

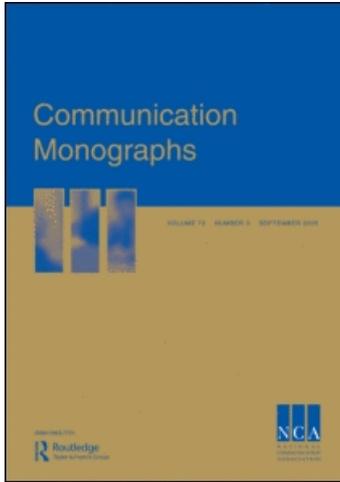
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### Modeling the ego-defensive function of attitudes

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# Modeling the Ego-Defensive Function of Attitudes

Maria Knight Lapinski and Franklin J. Boster

*Studying the psychological needs served by holding certain attitudes is the focus of the functional approach to attitudinal research. One function evidenced consistently in attitudinal studies is the ego-defensive function. Attitudes serving an ego-defensive function protect one's self-concept from counterattitudinal messages about the self. This paper presents an alternative perspective for understanding the ego-defensive function by conceiving and modeling it as a causal process. The data were consistent with a hypothesized model in which a message threatening to a salient aspect of self-concept, as opposed to a non-threatening message, initiates ego-defensiveness resulting in more negative message-related thoughts, discounting message content, and source derogation. Source derogation was related negatively to conformity to message recommendations. These findings suggest a new way of thinking about the ego-defensive function and the ways in which people respond to counterattitudinal information about an issue on which they are highly ego-involved.* **Key words:** Ego-Defense

"Unless we know the psychological need which is met by the holding of an attitude, we are in a poor position to predict how it will change." —Daniel Katz (1960 p. 170)

The functional approach to attitudes asserts that understanding the psychological needs to which our attitudes are an adaptation, and targeting them, is necessary to produce successful persuasion. That is, if one can determine the function served by an attitude and persuade targets that their attitude no longer serves this function, they will change their attitude (termed the functional matching effect; Lavine & Snyder, 1996). Examination of the psychological functions that various attitudes serve began with the work of two independent groups of investigators (Katz, 1960; Katz, McClintock, & Sarnoff, 1957; Smith, Bruner, & White, 1956). Later functional theorists (e.g., Herek, 1986, 1987; Shavitt, 1989, 1990), although enumerating different lists of functions, approximated closely the models provided by Katz (1960) and Smith et al. (1956). Notably, one attitude function common to all of these lists is the ego-defensive function.

Almost a decade ago, Dillard (1993) suggested that the functional approach to attitudes should be one of the central foci of future persuasion research because of its important implications for attitude formation and change. Recently, several scholars have heeded this suggestion (e.g. Hullett & Boster, in press; La France & Boster, 2001; Orrego, 1999), but despite a resurgence in interest in this approach, an understanding of the ego-defensive function remains elusive.

The ego-defensive function has received limited attention in recent years, possibly due to its complexity (Katz, 1989). This analysis involves a departure from previous work in the functional approach in that it integrates the existing literature on ego-defense and ego-involvement, and charts the process by which people respond to attitude discrepant/congruent messages for a topic in which they are highly

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ego-involved. Notably, this approach conceives of the ego-defensive function as a *causal process*, instead of as a *variable* (see Herek, 1986, 1987), or as a *value of a variable*.<sup>1</sup>

### *The Ego-Defensive Function as a Causal Process*

Functional theorists posit that attitudes sometimes act to promote the management of internal conflict, and they term such attitudes ego-defensive (Sarnoff & Katz, 1954; Katz, 1960). These attitudes may serve to protect cognitions central to the self-concept from messages that challenge, or attack, them. For example, one might see oneself as fair, open-minded, and of goodwill, yet hold stereotypes of racial or ethnic groups. When confronted with a message threatening the consistency of these cognitions, one may exert considerable cognitive effort in order to manage the ensuing internal conflict. In this way ego-defensive attitudes set into motion a process designed to render them resistant to change.

