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Reviewed work(s):

Source: *Political Psychology*, Vol. 21, No. 4 (Dec., 2000), pp. 745-778

Published by: [International Society of Political Psychology](#)

Stable URL: <http://www.jstor.org/stable/3792029>

Accessed: 24/01/2013 17:38

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# The Persuasive Effects of Emotive Visual Imagery: Superficial Manipulation or the Product of Passionate Reason?

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*This study reevaluates the persuasive impact of emotional visual appeals within politics and examines two different explanations for their effects. One possibility is that the effects of emotive visual images are essentially superficial in nature, consistent with the view that feelings aroused by an affective image are transferred somewhat mechanically to a political candidate or cause with which it is paired. This transfer-of-affect explanation suggests that emotional appeals may work best among the least informed voters or those paying the least attention to a persuasive political message. The second possibility is that emotional appeals work via passionate reason, in which affective responses to an emotive image are integrated with, and potentially bias, reasoned thought about the accompanying message. This integrated approach leads to the counterintuitive prediction that individuals who are most highly involved in an issue (and who know the most about it) are most influenced by emotional imagery. This prediction arises from growing evidence that people highly involved in value-laden social issues generate the strongest emotional responses to issue-related persuasive appeals. These two models were tested in a study in which undergraduate students were presented with a picture of a cute or an ugly animal and a flyer from an organization advocating a pro- or anti-environment stance with respect to preserving the animal's habitat. The responses showed that emotive imagery was most persuasive among the most involved environment supporters, providing clear evidence of passionate reasoning.*

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**KEY WORDS:** persuasion, attitude change, emotive imagery, attitude strength, environment.

Despite the pervasive use of emotionally laden imagery to influence voters, solicit monetary contributions, and spur citizens to political action, we still know

surprisingly little about whether and how such emotional images work (Graber, 1997). Current psychological approaches to persuasion suggest quite divergent views on the persuasive role of emotive visual imagery. At one extreme, emotive images are seen to work somewhat below consciousness via the transfer of affect from an image to an advocated policy or product. At the other extreme, visual emotional appeals are viewed as biasing the intellectual processing of a message, influencing both the feelings and thoughts one has about an appeal and its cause. These two views of the persuasive effects of emotive imagery imply very different views of the citizenry and generate opposing predictions about the types of citizens who are most susceptible to emotionally based persuasion attempts.

The debate over the influence of emotive imagery parallels the history of the role of emotion within theories of political behavior. Early public opinion researchers “placed emotion at the center of inquiry” (Kinder, 1994, p. 278), but emotion was construed in this research as irrational and, even worse, potentially destructive (e.g., the authoritarian personality outlined by Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950). In parallel, social researchers of the 1920s and 1930s were alarmed at the potential of new technologies, especially radio, to arouse public fears, play on citizens’ emotions, and extend the reach of demagogic orators, resulting in the propaganda scare of the 1930s (Cantril, Wells, Koch, Gaudet, & Herzog, 1940; Jowett & O’Donnell, 1992; Kinder & Sears, 1985). This negative view of emotion as an irrational and superficial response fits with much normative democratic theory, which suggests that “citizens are to approach the subject of politics with temperate consideration and objective analysis” (Kuklinski, Riggle, Ottati, Schwarz, & Wyer, 1991, p. 1).

The role of affect has been reformulated in recent political behavior research, spurred on by developments in psychology, as a less irrational, more complex, and more reasonable factor within political decision-making. In recent studies, political researchers have examined the role of affect in candidate decision-making, the political impact of judgments about the economy, public reactions to political events, the structure of political thought, and the origins of basic values such as political tolerance (Conover & Feldman, 1986; Granberg & Brown, 1989; Kinder, 1994; Kuklinski et al., 1991; Lodge, McGraw, & Stroh, 1989; Marcus & MacKuen, 1993; Ragsdale, 1991; Sears, Huddy, & Schaeffer, 1986). Emotion, as presented in this research, is pervasive, politically important, and serves as a potentially useful tool for citizens as they negotiate the complexity of contemporary politics.

The current vindication of emotion as a constructive aspect of political decision-making may overstate the case, however. The use of emotional political appeals in recent election campaigns, especially the use of powerful emotive symbols such as the flag, military tanks, or Willie Horton, remains contentious. And although emotion may play a potentially useful role in helping citizens to judge political candidates when confronted with overwhelming amounts of information (Lodge et al., 1989) or deciding when to seek out additional information about a political campaign (Marcus & MacKuen, 1993), its role in political decision-

making is not always so innocuous. Our goal in this study is to better document the influence of reason and affect on reactions to an emotive appeal and examine its potential to bias political decision-making. We begin with an overview of the role of affective symbols in contemporary psychological theories of persuasion, highlighting theoretical differences in the conception of emotional symbols as an essentially superficial or as a more reasoned basis for attitude change. We then extend this discussion to the role of affective imagery within the environmental movement. Our investigation into the effects of emotive appeals coincides with an increased interest in the process of political persuasion more generally (Cobb & Kuklinski, 1997; Sniderman, Brody, & Tetlock, 1991; Zaller, 1992).

### *Simple Transfer of Affect*

Perhaps the most negative view of the persuasive effects of emotional symbols arises from theories of classical conditioning. Within a classical conditioning model, affect is thought to transfer somewhat mechanically from an object that elicits strong emotional feelings (e.g., an American flag) to a second object that initially arouses little or no emotional response (e.g., a political candidate) (Eagly & Chaiken, 1993, p. 391; Ferster, 1968). A series of recent social psychological studies have revitalized interest in this approach to persuasion, demonstrating that affect can transfer in the way suggested by theories of classical conditioning (see Cacioppo, Marshall, Goodell, Tassinari, & Petty, 1992, for an overview) and might even occur outside of conscious awareness. Krosnick and colleagues found, for example, that participants react more negatively toward a woman depicted in a photograph after having been exposed to a subliminal photograph of a bucket of snakes (Krosnick, Betz, Jussim, & Lynn, 1992).<sup>1</sup>

The technique of pairing an affect-laden object and a neutral object is commonplace across different types of persuasive appeals. It is widely used within advertising and has been shown to effectively heighten emotional reactions to an advertised product (Batra & Ray, 1986; Chaudhuri & Buck, 1995; Janiszewski & Warlop, 1993). Conditioning has also been discussed as the basis for the formation of social and political beliefs. An early study by Staats and Staats (1958) demonstrated that positive and negative reactions to different countries could be conditioned by pairing countries with positive, negative, or neutral words.

The pairing of affective and neutral stimuli is central to Sears' view of symbolic politics theory (Sears, 1993). He argued that potent affective symbols have a powerful influence on the formation of attitudes toward current issues and

<sup>1</sup> There are persistent questions about the role of mood and the need for conscious awareness in these studies that pose a challenge to the classical conditioning thesis, as pointed out in detail by Eagly and Chaiken (1993). Nonetheless, Eagly and Chaiken concluded that "an automatic conditioning effect remains a viable explanation for the results of the many primary and higher-order classical conditioning experiments" (p. 411).

political figures because political elites, interest groups, and the mass media visibly and publicly link them. Thus, an attitude toward a neutral political object such as bilingual education develops through its repeated association with a more affect-laden symbol such as illegal immigrants. Extant negative feelings toward illegal immigrants are then transferred to bilingual education programs (Sears & Huddy, 1993).

From a classical conditioning perspective, an affective symbol exerts its influence independently of any argument advanced for or against a particular cause, policy, or candidate, and thus contributes to a view of emotion as a superficial source of persuasion that works independently of one's rational interests and deliberations. From this perspective, affective symbols are a manipulative and cynical tool used by interest groups, political campaign advisers, and media consultants. Edelman (1964, 1988) has developed this view more generally to argue that governments, political elites, the media, and interest groups act to arouse and calm public hopes and fears through the manipulation of political symbols of all kinds, not just emotive symbols.

Other approaches to persuasion suggest that the effectiveness of an emotionally charged symbol via the simple transfer of affect is limited to only some segments of a population, specifically those least likely or able to process its intellectual content (see McGuire, 1985). According to Petty and Cacioppo's (1986a, 1986b) elaboration likelihood model, individuals who are both motivated and able to process the intellectual content of a persuasive message remain unaffected by its superficial elements, including affect-laden symbols. These individuals process the message *centrally*. It is individuals who are not motivated or are unable to process a message's intellectual content who are swayed by its emotive elements. These uninvolved individuals do not process the intellectual content of the message centrally, but rather follow a more superficial or *peripheral* route to persuasion (Eagly & Chaiken, 1993; Petty & Cacioppo, 1986a, 1986b; Petty, Cacioppo, & Goldman, 1981).

As with classical conditioning more generally, Petty and Cacioppo's (1986a, 1986b) approach suggests that affective symbols exert their influence independently of an intellectual argument for or against a cause or political candidate. However, their model suggests that the impact of affective imagery is limited to people who are least interested in the issue at hand or who know too little about it to follow the content of a persuasive argument. In contrast, interested and involved individuals will be immune to the persuasive effects of emotive imagery and will instead be persuaded by well-reasoned arguments. From this perspective, emotive symbols can lead to poorly reasoned attitudes in the absence of careful deliberation, but their effects are limited to those who are the least politically involved.

