1980). While we do not hope to settle the matter, we believe that putting these "models" in competition may mislead.

Our understanding about anxiety and enthusiasm suggests that voters' emphasis on conscious rational choice (as opposed to long-standing commitment) will be conditioned on their emotional state. Voters can, and often will, vote their "standing decisions." However, they also rely on their internal emotional states to signal when to abandon their predispositions and begin conscious political choice. Emotionality thus empowers voters to confront their circumstances and react efficiently and appropriately. In the absence of anxiety, voters safely rely on preexisting partisan dispositions and the greater enthusiasm generated by the favored candidate; however, when disturbed by their emotional signals, voters pay more attention to the issues and no longer defer to established dispositions. Rather than being antagonistic or detrimental to citizenship, emotion enhances the ability of voters to perform their citizenly duties.

Because individual voters thus act differently under different conditions, we can expect that the quality of the entire electorate's behavior will vary when the macropolitical scene offers different blends of anxiety and enthusiasm. For example, consider conventional wisdom about positive and negative campaigns. Contemporary popular debate has almost universally condemned campaigns that seem to rely heavily on "attack" commercials while, implicitly, endorsing "positive" themes—odd. Our data indicate that positive campaigns, ones that emphasize visionary goals or candidate accomplishments, should do little for conscious deliberation. Instead, they seem best viewed as mobilization or activation—devices that yield a citizen involvement free from the burden of choice. On the other hand, campaigns that spur concern about the current state of affairs would seem much more likely to motivate people to pay closer attention to public affairs, to engage their full capacities, and to make rational decisions.[25]

More generally, the deliberative content of elections depends on the extent to which citizens feel comfortable or uneasy with the contemporary political situation. Partly, this comfort or discomfort will be a product of politicians' tactics. More interesting, though, is the likelihood that the public's emotional state will arise from social, economic, and political reality. Periods of economic depression (with the accompanying job losses and threats aimed at large numbers of families) will certainly activate people's emotional triggers and motive their political attention. Economic booms, on the other hand, may induce enthusiasm and, thus, political involvement without deliberation.[26] Similarly, failure during wartime should spur close attention while success should lead to grand parades in the collective fantasy. Because deliberation seems, at least in part, a function of emotionality, the nature of democratic government thus depends on how emotions get linked to political circumstances and how that link varies over time.

In the end, it appears that exploring the connection between emotions and political consciousness should yield much. We shall begin to appreciate how democracy handles changing social, economic, and political circumstances. At the very least, we shall begin to understand that the politics of emotion and rationality are closely intertwined.

APPENDIX

We wish to facilitate comparison between equations and to avoid the misinterpretations often associated with alternative scoring procedures. Because all the variables are measured by means of arbitrary survey-response scales, no natural metric suggests itself.

Retaining the survey-response scales (some running 0–1, 1–5, 1–7, or even 0–100) asks the reader mentally to translate all scale values before assessing the relative size of the regression coefficients. Mistaken inferences will arise when the variables' numerical scales differ by orders of magnitude, as do ours. On the other hand, standardizing coefficients by the population variances (using standardized regression coefficients) carries a more subtle threat to the reader's inferences. When different samples or subgroups form the focus of analysis and when they are marked by radically different variances (as in our case), the reader may be misled because coefficient values may be affected as much by the comparative variances as by the comparative impacts. For a commonsense discussion about scalar interpretations, see both the necessary warning by King (1986) and the entirely reasonable response by Luskin (1991).

We have chosen to standardize our numerical scales by the *range* of the variables—making all variables 0–1 scales. (For example, in the 1988 study, anxiety is measured as the mean of two 0–100 "thermometers." The values used here are simply the original values divided by 100.) Thus, our different measures are made *roughly comparable* to the 0–1 anxiety items of the 1980 surveys. With sensible caution, readers may safely distinguish "large" from "small" differences in the regression equations.

Notes

Some of the data utilized in this analysis were made available by the Inter-University Consortium for Political and Social Research. The Missouri data were made available through the good offices of the Public Policy Research Centers of the University of Missouri–St. Louis and Andrew Glassberg. (These surveys were conducted were conducted by the Public Policy Research Centers for MissouriNet, a private company.) We, of course, take full responsibility for our analyses and interpretations. We should like to thank Richard Brody, Russ Hanson, Roger Masters, W. Phillips Shively, W. Russell Neuman, Tim Cook, Betty Glad, Kathleen McGraw, James Kuklinski, John Mayer, Peter Salovey, Howard Eaton, David Watson, and Carolyn Lewis for their useful comments and suggestions.