Most theorists agree that ego-defensive attitudes are generally not accessible directly to those who hold them, and that they are highly resistant to change (Eagly & Chaiken, 1993; Katz, 1960).<sup>2</sup> It will also be taken as axiomatic that one reason for the formation of an attitude that serves a defensive function is the need to protect or maintain one's self-concept (i.e., the sum of one's beliefs about the object, self. Rosenberg, 1965, 1979). One's self conception functions to direct behavior, and is primarily formulated and maintained through communication with others (Kinch, 1967). Self-concepts are relatively enduring. Although self-discrepant information can cause change, this change is generally short-lived (Swann & Hill, 1982) and people typically revert to previous beliefs about self. Moreover, the self-concept influences the way information is processed (Markus & Kitayama, 1991; Swann & Hill, 1982), and it is maintained via a self-protection mechanism (Rosenberg, 1965, 1979; Swann, Pelham, & Krull, 1989). Self-protection involves attempts to maintain a consistent sense of self in the face of potential contradictory evidence. As Rosenberg (1979) suggests, "people behave in a fashion consistent with the pictures they hold of themselves and interpret any experience contradictory to this self-picture as a threat" (p. 57).

Thus, ego-defensiveness emerges as a means of protecting one's self-concept from inconsistencies that may take the form of unexpected or disconfirming information. That is, when one perceives that an essential element of the self has been threatened by counter-attitudinal information, one will attempt to maintain the self-concept in the face of these threats.

The ego-defensive function can be understood profitably by examining a model in which an external threat to some aspect of the self sets in motion a process that serves to maintain the self-concept. In the study reported subsequently this external threat takes the form of a message that is both attitudinally discrepant, or counterattitudinal, and highly ego-involving. Such messages activate a need to protect the self-concept. The production of counterarguments, derogation of the message, and derogation of the source of that message are consequences of this need. Subsequently, each of the components of the model, and their relationships to one another, are examined in turn.

### *The Ego-Defensiveness Model*

Figure 1 depicts the ego-defensive causal process. The persuasive message is exogenous in this model. If, and only if, it is both counterattitudinal and addresses an

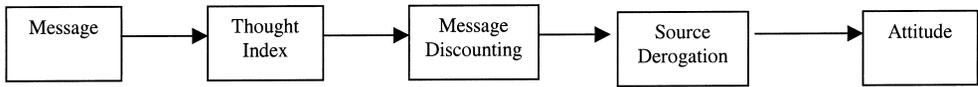


FIGURE 1  
PREDICTED PATH MODEL OF THE EGO-DEFENSIVE PROCESS.

issue that is highly ego-involving, will it be perceived as threatening.<sup>3</sup> There is ample evidence to suggest that response to counterattitudinal messages predicts subsequent attitudes (e.g. Festinger & Carlsmith, 1959). Respondents exposed to threatening messages are predicted to generate more negative thoughts (e.g., counterarguments) and fewer positive thoughts than are respondents exposed to non-threatening messages, i.e., those messages that are either proattitudinal, low in ego-involvement, or both (Abelson, 1968).

The thoughts engendered by the message are posited to then impact the extent to which the message is discounted. Specifically, for those generating a substantial quantity of negative, and few positive, thoughts there would be more message discounting than for those for whom the message induced a more modest number of negative thoughts, and a larger quantity of positive thoughts (Abelson, 1968). Having no reason to expect a more complex functional relationship, as negative thoughts increase (and positive thoughts decrease) message discounting is expected to increase proportionally.

Discounting message content, in turn, will lead to attacks on the source of the message. Skepticism concerning the veracity of message premises, evidence, or claims casts doubt on the competence, trustworthiness, or both of the message source. Specifically, the more audience members discount message content, the more they are predicted to derogate the source of the message. Again, having no reason to expect a more complex functional relationship between these variables, the relationship is expected to be linear.

The model then posits that the evaluation of the message source affects audience members' attitudes. Specifically, the more negatively audience members evaluate the source of the message, the less likely they will be to conform to message recommendations. Again, in the absence of reasons to expect complex functional relationships this effect is anticipated to be linear.

An experiment was designed in which participants were presented with either a counterattitudinal message on a highly ego-involving topic or a proattitudinal message on the same topic. Because the former message was both counterattitudinal and highly ego-involving, it met the criteria, enumerated previously, for a highly threatening message. Because the latter message was proattitudinal it met the criteria, mentioned earlier in this manuscript, for a less threatening message. Thoughts about the message, message discounting, source derogation, and attitudes were then measured so that the fit of the proposed causal process could be assessed. The details of this experiment are presented in the following section.

## Method

### *Participants*

Participants ( $N = 126$ ) in this experiment were undergraduates at Michigan State University. Their participation was voluntary, and they received course credit for it.