*Integrated Affect and Cognition*

There is growing acknowledgment among psychologists and researchers of political behavior, however, that reactions to an emotive symbol may not be as superficial or devoid of cognition as once thought. In fact, many researchers have demonstrated that, far from being distinct and separable, affect and cognition are quite closely interwoven (Damasio, 1994; Kinder, 1994; Lodge et al., 1989; Sears et al., 1986). Indeed, Marcus and MacKuen (1993) provided evidence that feeling anxious about a political candidate triggers a search for additional factual information about a political campaign. This intimate connection between cognition and affect suggests that feelings evoked by an emotive symbol will interact with its intellectual context to determine one's overall reaction to a persuasive message. At odds with the predictions of a simple classical conditioning model, pairing a political candidate with a positive visual image is unlikely to elicit the same reaction regardless of the candidate's message (Elder & Cobb, 1983). Consider the image of Democrat Michael Dukakis riding in a military tank during his unsuccessful bid for the presidency in 1988. Riding in a tank may have enhanced the standing of a candidate with a strong military background, but it simply made Dukakis look ridiculous in the eyes of most voters.

Researchers are devoting increased attention to the complex interplay of affect and cognition in determining the success of a persuasive message. In one of the first detailed studies to examine this, Rosselli and colleagues (Rosselli, Skelly, & Mackie, 1995) found that an emotive counterargument on the topic of animal rights elicited a mix of feelings and thoughts among research participants. Moreover, persuasion in their research depended on both agreement with the message and feeling positive about it. In their view, being persuaded by an emotive appeal depends on one's cognitive *and* affective elaboration of the message. These researchers concluded that reactions to emotional appeals are not simply a superficial response; instead, these messages are processed centrally and given careful intellectual consideration. As evidence, they pointed to the greater persuasiveness of strong versus weak emotive arguments in their research.<sup>2</sup>

Admittedly, Rosselli and colleagues manipulated emotive arguments and appeals, not specific emotive symbols. But they did provide direct evidence that individuals simultaneously elaborate and integrate both the emotional and intellectual content of a persuasive message. Their findings thus suggest what we refer to as an *integrated model* of affect and cognition, in which individuals both think about and integrate the emotional and intellectual content of a message. This expanded model then generates an intriguing prediction about the persuasive effects of emotive symbols. Extrapolating from Rosselli and colleagues' evidence

<sup>2</sup> This holds only for participants in the neutral mood condition. Consistent with much past persuasion research, participants in the positive mood condition made no distinction between strong and weak arguments (Bless, Mackie, & Schwarz, 1992; Mackie & Worth, 1989).

that emotive arguments are processed intellectually, the integrated elaboration model predicts that the affect aroused by emotional symbols will be processed in conjunction with, not at odds with or independently of, the intellectual content of a message.

Consider a political candidate's use of patriotic symbols. When confronted with a politician framed by the flag, it is reasonable to ask whether the flag is used as a positive patriotic symbol or as a symbol of American oppression. As a symbol of patriotism, the flag should enhance positive feelings for the candidate. When used by a foreign leader to signify American world tyranny and oppression, the flag should lead many Americans to dislike the leader. In either case, both message content and visual imagery receive considered attention and, indeed, interact. When the effects of emotive symbols are viewed in this way, the American public is transformed from a highly gullible, simple-minded audience to one that is paying at least minimal attention to both the visual and intellectual content of a political message.

### *Issue Involvement*

On the surface, the integrated model provides a very reasonable view of the effects of emotive imagery. Citizens reflect on what they feel, and their emotional reactions to an image are tempered by their intellectual thoughts about the message. Yet recent work by Petty and colleagues on the impact of emotive messages suggests that this process may not be so even-handed (Fabrigar & Petty, 1998; Petty, Wegener, & Fabrigar, 1997). Petty and colleagues found that emotive appeals have their strongest impact on attitudes grounded in emotion. When participants in one of their studies first read an emotive passage about a fictitious animal (i.e., an account of a friendly marine mammal swimming with humans) and then subsequently read a negative story about the animal, they were more inclined to change their attitudes when exposed to a second emotive appeal (i.e., an account of it brutally killing a swimmer) than when exposed to a non-emotive appeal (i.e., an encyclopedia entry about its unpredictable temperament). Participants who read an initial non-emotive passage about the fictitious animal (i.e., an encyclopedia entry about an intelligent marine mammal) were more likely to subsequently change their attitudes about the animal in response to the non-emotive appeal. These results suggest that someone who holds an emotionally flavored attitude toward a political issue will give greater credence to the affective content of an appeal when integrating thoughts and feelings about a persuasive message, adding a potential source of bias to the political decision-making process.

Placing greater emphasis on the affective content than on the cognitive content of a message can bias judgments about a political issue or candidate in several ways. An emphasis on affective information could intensify support for an issue with only weak supporting arguments. Consider various campaigns developed in support of the environment, the topic of the current study. A large number of environmental

campaigns have been waged successfully on behalf of attractive animals such as seals, whales, and wolves, although the logic underlying such campaigns is at times no more complex than the need to save a wonderful animal. An emphasis on the affective content of a message might also result in greater support for a highly charged issue at the expense of a cause with deeper intellectual merit. Turning again to the environmental movement, it is easy to think of issue campaigns that rely on images of attractive animals but much more difficult to think of highly visible campaigns, or accompanying public outrage, over complex but enormously important issues such as the buildup in greenhouse gases.

Evidence that attitudes grounded in emotion are more susceptible to emotive appeals leads to the intriguing prediction that highly involved individuals will be most susceptible to persuasive emotive appeals and, thus, most prone to exhibit biased reasoning. Our logic is based on recent evidence that, relative to less involved individuals, highly involved individuals hold more affect-laden attitudes on some political and social issues. Traditionally, highly involved individuals have been thought immune to the effects of emotive symbols and appeals. This view has been reinforced by a large number of persuasion studies in which highly involved individuals are found to give careful scrutiny to a message's intellectual content and are more persuaded by strong intellectual arguments than by weak ones (Petty & Cacioppo, 1990).

But Johnson and Eagly (1989) showed that there are different types of issue involvement, and that some forms of involvement (such as value-relevant involvement based on the defense of cherished values) inhibit the persuasive effects of strong arguments.<sup>3</sup> Moreover, recent research suggests that involved individuals not only reject strong arguments with which they disagree, but do so because they react more emotionally to arguments for and against their position. Zuwerink and Devine (1996) found, for instance, that individuals who support gays in the military and are highly involved with the issue are more irritated by arguments against gays in the military than less involved individuals and generate more negative feelings and thoughts in response to message content. Roser and Thompson (1995) found that individuals involved in environmental issues react more emotionally to arguments in accordance with their position on the problems of contamination from a nuclear power plant; this emotionally charged reaction in turn deepens their commitment to action on the issue.

This evidence, in combination with Petty's findings that emotion-laden attitudes are more heavily influenced by emotive appeals, suggests to us that highly involved individuals may respond more powerfully to emotive appeals because they weigh affective information more heavily than do the less involved when exposed to a persuasive message. We believe that this adds a potential source of

<sup>3</sup> For further discussion on the varied nature of attitude involvement, see Abelson, 1988; Boninger, Krosnick, and Berent, 1995; Krosnick & Abelson, 1992.



bias to the reasoning of highly involved individuals. Unlike the simple transfer-of-affect model, this does not happen in a mindless fashion; involved individuals process both the intellectual and affective components of the message. Nonetheless, we expect involved individuals to be more affected by persuasive emotive appeals than the less involved, independent of the message's cognitive content. This conclusion does not hold for involvement on all issues, but is confined to involvement on value-laden issues such as civil rights, abortion, the environment, or gun control. Thus, images of the Littleton, Colorado school shooting accompanied by an argument for gun control should arouse stronger support for gun control among involved supporters of the issue than would the argument alone. Likewise, the image of an aborted fetus accompanied by an argument against legalized abortion should arouse greater anger and opposition to abortion among involved supporters of the issue than would the argument alone. In other words, emotional arousal interacts with an accompanying argument and is given greater weight by those most highly involved in a value-laden issue.

### *Environmental Appeals*

It is difficult to dispute the existence of emotionally based appeals within the environmental movement. Pro-environment campaign materials often feature a beautiful or cute animal. Public opinion on environmental issues is often characterized by strong opposition to the clubbing of baby seals, for instance, but relative indifference to the potentially more damaging effects of greenhouse gas emissions or depletion of the ozone layer (Day, 1987; Scarce, 1990). Such emotionally based appeals often attempt to capitalize on early learned emotional reactions to animals (Schenk, Templer, Peters, & Schmidt, 1994) or even an innate "cute-response" (Alley, 1989; Cunningham, Roberts, Barbee, Druen, & Wu, 1995).<sup>4</sup> The emotive basis of support for the environment and animal rights movements has been acknowledged by persuasion researchers who have chosen these as areas in which to study the impact of emotionally based appeals (Fabrigar & Petty, 1998; Roser & Thompson, 1995; Rosselli et al., 1995). Thus, we expect emotive appeals to be particularly successful on environmental issues, given the likely affective basis of environmental attitudes.

<sup>4</sup> U.S. Supreme Court justices have also noticed the powerful affect elicited by references to attractive animals. While discussing the validity of a 1975 regulation prohibiting landowners from modifying the habitat of endangered species, Justice Breyer, supporting the regulation, repeatedly used the example of koalas whose existence was being threatened by forest destruction. In response, Justice Scalia said: "Can't we pick an uglier example than the bear? You've picked the cutest, handsomest little critter" (Greenhouse, 1995).