1. There has been a spate of articles and commentaries in psychology debating the independence of affective and cognitive information-processing systems (see esp. Lazarus 1982, 1984; Zajonc 1980, 1982). The Western tradition has long presumed an antagonistic relationship between affect and cognition, or more aptly, passion and reason. Further, the tradition has presumed the necessity of encouraging reliance upon the latter and diminishing the role of the former on matters of public importance. We believe that this formulation is both misguided and misspecified. As we shall argue, affective processes work with cognitive processes in mutual support to enhance learning. Indeed, feeling states are themselves the product of extensive complex cognitive processes. Political scientists have tended to conflate cognition with conscious awareness in spite of substantial evidence that cognitive processing is not equivalent to conscious awareness (see Lewicki 1986).

2. In addition to altering mood, these systems have distinctive cognitive (Mayer and Gaschke 1988; Mayer et al. 1991) and distinctive physiological effects (Fowles 1980; Lazarus et al. 1965).

3. Aristotle recognized this distinction, warning the orator not to invoke a horror so great that it would immobilize the audience (*Rhetoric* 2.5.1383).

4. Jeffrey A. Gray. Conversation with Marcus, 9 April 1991.

5. Note that respondents who feel neither enthusiastic nor unenthusiastic, neither anxious nor calm, could opt for something in between—say, a score of 50. This is, as it turns out, the modal response. In the ANES wording, respondents who wanted to "skip the question" seem to have chosen a *no* response (rather than *yes*). Our questionnaire design had the desired effect of eliminating the "emotional arousal" contamination.

6. The sampling frames represent the Missouri electorate. The samples sizes for June, July, and October were 509, 509, and 502. Interviews were conducted by telephone. Other survey items reported, unless otherwise noted, were elicited by the standard ANES question format.

7. We earlier reported the results of an experiment conducted with these data. One half of each sample was presented with an anxiety-prominent version of the anxiety items and the other half of each sample was presented with a reassuring-prominent version of the anxiety items (i.e., anxiety was nominated as 100 or reassurance nominated as 100 for each half sample). The manipulation consisted of changing the order of presentation of each anxiety pair. The results demonstrated the importance of properly measuring the anxiety dimension (Marcus, MacKuen, and Glassberg 1989). The results we present are based on the half of each sample that responded to the anxiety-prominent measures of anxiety.

8. For example, for the June 1980 threat we sum the individual's June interview responses to *anger, disgust, afraid,* and *uneasy* (0–1 scores) and then divide by four. For July 1988, we sum *anxious* and *upset* (the 100-point thermometers) and divide by 200. This straightforward scale gives some weighting precision away to factor scoring but it retains the essential variance information across surveys.

9. Note that the public's sense of enthusiasm and anxiety appear to move in equal and opposite directions. The dynamics apparent in the aggregate data suggest that enthusiasm and anxiety might be opposite-signed versions of affect. Yet the internal evidence contradicts this view. If individuals are moved by events only along a single dimension, then those who increase their sense of anxiety should simultaneously decrease their sense of enthusiasm. To test this hypothesis, we may observe the correlation of change in enthusiasm and anxiety for the 1980 panel study. The observed correlations have the right sign (negative) but are of insignificant magnitude: −.06. Thus, while the aggregate reacts to news in a uniform manner, individuals do so in distinctive ways. For example, while the public as a whole might sour on a candidate, some individuals might increase their anxiety but not lose their enthusiasm and others might simultaneously become less enthusiastic but not necessarily anxious.

10. Bruce (1991) has done an extensive analysis of the structure of affect in the 1980 panel. He finds substantial changes over time: the correlations between the two dimensions range between near zero to the −.60s range. He finds no consistent patterns. This is as we would expect, given the unpredictable character of the changing circumstances confronting the body politic.

11. The specification of the analyses in Table 2 and Table 3 below do not include measures for issue proximity of candidate perceptions. Our previous work suggests that excluding issue-proximity measures is appropriate (Marcus 1988b). Candidate perceptions would be useful. However, our previous work discovered no interaction between candidate perceptions and the factors included here.

12. Presidential preference includes decided voters, leaners, and undecided (scored *Bush* = 0, *lean Bush* = .25, *undecided* = .50, *lean Dukakis* = .75, *Dukakis* = 1.0). Partisanship is measured by the standard seven-point scale from the Survey Research Center/Center for Political Studies (SRC/CPS) question sequence (scored *strong Republican* = 0, *weak Republican* = .166, . . . , *strong democrat* = 1.0). The "comparative" emotion measures calculate a score for Bush and Dukakis and take the (signed) difference.