Although their responses were not anonymous, they were promised that the data would be held in confidence.

### *Procedure*

Upon entering the laboratory participants completed a questionnaire assessing their attitude toward being a serious student, ego-involvement, and a series of items designed to mask the nature of the experiment (Time 1). One week later they entered the same laboratory, and were assigned randomly to read either a proattitudinal or counterattitudinal message containing information on what constitutes being a serious student.<sup>4</sup> Subsequently, they completed a thought-listing task, and were then asked to evaluate the message and the source of the message (Time 2). One week later they came to the laboratory a third time, and responded to attitude, ego-involvement, and masking measures once again (Time 3).

### *Message Design*

Based on the results of a pilot study, as well as prior research by Atkin (1998), two messages were designed targeting the “successful student.” Atkin (1998) surveyed undergraduates at Michigan State University, and found that 92% of those surveyed considered themselves serious students. Consequently, it is reasonable to expect that a large number of students should be ego-involved highly on this issue, and thus, they should be threatened by a message challenging the belief that they are a serious student.<sup>5</sup>

The content of the messages was based on the results of a pilot study and Atkin’s (1998) findings concerning student behaviors. The non-threatening message presented the results of a bogus study suggesting that students who achieve success in school engage in school-related behaviors consistent with those reported by Atkin’s (1998) respondents. For example this message claimed that serious students study on average five to seven hours a week, with few hours during the weekends, and that studying the night before an examination is sufficient to succeed in school. Given the similarity of Atkin’s respondents to those in this experiment, the likelihood that this message was non-threatening is high.

The threatening message reported results from a bogus study that was inconsistent with students’ previously reported behaviors. This message claimed that serious students study approximately seven to eight hours each day outside of class time, with more hours on the weekend, and that research indicated that studying the night before the examination rarely results in success. The likelihood that this message was threatening is high. Factors known to impact responses to messages, such as source effects (e.g., source credibility) and message effects (e.g., argument quality, message-sidedness, number of arguments) were held constant across conditions.

### *Instrumentation<sup>6</sup>*

On a five-point response scale ranging from “Strongly disagree” to “Strongly agree” participants completed three items assessing the degree of ego-involvement in the topic. This scale included items such as, “I place high value on being a good student” and “Being a good student is central to how I see myself.” Items were scored such that higher scores indicated higher ego-involvement on the issue. The reliability of the scale was measured by standardized item  $\alpha$ , and was found to be .92 at Time 1, .90 at Time 3, and .68 for the change in ego-involvement.

Participants were given a task in which they were asked to list all of the thoughts they had while reading the message. Subsequently, these lists were reviewed, and the number of positive and negative thoughts was coded. Positive thoughts included those that evaluated positively the source or points made in the message, or provided evidence consistent with the message. Negative thoughts included those evaluating negatively the source or the message, or provided evidence inconsistent with the message. A thought-list index was formed by subtracting the number of negative thoughts from the number of positive thoughts. Hence, positive scores indicate a preponderance of positive thoughts generated in response to the message, and negative scores indicate a preponderance of negative thoughts that occur as a function of message exposure. Moreover, the higher the score on this index, the more a participant was disposed favorably toward the message.

Two trained coders, rating independently and blind to experimental conditions, coded 20% of the transcripts so that interrater reliability could be estimated. Pearson's Product-Moment Correlation Coefficient was calculated between raters, and the Spearman-Brown Prophecy Formula was applied to estimate these reliabilities. The resulting coefficients were .99 for positive thoughts and .98 for negative thoughts. Disagreements were resolved by discussion.

To measure message discounting participants were asked to respond to a set of nine semantic differential items with accompanying seven-point response scales (e.g., The points made in this message are "important/not important," "relevant/irrelevant"). Scores were assigned such that higher numbers indicated more message discounting. Standardized coefficient  $\alpha$  was employed to assess the reliability of this measure, and was found to be .90.

To measure source derogation participants were asked to evaluate the source of the message (The source of this message is "intelligent/stupid," "reasonable/absurd") on a set of five items with accompanying seven-point semantic differential response scales. Higher scores indicated more source derogation. Standardized item  $\alpha$  was .92.

A set of items was designed to assess participants' attitudes about the issue of being a successful student. This measure consisted of six items in a Likert format accompanied by five-point response scales. Items included, "I respect those who dedicate themselves to learning" and "It is important to do well in school." Standardized item  $\alpha$  was .70 at Time 1, .73 at Time 3, and .35 for the change score.