### *Hypotheses*

We examined the effects of an image of a cute or ugly animal on support for an organization advocating a pro- or anti-environment stance to test the predictions of the two major approaches to persuasion outlined above. The simple transfer-of-affect model predicts that cute animals will promote support for an organization regardless of its stance on the environment. A variant of this suggests that this will occur only among the *least* involved respondents. In contrast, the integrated affect and cognition model suggests that the effects of a visual image depend integrally on its accompanying message and the affective nature of one's initial attitude. Thus, we expect the impact of the animal to depend on the direction of argument. Relative to the image of an ugly animal, the image of a cute animal should result in greater support for an organization that advocates a pro-environment position and even greater opposition to an anti-environment group. Moreover, we expect the effect of the image of a cute animal to be most pronounced among those *most* involved in environmental issues.

### **Method**

*Participants.* Participants were 236 undergraduate students enrolled in political science courses at the State University of New York (SUNY) at Stony Brook in the spring of 1995. Students participated in exchange for extra course credit.

*Experimental design and stimuli.* The design of this study is a 2 (pro- or anti-environment message)  $\times$  5 (no animal, cute mammal, ugly mammal, cute insect, ugly insect) between-participants factorial design. The stimulus material consisted of flyers emulating pro- and anti-environment fundraising letters. All flyers, whether pro- or anti-environment, were about the same fictitious environmental dilemma, in which mining would assist an impoverished population living in the Guatemalan rainforest but would destroy the habitat of a geographically restricted animal. The pro-environment flyer argued for the protection of the animal; the anti-environment flyer argued that human needs outweigh environmental concerns. The names of the fictitious animal (the Guatemalan cobyx) and the fictitious organization (Club Berneaud International, or CBI) were held constant across conditions. The argument to save or sacrifice the animal was accompanied by the image of an appealing mammal or insect, an unappealing mammal or insect, or no image.<sup>5</sup> The pairing of an anti-environment message with the image of a cute animal may seem unrealistic, but organizations that argue for the

<sup>5</sup> The effects of cute and ugly animals were tested for both mammals and insects to ensure that the impact of animal attractiveness was not confounded with species importance. It would be difficult to determine whether animal attractiveness or species importance explained greater support for an organization that advocated the preservation of a cute mammal than for one that advocated the preservation of an unattractive insect.

controlled hunting of certain animals do depict the animals in their appeals, although the animals are portrayed schematically or in ways that minimize their attractiveness (see, e.g., <http://luna.pos.to/whale/> or [www.worldcouncilofwhalers.com/](http://www.worldcouncilofwhalers.com/)).

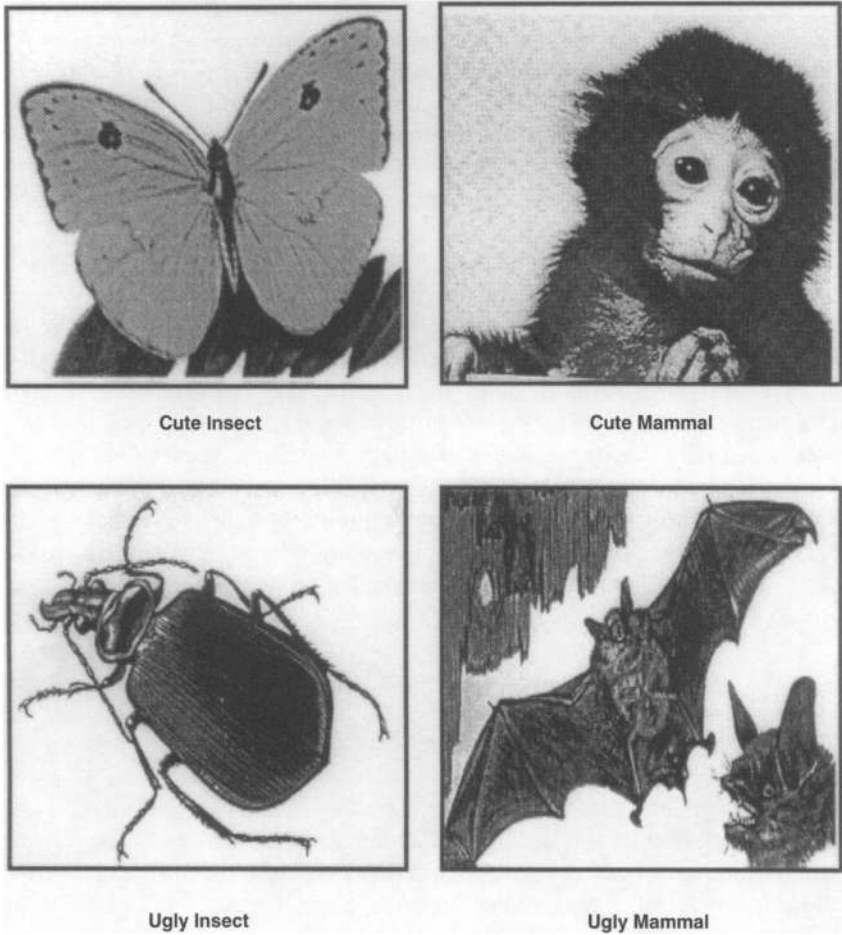
Figure 1 illustrates the animals presented in each condition. The exact wording of the arguments in the pro- and anti-environment conditions is presented in Appendix A. The flyers were printed on Club Berneaud International letterhead. From participants' reactions, it appears that the flyers were viewed realistically. A number of participants asked about the issue presented in the flyer they received, and wanted to know more about the organization. Some even asked to keep the flyer.

*Pretests of stimulus material.* Various animal pictures were pretested in an undergraduate class ( $N = 30$ ) in political psychology. The four animals presented in Figure 1 aroused the most emotion and elicited the most uniform positive (butterfly, monkey) and negative (bug, bat) reactions. Among mammals, a baby monkey was considered cute by most and elicited substantially more positive than negative emotions, whereas a bat elicited more negative than positive feelings, arousing fear and repulsion. Among insects, a butterfly elicited positive feelings and was considered beautiful, whereas a bug elicited negative feelings, especially disgust. A second pretest established the neutrality and lack of meaning attached to the names and facts used in the flyer; it also demonstrated that the pro- and anti-environment arguments were viewed as equally strong and credible.

*Procedure.* Participants first completed a questionnaire assessing their prior attitudes toward the environment. After returning this completed questionnaire, participants were randomly assigned to receive one of the 10 flyers, accompanied by a second questionnaire. This questionnaire measured their agreement with the argument, positive feelings toward CBI, and readiness to act on its behalf. Participants then returned both the flyer and the second questionnaire and received a final questionnaire that contained questions on the quality of the argument, their feelings about the animal, their knowledge of environmental issues, and their participation in pro-environment activities.

### *Measures*

*Pro-environment scale.* Participants' prior attitudes toward the environment were assessed with 14 questions adapted from Seligman, Syme, and Gilchrist (1994) on local environmental dilemmas. The questions tended to pit environmental protection against economic growth and self-interest. All 14 items were combined to form a reliable "pro-environment" scale, which was standardized to have a midpoint at 0 and ranged from  $-.5$  to  $.5$  ( $\alpha = .78$ ). See Appendix B for the exact wording of all scale items. The majority of participants were pro-environment, as indicated by an average score of 0.10 on the pro-environment scale. The pro-environment scale was used as a control variable in initial analyses. Later



**Figure 1.** Emotive visual imagery: Cute and ugly animals in the pro- and anti-environment flyers.

analyses were run separately for participants who were pro-environment ( $N = 175$ ) and anti-environment ( $N = 61$ ), and the strength of their pro or anti position was included as a control.

*Support for the organization.* After reading the flyer, participants indicated their agreement with the argument (11 items,  $\alpha = .89$ ), positive feelings toward the organization (6 items,  $\alpha = .90$ ), and readiness to act in support of the organization (9 items,  $\alpha = .95$ ). All three scales were standardized on a scale that ranged from 0 to 10. These three indicators of environmental support were chosen to examine whether emotive imagery has similar influence on cognition, affect, and behavioral intentions.

*Issue involvement.* Involvement with environmental and animal rights issues was assessed with four items that were combined to form a reliable scale ( $\alpha = .80$ ). The scale was split at its midpoint to create subgroups of participants who scored high ( $N = 116$ ) and low ( $N = 120$ ) on the involvement scale.

*Experimental variables.* Three dummy variables, coded 0 or 1, indicated the effects of visual imagery in the study. The three variables were image, cute animal, and mammal. A fourth dummy variable indicated a pro- or anti-environment argument.

*Manipulation check.* The experimental manipulations worked as expected. Participants rated the pro- and anti-environment arguments as equally sensible, credible, and clear.<sup>6</sup> The cute and ugly animals also elicited the appropriate feelings and perceptions. Participants felt more positively toward the monkey and the butterfly than toward the bat and bug, and rated the monkey and butterfly as having more “cute” traits. Moreover, the two attractive animals were rated similarly; the monkey and the butterfly were seen as equally cute and aroused similar levels of positive feeling. Although none of the four animals aroused strong negative feelings, the bat (ugly mammal) and bug (ugly insect) were seen as having more negative or “dangerous” traits. Furthermore, they were seen as equally noxious, not especially cute, and aroused few positive feelings (see Table I; see Appendix B for exact wording of these items).<sup>7</sup>

## Results

### *Simple Transfer of Affect*

Do cute animals promote, and ugly animals diminish, support for an organization regardless of its support or opposition to the environment, as suggested by a simple transfer-of-affect model? To answer this question, we estimated the following model of organizational support, where image, cute, mammal, and pro-environment argument are dummy variables:

$$\text{Equation 1: Organization support} = a + b_1(\text{image}) + b_2(\text{image} \times \text{cute}) + b_3(\text{image} \times \text{mammal}) + b_4(\text{pro-environment argument}) + b_5(\text{pro-environment attitude}) + b_6(\text{pro-environment argument} \times \text{pro-environment attitude})$$

The image of a mammal is included as a control in these analyses because, as seen in Table I, the mammal (monkey or bat) tends to arouse somewhat more positive feelings than the insect (butterfly or bug), and this positive affect might contribute additional support to the organization. The analyses also include controls for the

<sup>6</sup> Participants rated the flyer on each of these three dimensions, which were combined to form a reliable scale ( $\alpha = .72$ ).