13. Our discussion thus far has separated anxiety from enthusiasm as factors that distinctively stimulate attention

and engagement. We suspect that matters are not so simple. For example, uncertainty about a candidate's ability to guide the future will, naturally, lead to anxiety. We predict that this enhanced anxiety will move voters to gather information and more fully evaluate their electoral options. Yet we would not be entirely surprised if that uncertainty (and anxiety) also led risk-averse voters to lose enthusiasm for the candidate. Obviously, the clean theoretical distinction between anxiety and enthusiasm will be complicated in real life. Our finding that voters' candidate preferences (in the 1988 Missouri data) are independent of comparative anxiety overstates the case. Work with the 1980 and 1984 ANES studies suggests that anxiety's role is less than that of enthusiasm but does not disappear completely. Clearly, accepting anxiety's peculiar role in stimulating attention rather than merely diminishing enthusiasm, depends on a more direct test.

14. We exclude comparative anxiety in these equations because it, and its interaction, produce negligible coefficients. The simple model in Table 3 is subject to mistaken inference. Anxiety is theoretically and empirically linked to both partisanship and enthusiasm. In order to substantiate Table 3 we replicated the analysis using a "purged" version of anxiety rather than the raw score. To do so, we estimated auxiliary equations (regressing each candidate-specific anxiety term on the enthusiasm terms and partisanship) and retained the mean of the two "residuals" as a cleaner measure of anxiety. The replication produced results that were substantively similar and statistically crisper: Table 3 stands. In addition, we replicated the same experiments using a Bush–Dukakis dichotomy and estimated the equations in logistic form. Again, the theoretical inferences were unchanged.

15. A substantial body of studies in psychology have shown that negative events generate more cognitive activity than do positive events. For an excellent recent review, see Taylor 1991.

16. We are unable to proceed with our 1988 data because they were not collected in panel form (i.e., we did not interview the same respondents through the campaign). Thus, in order to test learning (the acquisition of knowledge), we need to turn to the 1980 data. Here we must use inferior measures of emotional response to take advantage of the panel design.

17. Survey respondents typically volunteer responses to prompts and, as the political campaign progresses, feel pressure to produce opinions about obviously important public figures. Further, respondents become willing to guess about personal qualities or about policies as they begin to learn anything at all about the candidate. Finally, even though genuine, such cognitions may be completely erroneous.

18. Here knowledge is tapped by the respondent's understanding that Reagan (more than Carter) wanted increases in defense spending, that Reagan (more than Carter) favored cuts in government spending on social welfare programs, that Carter (more than Reagan) was inclined toward détente with the Soviets, and (finally) that Reagan was more conservative than Carter. We choose these items because, in the aggregate, the public saw the candidates distinctively of the Left and of the Right. On the seven-point scales, the mean-mass perception of Reagan was a full point to the right of the mean-mass perception of Carter. (On other issues, the public was less certain that the candidates differed.) The knowledge measure is corrected for guessing. Assuming randomness, one would expect that there are an equal number of "correct" and "incorrect" answers. Thus, the measure assigns a score of 1 for those placing Reagan to the right of Carter, a score of −1 for those placing Reagan to the left of Carter, and a score of 0 otherwise.

19. For the individual-level analysis ahead, in Table 5, we have truncated individual below-zero scores to zero in order to retain a (0–1) "knowledge" scale. The problem of negative scores appears only with the individual analysis presented in Table 5, not in the aggregates presented in Table 4. Note that most of those not getting a "correct" score simply fail to place both candidates on the policy question. For the truncated scores, the summary knowledge means are .27 (January), .35 (June), and .42 (October).

20. We normally expect the coefficient associated with the "lagged dependent variable" to take on a large negative value—because deviations from the "mean" or "equilibrium value" will collapse toward that value. In the extreme, when any deviation from the overall mean disappears from one time to the next, the coefficient takes on the value of −1.0. On the other hand, we might expect some "positive feedback" in the sense that people who know more will learn more. Insofar as we fail to capture this phenomenon in the substantive variables elsewhere in the estimation equation, we expect a positive coefficient for the lagged dependent variable. The net (negative and positive) result will determine the observed value. In Table 5's equations, we find moderately large negative coefficients as is common for this sort of work. We draw no theoretical inferences from their estimates. More important, this "control" allows us to estimate more cleanly the independent effects of our theoretically interesting variables.

21. Here we are bending over backward by treating campaign interest as a cognitive factor. It is likely that campaign interest is itself a factor well imbued with a positive affect component (inasmuch as enthusiasm for political activity is a learned disposition and therefore likely under the influence of the behavioral approach system).