<sup>7</sup> All four scales reached acceptable levels of reliability: positive feelings ( $\alpha = .70$ ), negative feelings ( $\alpha = .80$ ), cute traits ( $\alpha = .92$ ), and dangerous traits ( $\alpha = .94$ ).

**Table I.** Manipulation Check on Feelings Elicited by Emotive Imagery

	Cute monkey	Cute butterfly	Ugly bat	Ugly bug
Positive feelings	0.52 <sup>a</sup>	0.37 <sup>ab</sup>	0.27 <sup>bc</sup>	0.14 <sup>c</sup>
Negative feelings	0.16 <sup>a</sup>	0.09 <sup>a</sup>	0.17 <sup>a</sup>	0.15 <sup>a</sup>
“Cute” traits	0.59 <sup>a</sup>	0.48 <sup>a</sup>	0.14 <sup>b</sup>	0.10 <sup>b</sup>
“Dangerous” traits	0.04 <sup>a</sup>	0.02 <sup>a</sup>	0.36 <sup>b</sup>	0.32 <sup>b</sup>

*Note.* Entries are means on combined feeling or trait scales that run from 0 (no feeling or no trait) to 1 (feel it very much or trait describes the animal very well). Means in the same row that do not share a common superscript are significantly different ( $p < .05$ ). See Appendix B for item wording.

respondent's initial position and argument direction. If the positive affect aroused by a cute animal transfers in a simple fashion to the organization, there should be a significant positive effect of a cute image ( $b_2$ ) on organization support, independent of the argument advanced in the flyer. Table II presents the results of this analysis. Findings are presented for all three indicators of organization support: agreement, positive feelings, and intended action.

Among the entire sample (left-hand side of Table II), the findings for all three dependent variables argue against a simple transfer-of-affect model. The coefficient for cute animal ( $b_2$ ) is not significant in any of the three equations. Only one of the nine image-related coefficients is significant, and this finding is unrelated to the initial hypotheses.<sup>8</sup> Taken together, these three equations indicate that the positive or negative feelings aroused by the animal did not transfer in any simple way to the sponsoring organization. Reading a flyer that depicted an attractive versus an ugly animal had no significant impact on one's agreement with, positive feelings for, or willingness to act on behalf of CBI.

The best predictor of support and willingness to act on behalf of the organization was hearing an argument with which one agreed. Support for a pro-environment organization and opposition to an anti-environment organization increased with the strength of a respondent's support for a pro-environment position. This is indicated in Table II by a significant, positive coefficient for the interaction between one's initial position on the environment and a pro-environment argument ( $b_6$ ) for all three dependent variables, and by a significant negative coefficient for pro-environment attitude ( $b_5$ ) when exposed to the anti-environment argument (pro-environment argument = 0 in Equation 1) for agreement with the organization and willingness to act on its behalf.

Perhaps the simple effects of an emotive image are confined, however, to those who are least involved in environmental issues. On the basis of a dual-processing model of attitude change, we might expect the least involved to pay so little attention to the text of the flyer that they are influenced solely by the attractiveness

<sup>8</sup> Respondents who saw an image of an ugly insect (when cute and mammal are 0) felt more positive about CBI than did individuals in the no-image condition.

**Table II.** Effects of Emotive Imagery on Organization Support Independent of Argument Direction: Simple Transfer of Affect

	Entire sample (N = 236)		Least involved (N = 119)	
	Agreement	Readiness to act	Agreement	Readiness to act
<i>Emotive image</i>				
Image	-0.21 (0.25)	-0.62 (0.47)	-0.51 (0.32)	-0.21 (0.62)
Image × Cute	-0.27 (0.19)	0.18 (0.36)	-0.31 (0.24)	-0.43 (0.46)
Image × Mammal	0.13 (0.19)	-0.37 (0.36)	0.41 (0.24)	0.03 (0.46)
<i>Controls: Initial attitude</i>				
Pro-environment argument	0.10 (0.21)	0.13 (0.39)	-0.25 (0.22)	-0.26 (0.43)
Pro-environment attitude	-4.82 (0.88)**	-4.85 (1.64)**	-4.56 (1.15)**	-5.16 (2.19)*
Pro-Environment Attitude ×				
Pro-Environment Argument	12.83 (1.19)**	14.67 (2.22)**	12.79 (1.53)**	13.71 (2.94)**
Constant	5.59 (0.23)**	3.73 (0.43)**	5.95 (0.27)**	3.56 (0.53)**
R <sup>2</sup> (adjusted)	.47	.23	.42	.15

Note. Entries are unstandardized regression coefficients; standard errors are in parentheses. All dependent variables are coded 0 to 10, with a higher score representing stronger support for the organization. All independent variables are dummy variables coded as 0 or 1 with the exception of pro-environment attitudes, which are coded -5 to .5. Due to missing values, the N among the entire sample was reduced to 233, 233, and 234 in columns 1–3 respectively; the N among the least involved was reduced to 118 in column 4.

\* $p < .05$ , \*\* $p < .01$ .

or ugliness of the depicted animal. In contrast, the most involved concentrate on the flyer's message and remain uninfluenced by its accompanying visual imagery. If so, we would expect the coefficient for cute animal to have a significant positive impact on organization support when Equation 1 is recalculated for those who are the least involved in environmental issues. The findings for these regression analyses are presented on the right-hand side of Table II.

Once again, the data contradict a simple transfer-of-affect model even among the least involved. The coefficient for cute animal ( $b_2$ ) is not significant for any of the three measures of organization support. Indeed, none of the nine image-linked coefficients reach significance. There is no evidence here that those least involved in environmental issues support an organization because that organization depicts a cute or ugly animal in its appeal. As was seen in the entire sample, support for the organization does not depend on emotive imagery but rather on agreement with the arguments advanced in the flyer. There is a significant and positive interaction between argument direction and initial attitude toward the environment ( $b_6$ ) for all three dependent variables on the right-hand side of Table II. Apparently, few individuals are influenced by a powerful emotional image without giving some thought to the intellectual context in which it is presented.<sup>9</sup>

### *Integrated Affect and Cognition*

Having ruled out the existence of any simple transfer of affect, we turn to the remaining predictions that are derived from an integrated affect and cognition model, in which affective imagery is thought to elicit both affective and cognitive processing. In essence, the effect of depicting a cute animal will depend on whether an organization promotes the animal's survival or is willing to sacrifice it for economic development. It will also depend on the respondent's position on the environment. Thus, we expect that among environment supporters, a cute animal will promote support for a pro-environment organization to a far greater degree than would an ugly animal. Among environment opponents, we expect a cute animal to undercut support for an anti-environment group.

Before presenting the analytic model, it is worth noting that there are far more environment supporters ( $N = 175$ ) than opponents ( $N = 61$ ) in the sample. More important, involvement is linked to one's position on the environment. Although a majority (58%) of environment supporters are highly involved in environmental issues, involvement is quite low (23%) among environment opponents. The paucity of involved anti-environmentalists should be kept in mind when interpreting the next analyses. It helps to explain why environment opponents are less affected than environment supporters by the emotive imagery in this study.

<sup>9</sup> Emotive visual imagery has no impact among highly involved individuals either, although these results are not presented in Table II.



To test the central hypotheses, we evaluated the following model in which image, cute, mammal, and pro-environment argument are dummy variables:

$$\text{Equation 2: Organization support} = a + b_1(\text{image}) + b_2(\text{image} \times \text{cute}) + b_3(\text{image} \times \text{mammal}) + b_4(\text{pro-environment argument}) + b_5(\text{pro-environment argument} \times \text{image}) + b_6(\text{pro-environment argument} \times \text{image} \times \text{cute}) + b_7(\text{pro-environment argument} \times \text{image} \times \text{mammal}) + b_8(\text{pro- or anti-environment attitude}) + b_9(\text{pro-environment argument} \times \text{pro- or anti-environment attitude})$$

In the above equation, the anti-environment flyer is considered the *baseline* condition (following Mendelberg, 1997) and, because we expect environment supporters to feel negatively about this organization when it urges the destruction of a cute animal, the coefficient for cute animal ( $b_2$ ) should be negative. In contrast, the cute animal should promote support for the pro-environment organization among environment supporters, and thus we expect a positive interaction between it and the pro argument ( $b_6$ ). We refer to the latter as the *incremental* effect of a cute animal in the pro-environment condition. We expect the animal to have similar results for environment opponents, although they should be more positively disposed toward anti- than toward pro-environment arguments. The results of this analysis, which includes an interaction between argument direction and emotive imagery, are presented in Table III separately for pro- and anti-environment participants. Each regression is represented by a row. Only the coefficients for the baseline and incremental effects of a cute animal are presented in Table III. The full regression analyses for Equation 2 from which the coefficients in Table III are drawn are presented in Appendix C.