22. Strength of partisanship is measured by the standard SRC/CPS question sequence (scored *pure independent* = 0, *leaning independents and weak identifiers* = .5, *strong identifiers* = 1.0).

23. Note that we model the impact of emotional reactions on subsequent learning and involvement. We do not believe these relationships to be unidirectional. In fact, any commonsense understanding of politics suggests that as people learn more about the candidates and get more involved in the campaign, they will develop further emotional reactions. These expectations are sustained in the 1980 panel data. Table 6 models change in anxiety and enthusiasm as a function of previous candidate knowledge (knowing Reagan to be more conservative than Carter), level of involvement (campaign interest), and the lagged endogenous term and shows that the phenomena are dynamically interrelated.

Table 6. Emotional Response as a Function of Prior Learning and Involvement

	CHANGE IN ENTHUSIASM[a]		CHANGE IN ANXIETY[b]	
INDEPENDENT VARIABLES	JAN.–JUNE	JUNE–OCT.	JAN.–JUNE	JUNE–OCT.
Knowledge (lag)[c]	.00	.05*	.10*	.07*
	(.02)	(.03)	(.02)	(.03)
Involvement (lag)	.01	.06*	.05*	.05*
	(.02)	(.03)	(.02)	(.03)
Enthusiasm (lag)	−.41*	−.39*	—	—
	(.03)	(.03)		
Anxiety (lag)	—	—	−.43*	−.35*
			(.04)	(.04)
Constant	.20*	.12*	.16*	.14*
	(.02)	(.03)	(.02)	(.02)
Adjusted R^2	.19	.18	.18	.13
Root Mean Squared Error	.21	.20	.20	.22

Source: 1980 ANES Data.

Note: Standard errors of the estimators are in parentheses.

[a]Change in enthusiasm is measured by the change in the enthusiasm score from one time to the next [enthusiasm$_{(t)}$ − enthusiasm$(t-1)$].

[b]Change in anxiety is measured by the change in the anxiety score from one time to the next [anxiety$_{(t)}$ − anxiety$_{(t-1)}$].

[c]For comparability, all variables are scored to a common range of 0–1. See Appendix.

*$p \leq .05$, two-tailed test.

The results suggest that people who become engaged in and learn more about politics find their emotional reactions reinvigorated. This mutual feedback system appears stronger during the June–October campaign period rather than during the January–June primary season, and for the anxiety–knowledge system rather than the enthusiasm–involvement sys-

tem. However, the case is not settled. For example, if we control for the respondents' education and (the interviewers' assessment of) the respondents' January political information, the apparent mutual feedback disappears. Thus, changes in enthusiasm and anxiety seem related to permanent trait characteristics as well as (and perhaps rather than) temporary-state characteristics. Given these ambiguities, we must leave the details of the more complete system as an intriguing puzzle worthy of future work.

24. Campaign interest is measured by the standard ANES question: "Some people don't pay much attention to campaigns. How about you? Would you say that you are very much interested, somewhat interested, or not much interested in following the political campaigns this year?" The aggregate level of interest remained roughly constant during the 1980 primary and general election campaigns. In modeling the change in "involvement," we are modeling the factors that sustained people's interest in the campaign. Note that campaign interest is distinct from knowledge. Looking at the 1980 study, we find that self-reported campaign interest is highly correlated with the respondents' reported actions of reading of public affairs in their newspaper and watching the national news on television. Knowledge is more closely associated with their education and the interviewer's assessment of the respondents' political information.

25. The term *negative campaign* is used to characterize elections that are dominated by "attack" commercials. However, the term is used without great precision. Is a negative campaign distinguished from other campaigns by the proportion of the negative versus positive material produced by either or both candidates' campaign staffs? Does material become negative when it compares the candidates' behavior against some ideal standard or need it employ tasteless or pejorative language? Or is a negative campaign one in which attack materials, of whatever proportion and of whatever character, have had apparently great impact? Our appreciation for the potential benefits of "negative" campaigning will depend on our obtaining a firmer grasp on the phenomenon itself. In any case, we do not wish to make a normative judgment on the virtue of different sorts of emotional campaigns until we know more.

26. Evidence on this matter is relatively weak. Nevertheless, our speculation is sustained in Nie, Verba, and Petrocik's (1976) historical survey data on the ability of people to translate class-oriented preferences into presidential choices. During the anxiety-provoking thirties and sixties, the correlation between class-related issue preferences and voting was relatively strong, while during the relatively calm fifties and seventies, that correspondence weakened considerably.

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