As seen in Table III, there is initial support for the integrated affect and cognition model. As expected, the cute animal influences attitudes toward the organization among environment supporters. Environment supporters are significantly more likely to disagree with CBI when it argues against the preservation of a cute animal (the baseline) but are more likely to agree with CBI when it argues for the cute animal's preservation (incremental). Environment supporters' willingness to act on behalf of CBI shows a similar trend, although they are more willing to do so when CBI saves a cute animal than to oppose CBI when it does not. The only dependent variable that does not fit this trend is feelings toward CBI. The image of a cute animal has no effect on feelings for CBI regardless of its position on the environment. Taken across all three dependent variables, there is a negative average baseline effect of  $-0.39$ , indicating a mild tendency among environment supporters to oppose CBI when it does not save a cute animal, and a combined effect of  $1.01$  (baseline + incremental), suggesting a somewhat stronger tendency to support CBI when the cute animal is preserved.

In contrast, environment opponents remain largely unmoved by the ugliness or attractiveness of the animal depicted in the CBI flyer. The coefficients for a cute animal are at or close to zero, regardless of argument direction. When averaged

**Table III.** Effects of Emotive Imagery on Organization Support: Affective Elaboration Among Environment Supporters and Opponents

	Effect of cute image on anti-environment argument (baseline)	Effect of cute image on pro-environment argument (incremental)
Environment supporters ( <i>N</i> = 175)		
Agreement with CBI	-0.87 (0.31)**	1.31 (0.44)**
CBI: Positive feelings	0.35 (0.57)	0.74 (0.81)
Readiness to act for CBI	-0.65 (0.59)	2.17 (0.84)**
Environment opponents ( <i>N</i> = 61)		
Agreement with CBI	-0.51 (0.56)	0.00 (0.74)
CBI: Positive feelings	0.60 (1.08)	-0.66 (1.44)
Readiness to act for CBI	-0.66 (0.99)	-0.20 (1.32)

*Note.* Entries are unstandardized OLS regression coefficients; standard errors are in parentheses. Incremental effects must be added to the baseline effects for the total effect of a cute image among respondents exposed to a pro-environment argument. Independent variables not shown include presence of an image, image  $\times$  mammal, argument direction (pro), argument direction  $\times$  image, argument direction  $\times$  mammal, pro-environment attitudes, and argument direction  $\times$  pro-environment attitudes. All dependent variables are coded 0 to 10, with a higher score representing stronger support for the organization. All independent variables are dummy variables coded as 0 or 1 with the exception of pro-environment attitudes, which are coded  $-0.5$  to  $0.5$ . See Appendix C for the full regressions.

\*\* $p < .01$ .

across all three dependent variables, a cute animal results in a slight tendency to oppose CBI when it is willing to sacrifice the animal ( $-0.19$ ), but the cute animal does not promote support for the pro-environment organization attempting to save it ( $-0.48$ ). These trends are not significant, however. None of the individual coefficients ( $b_2$  and  $b_6$ ) in Table III reach significance for environment opponents.<sup>10</sup> Their support for CBI is based solely on whether the organization supports or opposes their beliefs about the environment. The findings for environment opponents do not conform to the expectations of the simple integrated affect and cognition model, but they make more sense when we consider the effects of involvement and the small number of involved anti-environmentalists in our sample.

Overall, these findings provide some support for the general version of the integrated message elaboration hypothesis. We next consider the role of issue involvement in modifying the persuasive effects of emotive imagery. These analyses provide even stronger support for our predictions and demonstrate that emotive imagery has its greatest impact on the most involved environment supporters.

<sup>10</sup> Among environment opponents, the reactions to CBI depend almost entirely on the strength of one's initial anti-environment position and the organization's position (see Appendix C). Strong environment opponents disagree with CBI, dislike it, and will not act on its behalf when it is portrayed as pro-environment. They are supportive of the organization on all these dimensions when it adopts an anti-environment stance. The attractiveness of an animal that is being saved or sacrificed by the organization is irrelevant to them.

*Biased Reasoning Among the Most Involved*

As noted earlier, the majority of individuals who are highly involved with the environment issue are pro-environment. Equation 2 was thus reestimated for the least and most involved supporters of the environment. The baseline and incremental effects for a cute animal ( $b_2$  and  $b_6$ ) are presented separately for the least and most involved in Table IV. The complete regressions from which these coefficients are derived are presented in Appendix D. The findings in Table IV provide strong support for our earlier hypotheses.

Highly involved environment supporters are more opposed to an anti-environment organization that would sacrifice a cute animal than one that would sacrifice an ugly animal. The baseline coefficient for cute animal only reaches significance for agreement with the organization, but it is consistently negative and attains an average value of  $-1.11$ . Highly involved environment supporters are even more likely to support an organization that would save a cute animal than one that would save an ugly animal. The incremental effect of a cute animal on support for a pro-environment organization is significant and positive for all three dependent variables. When averaged across all three indicators of organization support, a cute animal receives almost 2 (1.98) additional points on the 0 to 10 support scale than an ugly animal, when baseline and incremental effects are combined.

In contrast, individuals who support the environment but are least involved in environmental issues are no more likely to oppose an anti-environment organization that is willing to sacrifice a cute versus an ugly animal, nor are they more likely to support an organization attempting to save a cute animal. The only significant findings are the reverse of those predicted. Environment supporters who are least involved in the issue actually feel more positive about an organization sacrificing a cute animal ( $b_2 = 2.02$ ) and feel slightly less positively about an organization trying to save it ( $b_2 + b_6 = 2.02 - 2.99 = -.97$ ). This trend does not extend to the other two dependent variables. Findings for the less involved environment supporters parallel findings reported earlier for environment opponents, the majority of whom are relatively uninvolved with environmental issues.

These results lend strong support to the notion that highly involved individuals are most influenced by emotive imagery. To show more clearly the magnitude of this effect, we present in Figure 2 the predicted values of one's willingness to act on behalf of CBI for environment supporters who are high and low in issue involvement. (The regression shown in the lower panel of Appendix D was used to calculate predicted values.) Predictions were calculated for those scoring .25 on the pro-environment scale out of a total scale range of  $-.5$  to  $.5$ ; 20% of the highly involved and 12% of the least involved environment supporters scored .25 or higher on this scale.

Figure 2 demonstrates the greater impact of a cute animal on highly involved environment supporters than on those who are less involved. The highly involved are very ready to act on behalf of CBI when it supports an attractive monkey (6.58)

**Table IV.** Effects of Emotive Imagery on Organization Support Among Environment Supporters (*N* = 175) by Argument Direction and Issue Involvement

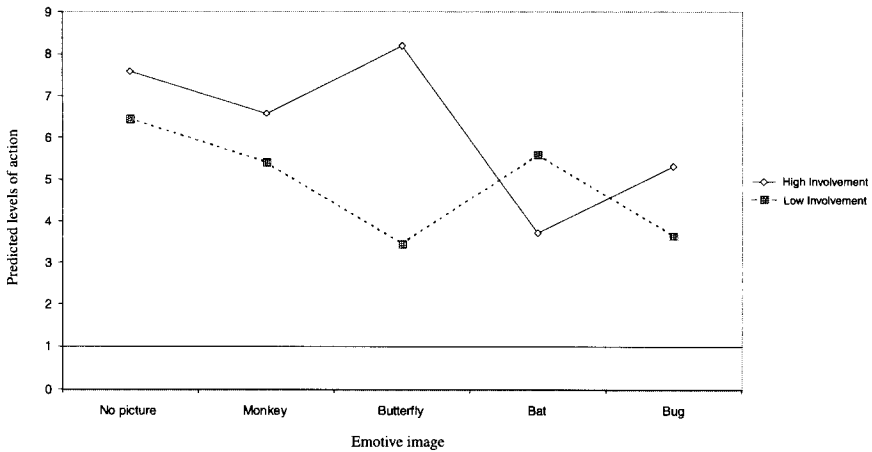
Environment supporters	Effect of cute image on anti-environment argument (baseline)	Effect of cute image on pro-environment argument (incremental)
Low involvement ( <i>N</i> = 73)		
Agreement with CBI	-0.41 (0.45)	0.36 (0.64)
CBI: Positive feelings	2.02 (0.83)*	-2.99 (1.18)**
Readiness to act for CBI	-0.64 (0.85)	0.45 (1.20)
High involvement ( <i>N</i> = 102)		
Agreement with CBI	-1.30 (0.42)**	2.18 (0.61)**
CBI: Positive feelings	-1.09 (0.73)	3.28 (1.07)**
Readiness to act for CBI	-0.95 (0.78)	3.83 (1.14)**

*Note.* Entries are unstandardized OLS regression coefficients; standard errors are in parentheses. Incremental effects must be added to the baseline effects for the total effect of a cute image for respondents exposed to a pro-environment argument. Independent variables not shown include presence of an image, image × mammal, argument direction (pro), argument direction × image, argument direction × mammal, pro-environment attitudes, and argument direction × pro-environment attitudes. All dependent variables are coded 0 to 10, with a higher score representing stronger support for the organization. All independent variables are dummy variables coded as 0 or 1 with the exception of pro-environment attitudes, which are coded -.5 to .5. See Appendix D for the full regressions.

\**p* < .05, \*\**p* < .01.

or a butterfly (7.68) but are much less willing to act when CBI supports an ugly bat (3.70) or a bug (5.31). In contrast, the less involved are more supportive of CBI when it supports a mammal (monkey = 5.41, bat = 5.60) than an insect (butterfly = 3.45, bug = 3.64), as reflected in a significant interaction between pro-environment argument and mammal in Appendix D. But as these numbers suggest, less involved environment supporters are less willing to act on behalf of CBI overall and are not more willing to support CBI when it supports a cute animal versus an ugly one.

The one anomaly in Figure 2 is that both highly involved and less involved environment supporters are quite willing to act on behalf of CBI in the control condition, when the animal is mentioned in the flyer but is not depicted. If anything, support for CBI among highly involved environment supporters is just as high when they see no animal as when they see an attractive animal. Does this undercut our argument about the persuasive effects of emotive visual imagery? We think not. A closer examination of respondents' initial feelings toward the animal in all experimental conditions suggests that even though no animal is depicted in the control condition and its attractiveness is left unstated, respondents imagine an animal that is attractive and appealing. Supportive evidence is presented in Figure 3. Regardless of issue involvement, environment supporters feel almost as positively about the Guatemalan cobyx when it is not depicted as when it is portrayed as a cute monkey or a beautiful butterfly. Perhaps as a consequence of past environment appeals, environment supporters tend to think of beautiful or attractive animals



**Figure 2.** Predicted levels of action on behalf of a pro-environment organization among environment supporters.

*Note.* Predicted levels of action calculated at a value of .25 on the pro-environment scale. See text for details.

when they read about attempts to save or sacrifice an animal unless they are informed otherwise.

### *The Nature of Issue Involvement*

We have uncovered intriguing evidence that emotive appeals have greatest resonance with those most involved in an issue. But perhaps our measure of involvement did not adequately tap involvement in the environment issue, and thus lacked validity. Or perhaps individuals who are highly involved in environmental issues are prone to ignore intellectual arguments at the expense of powerful imagery, unlike individuals involved in other types of issues typically explored in persuasion studies. Additional analyses rule out both possibilities. Highly involved individuals seem better informed than less involved individuals on environment issues in general. On a multiple-choice environment quiz scaled from 0 to 4, the highly involved knew significantly more than the less involved (2.66 vs. 2.16;  $p < .05$ ). They had performed significantly more actions on behalf of an environmental organization (1.83 vs. 0.97 out of 6 possible actions;  $p < .05$ ) and had taken more action on behalf of an animal rights organization (1.46 vs. 0.93 out of 6 possible actions;  $p < .05$ ).<sup>11</sup> There is no question that those who scored highly on

<sup>11</sup> The four-item knowledge quiz consisted of questions about the nature of the greenhouse effect, the harm caused by fluorocarbons, the dangers of a hole in the ozone layer, and the importance of the

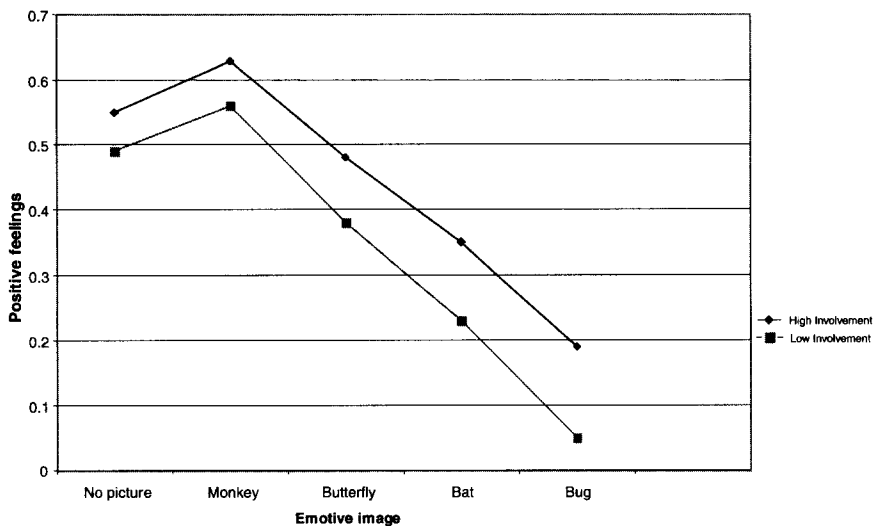


Figure 3. Positive emotional reactions to the animal among environment supporters.

our involvement measure had performed a greater number of activities on behalf of environmental organizations and knew more about environmental issues.

There was also no evidence that the highly involved paid less attention to the message contained in the flyer. If anything, highly involved respondents demonstrated significantly better recall of information contained in the flyer than did less involved respondents, consistent with past findings (see Petty et al., 1997, p. 632). On a five-item recall test completed after the flyer had been returned to the experimenter—including questions about the name of the country, the kind of people living in the affected area, the full name of the organization, the nature of an argument advanced by the organization, and the kind of metal found in the region—highly involved environment supporters obtained a greater number of correct answers than the less involved (4.0 vs. 3.6;  $p < .05$ ). Highly involved pro-environment individuals also reported feeling more aroused—excited, interested, and intense—when reading the flyer (5.31 vs. 4.04;  $p < .05$ ).<sup>12</sup> Moreover, environment opponents demonstrated the same low level of arousal as less involved environment supporters (3.84 vs. 4.04, not significant). Thus, in accordance with

spotted owl. The six possible actions on behalf of an environmental or animal rights organization were as follows: demonstrated or picketed, sent letters or postcard, spoke up in the presence of family or friends, boycotted products, made a donation, or became a member ( $\alpha = .8$ ).

<sup>12</sup> Following Kosterman (1991), arousal was assessed by asking respondents to indicate the extent to which the flyer made them feel calm (0) or excited (10), bored (0) or interested (10), and dull (0) or intense (10). These three items were combined to create a scale that ranged from 0 to 10 ( $\alpha = .79$ ).

our expectation that highly involved individuals would hold more emotionally charged views on the environment, the involved environment supporters reported feeling more aroused by the message in addition to remembering more of its factual details. It appears that these involved individuals were simultaneously processing both the intellectual and emotional content of the message, yet were more powerfully influenced by its emotive imagery than were the less involved environment supporters and the opponents.

## Discussion

What conclusion can be drawn from this research about public susceptibility to emotionally charged persuasive appeals? Our findings challenge the longstanding view of an easily manipulated and gullible public. There is no evidence in this study that a cute or beautiful animal sways an individual to support an organization irrespective of that organization's goals, arguments, and rational appeals, even when the animal is attractive and arouses strong positive emotions. Nor is there any evidence that those least involved in an issue are most susceptible to this superficial form of persuasion. Of course, we cannot conclude that such types of appeals never work. Participants in our study read a flyer that contained considerable intellectual content; they also had time to read through this carefully. Neither condition is likely to hold for the typical spot television ad (Diamond & Bates, 1993; Kern, 1989), and there is some evidence that emotive or symbolic appeals can weaken thoughtful processing of a brief televised political commercial (Kosterman, 1991). Moreover, our results are based on college students who are better informed about politics than the average citizen.

The results of this study challenge conventional wisdom in a second, and potentially more powerful, fashion. We find that those most committed to a cause are influenced the most by emotive appeals. Involved supporters of the environment in our study were more likely than their less involved counterparts to support an environmental organization protecting a cute animal than one protecting an ugly animal. This suggests an alternative, and thus far unexplored, political role for emotive appeals: as a means by which an organization or a politician can galvanize potential supporters and incite them to action. This conclusion radically alters the debate over emotive appeals. In a simple transfer-of-affect model, emotive appeals are seen as a potentially pernicious manipulation of the uninformed; on the basis of our current findings, however, emotive appeals are a means by which to arouse one's supporters. This seems like a more benign consequence than manipulating uninformed citizens to support a politician or an issue at odds with their preexisting political outlook.

Emotive appeals do not have a thoroughly innocuous impact on the political decision-making process, however. It is clear that emotive images led to biased reasoning in this study. Knowledgeable, involved participants reacted more strongly to arousing visual imagery and were much more likely to feel positive

about an organization, agree with its goals, objectives, and arguments, and take action on its behalf when it was protecting a cute animal. This effect was independent of the animal's potential biological importance and is difficult to justify on purely intellectual grounds. It is possible to argue that the loss of a higher-order mammal signals deeper environmental problems than the loss of an insect, but a cute mammal was just as effective as a cute insect in promoting organizational support; an ugly mammal was just as likely as an ugly insect to undercut support.

It is difficult to defend this reasoning as fully consistent with the goals of the environmental movement. In the extreme, advocates of biodiversity such as E. O. Wilson (1992) have argued that the preservation of a declining ant species is just as important in the long run as the preservation of an endangered mammal. The public's inability to share this view bodes poorly for highly technical environmental issues (such as greenhouse gas emissions) that are not accompanied by powerful images that motivate political action but may be more consequential in the long run than the loss of a single mammalian species.

The environmental movement has undoubtedly contributed to the charged emotional flavor of environmental politics. All respondents, regardless of their involvement in environmental issues, spontaneously imagined an attractive animal when they read about but did not see the fictitious Guatemalan cobyx. This finding is surely related to the activities of environmental organizations such as Greenpeace and the World Wildlife Fund, which have purveyed images of adorable baby seals, majestic Siberian tigers, and cuddly pandas in the service of their cause. This results in highly affective attitudes, especially among those who are most involved in the environmental movement, leaving them susceptible to future emotive appeals.

The findings of this study lend additional insight into the nature of contemporary American politics. Interest groups expend considerable resources on motivating and persuading supporters and potential recruits to contribute time and money to their cause. Our results highlight the crucial role of emotive appeals in that process, and, if anything, argue for a more passionate view of this process than is conveyed by contemporary research on political participation and interest groups (Chong, 1991; Verba, Scholzman, & Brady, 1995).<sup>13</sup> Together with other recent psychological research on issue involvement, our results imply that political commitment and involvement often incorporate strong emotions that result in heightened susceptibility to like-minded emotive appeals (Johnson & Eagly, 1989; Zuwerink & Devine, 1996). Interest groups working on environmental issues seem fully aware of these results, which are reflected in the types of environmental problems that constitute the basis of their appeals.

<sup>13</sup> Although researchers have paid little attention to the role of emotion in political participation, social movement researchers are paying increased attention to the importance of symbolic expression as a motive for collective action (Lofland, 1995; Taylor & Whittier, 1995).



*Future Research*

This research raises a series of intriguing questions about the effectiveness of emotive appeals across a broad array of issues. Emotive appeals should be most effective on issues that arouse or elicit strong feelings. Thus, we would expect similar findings for a range of social issues such as abortion, civil rights, the death penalty, or gun control. We did not find equal levels of involvement on both sides of the environmental issue in this study and so could not document the symmetrical effects of emotive imagery. But many affect-laden issues elicit powerful emotive imagery on both sides of the debate. Consider abortion. A woman's right to choose and the murder of infants serve as equally passionate symbols for supporters and opponents of abortion rights. Emotive appeals are thus likely to work equally well among involved individuals on both sides of the issue. For example, among committed abortion rights advocates, the image of a coat hanger may elicit stronger feelings than a reasoned argument in favor of legalized abortion. Thus, a related question worthy of investigation is whether emotive symbols cross over to arouse the enmity of the other side. Would, for example, the image of an aborted fetus incense an abortion rights supporter to a greater degree than a simple right-to-life argument? This would be consistent with our argument that involved individuals react more strongly to emotive appeals, but that such appeals are interpreted in light of their accompanying message.

Our findings also raise questions about the nature of political involvement. Are emotionally labile individuals most likely to get involved in politics because they have been aroused by past emotional appeals? This might explain the pattern of findings uncovered in this study and would help to account for the greater impact of emotive appeals on affective issues more generally. Or is everyone susceptible to emotive imagery to some degree? And, if so, to what extent can one's initial emotional reactions be overridden by factual information and reasoned argument in the early stages of attitude development? Experimental studies that actively create new attitudes that vary in their affective content can shed some light on the role of individual differences and the interplay of affect and cognition in the process of attitude creation.

There is no question that the environmental movement has some of the most powerfully affecting images at its disposal—cute animals that provoke almost universally positive emotions. Nonetheless, if we take seriously the actions of interest group organizations and their appeals across a broad array of causes, our findings may extend well beyond the environmental movement. Almost all interest group organizations make emotionally laden appeals to their supporters. Some groups, such as overseas humanitarian relief groups or those working on behalf of impoverished older people, use strong emotive images in their fundraising appeals. Others, such as organizations fighting intolerance or racism, draw on powerful emotive arguments and a defense of cherished values to make their case. But it is difficult to find any organization that sidesteps an emotional appeal in favor of a

purely informational approach. It appears that interest group organizations are well ahead of political behavior researchers in understanding the reach and scope of emotionally laden political appeals.

## APPENDIX A

### Wording of the Pro- and Anti-Environment Flyers

#### Pro-Environment

Dear friend,

Please let me quickly explain why we need your help.

We are presently channeling our energies into the urgent task of saving the Guatemalan Cobyx, pictured to the left. This unique and interesting species has always been restricted to the Atilan Hills, an inaccessible area in the Guatemalan jungle. The number of Cobyx has always been small and regrettably, through recent development in the area, their situation has dramatically deteriorated: This wonderful creature is now on the verge of extinction: Large reservoirs of copper have recently been discovered in the Atilan Hills, and mining corporations in search of greater profits are planning to turn the whole area into a wasteland, leaving no stone unturned. While the mining companies maintain that mining will benefit the local population, it will also forever destroy the habitat of this unique animal.

In plain English: For our children and children's children, we must save this truly special creature, the Guatemalan Cobyx. We must not allow another species to disappear from the face of the earth!

We urgently need your help. Your assistance is important. Time is running out. Given the urgency of the problem, we are currently buying land in the Atilan Hills, and plan to turn it into a reservation. We may even be able to protect the entire area from the mining companies, in order to preserve the habitat of the Cobyx, a truly remarkable species found nowhere else in the world.

Let not yet another animal fall prey to human greed and a desire for short-term profit. Let us preserve our earth for the sake of our children, in the way WE ourselves have inherited it!

Delay may be fatal. Please complete and return the enclosed card, together with a donation of whatever amount you can afford, and join our effort to save the Cobyx before it is too late. Awaiting your positive response,

Robert Durand,  
President

#### Anti-Environment

Dear friend,

Please let me quickly explain why we need your help.

We are presently channeling our energies into the urgent task of countering radical environmentalist attempts to save the Guatemalan Cobyx, pictured to the left. This species has always been restricted to the Atilan Hills, an inaccessible area in the Guatemalan jungle. The number of Cobyx has always been small. Moreover, the protection of the Guatemalan Cobyx would cause great hardship to a population of about 450 poor farmers in the area, who are on the verge of starvation. The misery of these peaceful people, who only know their ancient way of life and have nowhere to turn to improve their lot, is truly distressing. The infertile area barely allows for their survival. However, large reservoirs of copper have recently been discovered in the area, and mining will give these men and women jobs and the chance to join the 20<sup>th</sup> century on their own terms, by using the resources of their land. They are hopeful that finally, they will be able to send their children to school and enjoy medical care. Yet radical environmentalists oppose the development. They want to turn the Atilan Hills into a park, to save an animal, at the same time sacrificing human lives to poverty, disease and despair.

In plain English: We must not allow environmentalist lobbies once more to exclude powerless and voiceless people from a decent life, just to protect the habitat of a single animal species.

We urgently need your help. Your assistance is important. Time is running out. These men and women are about to lose their quest for their children's future!

Delay may be fatal. Please complete and return the enclosed card, together with a donation of whatever amount you can afford, and join our effort to save helpless people from powerful lobbies before it is too late. Awaiting your positive response,

Robert Durand,  
President

## APPENDIX B

### Wording of All Items

<i>Feelings Toward the Animal</i>		<i>Animal Traits</i>	
Positive	Negative	Positive, cute	Negative, dangerous
Tender	Disgusted	Cute	Dirty
Empathetic	Frightened	Cuddly	Nasty
Protective	Angry	Friendly	Dangerous
Sympathetic	Hostile	Beautiful	Obnoxious
Hopeful		Gentle	Hostile
		Intelligent	Repulsive
		Nice	Threatening
			Eerie

*Note.* The response options for feelings and traits were (1) very, (2) quite, (3) a little, (4) not at all.

#### *Initial Pro-Environment Scale (adapted from Seligman et al., 1994)*

Should agricultural genetic engineering to increase crop yields be allowed at SUNY experimental farms despite a slight risk of ecological imbalance?

Should public parklands such as the Adirondacks Park be open to increased mining and logging to promote increased employment and economic growth?

Should the use of private automobiles in North America be restricted in order to reduce air pollution?

Should sorting and recycling of all household garbage (including university residences) be mandatory on Long Island, even though it is inconvenient and time-consuming?

Should SUNY spend more money on programs to deal with local environmental problems (such as PCB storage and recycling) if it means increasing tuition and other student fees?

Should camping and hiking in the Pine Barrens Park be limited to reduce damage to land and wildlife?

Should ConEdison be allowed to continue to build more nuclear power plants to meet New York energy needs despite the increased risk of serious ecological damage?

Should U.S. industry be made to support attempts to reduce air and water pollution, even if it means loss of employment and decreased job opportunities for new university graduates?

Should the government increase our taxes on energy use in order to encourage energy conservation?

Should Wyoming farmers be allowed to hunt and kill wolves, an endangered species, to protect their livestock?

Should the U.S. government ever have the right to limit family size as a means of dealing with environmental problems caused by overpopulation?

Should buildings of historical and aesthetic value on Long Island be demolished if space is needed for new development?

Should very poor farmers in the Amazon area of Brazil be allowed to continue to clear land in the rainforests in order to survive, even though, if continued, it will cause permanent environmental damage with global consequences?

Should Long Island residents set their thermostats to their desired comfort level even if it means they will be using a lot of energy?

*Note.* The response options for these 14 items were (1) absolutely yes, (2) probably yes, (3) maybe yes, (4) neutral, (5) maybe no, (6) probably no, (7) absolutely no.

*Agreement With the Organization, CBI*

1. It is not right to destroy the habitat of the Guatemalan cobyx for time-bound economic gain.

2. Destroying the habitat of the Guatemalan cobyx is economically necessary for the sake of the farmers.

3. The Guatemalan farmers are a part of nature and have a right to live well, even if it means destroying the habitat of an animal.

4. There is probably another solution to the farmers' economic needs, a solution which does not involve the destruction of the habitat of the cobyx.

5. The farmers have every right to govern their territory and to decide themselves about any environmental issues they might face on their land.

6. Destroying the habitat of the cobyx is justifiable in this particular case.

7. Preserving the Guatemalan cobyx is ecologically important.

8. Every possible effort should be made to save an animal species, including the cobyx, no matter what the circumstances are.

9. The Guatemalan farmers should be allowed to enjoy a decent living standard just like us, even if the habitat of the animal is destroyed.

10. The Guatemalan local farmers should be less materialistic. If they would stick to their traditional lifestyle, which was more in harmony with their environment, this problem would not arise.

11. If the Guatemalan cobyx were to become extinct, what impact will it have on the world's ecology, according to your judgment?

*Note.* The response options for items 1 to 10 were (1) strongly disagree, (2) disagree, (3) moderately disagree, (4) neither, (5) moderately agree, (6) agree, (7) strongly agree. The response options for item 11 were (1) very negative, (2) negative, (3) somewhat negative, (4) no significant impact at all. Items 2, 3, 5, 6, and 9 were reversed in the pro-environment condition; items 1, 4, 7, 8, 10, and 11 were reversed in the anti-environment condition.

*Feelings Toward the Organization, CBI*

Positive	Empathetic	Hopeful
Tender	Protective	Sympathetic

*Note.* The response options were (1) very, (2) quite, (3) a little, (4) not at all.

*Readiness to Act on Behalf of the Organization, CBI*

How likely would you be to demonstrate or march with others in the street for CBI's specific cause?

How likely would you be to picket the Guatemalan embassy on behalf of CBI's specific cause?

How likely would you be to wear a T-shirt supporting this specific cause promoted by CBI?

How likely would you be to boycott Guatemalan products if a boycott were being called for by CBI, in order to press the Guatemalan government to intervene on CBI's behalf?

How likely would you be to speak up for this specific cause represented by CBI in the presence of friends and family who oppose the cause?

Independent of the specific cause presented here, how likely would you be to join the CBI organization as a regular member, if there was no membership fee?

How likely would you be to wear a T-shirt or badge with CBI's logo?

How likely would you be to defend the CBI organization in the presence of friends and family who oppose the organization?

How likely would you be to do volunteer work one evening a month for the CBI organization?

*Note.* The response options were (1) very unlikely, (2) unlikely, (3) somewhat unlikely, (4) neither, (5) somewhat likely, (6) likely, (7) very likely.

*Issue Involvement*

How informed do you consider yourself to be about environmental issues?

- a. Very informed
- b. Informed
- c. Somewhat informed
- d. Not informed at all

How interested are you in issues regarding the protection of the environment?

- a. Very interested
- b. Interested
- c. Somewhat interested
- d. Not interested at all

How informed do you consider yourself to be about issues regarding the protection of animals and animal rights?

- a. Very knowledgeable
- b. Knowledgeable
- c. Somewhat knowledgeable
- d. Not knowledgeable at all

How interested are you in issues regarding the protection of animals and animal rights?

- a. Very interested
- b. Interested
- c. Somewhat interested
- d. Not interested at all

**APPENDIX C**  
**Origins of Organization Support Among Environment Supporters and Opponents: Complete Regressions**

Agreement    Positive feelings    Readiness to act

*Environment supporters (N = 175)*

*Emotive image (baseline)*

Image (yes/no)	0.18 (0.41)	-1.62 (0.75)*	-0.41 (0.78)
Image × Cute	-0.87 (0.31)**	0.35 (0.57)	-0.65 (0.59)
Image × Mammal	-0.47 (0.31)	0.27 (0.56)	-0.36 (0.59)
<i>Image × Argument (incremental)</i>			
Pro-environment argument	0.23 (0.57)	0.37 (1.06)	1.09 (1.09)
Pro-Environment Argument × Image	-1.11 (0.58)	0.14 (1.07)	-1.87 (1.10)
Pro-Environment Argument × Image × Cute	1.31 (0.44)**	0.74 (0.81)	2.17 (0.84)**
Pro-Environment Argument × Image × Mammal	0.82 (0.44)	-0.57 (0.81)	0.18 (0.83)
<i>Controls: Initial attitude</i>			
Pro-environment (strength)	-5.49 (1.51)**	1.26 (2.79)	-2.96 (2.89)
Pro-Environment × Pro-Environment Argument	12.49 (2.16)**	6.23 (3.99)	12.50 (4.14)**
Constant	5.85 (0.42)**	4.91 (0.77)**	3.59 (0.80)**
R <sup>2</sup> (adjusted)	.49	.13	.26

*Environment opponents (N = 61)*

*Emotive image (baseline)*

Image (yes/no)	0.57 (0.69)	0.87 (1.36)	1.86 (1.25)
Image × Cute	-0.51 (0.56)	0.60 (1.08)	-0.66 (0.99)
Image × Mammal	0.13 (0.59)	-2.02 (1.12)	-0.92 (1.03)
<i>Image × Argument (incremental)</i>			
Pro-environment argument	-0.05 (0.80)	0.13 (1.58)	0.81 (1.45)
Pro-Environment Argument × Image	-0.42 (0.95)	-0.14 (1.87)	-0.05 (1.72)
Pro-Environment Argument × Image × Cute	0.00 (0.74)	-0.66 (1.44)	-0.20 (1.32)
Pro-Environment Argument × Image × Mammal	0.69 (0.36)	2.43 (1.45)	0.68 (1.33)

*Controls: Initial attitude*

Anti-environment (strength)	0.19 (2.98)	10.15 (5.86)	13.72 (5.38)*
Anti-Environment × Pro-Environment Argument	-10.38 (3.5)**	-17.70 (3.27)*	-23.54 (6.37)**
Constant	5.54 (0.64)**	3.08 (1.25)*	1.47 (1.15)
R <sup>2</sup> (adjusted)	.43	.12	.23

*Note.* Entries are unstandardized regression coefficients. Standard errors are in parentheses. All dependent variables are coded on a 0 to 10 scale, with a higher score representing stronger support for the organization. The independent variables are all coded from 0 to 1 except pro-environment attitudes, which are coded -.5 to .5. Missing values resulted in a slightly lower N for regression analyses among environment opponents (58, 59, 59 in columns 1–3). \* $p < .05$ , \*\* $p < .01$ .

**APPENDIX D****Origins of Organization Support Among Environment Supporters:  
Complete Regressions by Involvement**

Agreement      Positive feelings      Readiness to act

*High involvement (N = 102)**Emotive image (baseline)*

Image (yes/no)	0.70 (0.55)	-0.88 (0.97)	-0.05 (1.03)
Image × Cute	-1.30 (0.42)**	-1.09 (0.73)	-0.95 (0.78)
Image × Mammal	-0.40 (0.41)	-0.17 (0.71)	-0.44 (0.76)

*Image × Argument (incremental)*

Pro-environment argument	0.69 (0.82)	2.46 (1.44)	2.19 (1.53)
Pro-Environment Argument × Image	-1.40 (0.78)	-0.99 (1.36)	-2.22 (1.45)
Pro-Environment Argument × Image × Cute	2.18 (0.61)**	3.28 (1.07)**	3.83 (1.14)**
Pro-Environment Argument × Image × Mammal	0.24 (0.59)	-0.82 (1.03)	-1.17 (1.10)

*Controls: Initial attitude*

Pro-environment (strength)	-4.24 (2.07)*	9.10 (3.63)*	2.65 (3.86)
Pro-Environment × Pro-Environment Argument	12.51 (3.14)**	-2.68 (5.50)	10.09 (5.87)
Constant	5.11 (0.57)**	3.29 (1.00)**	2.21 (1.07)*
R <sup>2</sup> (adjusted)	.56	.25	.37

*Low involvement (N = 73)**Emotive image (baseline)*

Image (yes/no)	-0.30 (0.62)	-3.33 (1.14)**	-1.13 (1.16)
Image × Cute	-0.41 (0.45)	2.02 (0.83)*	-0.64 (0.85)
Image × Mammal	-0.63 (0.46)	0.78 (0.84)	-0.62 (0.86)

<i>Image × Argument (incremental)</i>			
Pro-environment argument	-0.15 (0.82)	-2.90 (1.51)	-1.25 (1.54)
Pro-Environment Argument × Image	-1.21 (0.85)	2.49 (1.57)	-1.68 (1.60)
Pro-Environment Argument × Image × Cute	0.36 (0.64)	-2.99 (1.18)*	0.45 (1.20)
Pro-Environment Argument × Image × Mammal	1.80 (0.63)**	0.02 (1.16)	2.58 (1.19)*
<i>Controls: Initial attitude</i>			
Pro-environment (strength)	-5.97 (2.39)*	-7.51 (4.41)	-11.50 (4.50)*
Pro-Environment × Pro-Environment Argument	11.61 (3.45)**	21.85 (6.36)**	19.53 (6.49)**
Constant	6.46 (0.62)**	6.93 (1.14)**	5.70 (1.16)**
R <sup>2</sup> (adjusted)	.36	.17	.21

*Note.* Entries are unstandardized regression coefficients. Standard errors are in parentheses. All dependent variables are coded on a 0 to 10 scale, with a higher score representing stronger support for the organization. The independent variables are all coded from 0 to 1 except pro-environment attitudes, which are coded -5 to .5.

\* $p < .05$ , \*\* $p < .01$ .

## ACKNOWLEDGMENTS

An earlier version of this paper was presented at the annual meeting of the International Society of Political Psychology, Washington, DC, July 1995. Correspondence concerning this article should be sent to Leonie Huddy, State University of New York at Stony Brook, Stony Brook, NY 11794-4392. E-mail: leonie.huddy@sunysb.edu

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