## Results

Observing Table 1 indicates that, on average, participants were ego-involved highly in being a serious student. Statistically, mean ego-involvement at Time 1 ( $M = 4.41$ ,  $S = .47$ ) was greater than the midpoint of the scale [ $t(124) = 19.30$ ,  $p < .05$ ], an outcome that was replicated at Time 3 ( $M = 4.25$ ,  $S = .52$ ) [ $t(124) = 22.76$ ,  $p < .05$ ]. The change in ego-involvement from Time 1 to Time 3 was minimal ( $M = .02$ ,  $S = .45$ ), and was within sampling error of zero [ $t(124) = .53$ , ns], indicating that these judgments were stable across the time frame of the experiment. Moreover, ego-involvement did not vary substantially across experimental conditions. As can be observed in Table 1, at Time 1 the difference in ego-involvement in the threatening message condition and the non-threatening message condition was within sampling error of zero [ $t(124) = -.31$ , ns], as it was at Time 3 [ $t(124) = .56$ , ns]. Previously messages were said to be threatening if they

TABLE 1  
 MEANS AND STANDARD DEVIATIONS FOR EACH SCALE PRE (TIME 1) AND POST MESSAGE (TIME 2 OR 3)  
 BY MESSAGE TYPE

Scale	Pre Message: Time 1		Post Message: Time 2/3	
	Non-Threatening	Threatening	Non-Threatening	Threatening
Ego-Involvement	4.17 (.58)	4.14 (.56)	4.10 (.64)	4.16 (.67)
Attitude	4.39 (.51)	4.42 (.44)	4.26 (.49)	4.23 (.54)
Negative Thoughts			1.08 (1.39)	2.78 (2.18)
Positive Thoughts			2.26 (1.97)	1.04 (1.16)
Thought Index			1.18 (2.74)	-1.74 (2.64)
Message Discounting			5.63 (1.33)	5.25 (1.44)
Source Derogation			5.46 (1.31)	5.43 (1.20)

Note: Thought index was created by subtracting the number of negative thoughts from the number of positive thoughts.

were both highly ego-involving and counterattitudinal. Consequently, participants were expected to regard the counterattitudinal version of the message as relatively threatening, and the proattitudinal message as relatively non-threatening.

It was expected that the threatening message would lead to a greater number of negative thoughts than the non-threatening message, and the data are consistent with this prediction. From Table 1 it can be noted that those who received the threatening message produced more negative thoughts than those who received the non-threatening message, a difference that was both substantial and statistically significant [ $t(124) = -5.18, p < .001, r = .42$ ]. Statistically, in both the threatening [ $t(64) = 10.30, p < .05$ ] and non-threatening [ $t(60) = 6.00, p < .05$ ] message conditions the mean number of negative thoughts is significantly greater than zero.

It was expected that the threatening message would result in less positive thoughts than the non-threatening message, and the data are consistent with this prediction as well. From Table 1 it can be seen that those who received the threatening message produced less positive thoughts than those who received the non-threatening message, a difference that was both substantial and statistically significant [ $t(124) = -4.24, p < .001, r = .36$ ]. Statistically, in both the threatening [ $t(64) = 7.23, p < .05$ ] and non-threatening [ $t(60) = 8.96, p < .05$ ] message conditions the mean number of positive thoughts is significantly greater than zero.

It was predicted that there would be a substantial number of negative thoughts and few positive thoughts in the threatening message condition, and few negative thoughts but numerous positive thoughts in the non-threatening message condition. Thus, the index, positive thoughts less negative thoughts, is expected to yield a substantial negative number in the threatening message condition and a substantial positive number in the non-threatening message condition. As Table 1 indicates the data were consistent with this prediction. In the threatening message condition there was a preponderance of negative thoughts [ $t(64) = -5.31, p < .05$ ], and in the non-threatening message condition there was a preponderance of positive thoughts [ $t(60) = 3.36, p < .05$ ]. The difference between conditions was both statistically significant and substantial [ $t(124) = 6.09, p < .05, r = .48$ ].

Observing Table 1 suggests that the effect of the message on both message discounting and source derogation is minimal. More formal analyses are consistent with this impression. The effect of the message both on message discounting [ $t(124) = 1.54, p = \text{ns}, r = -.14$ ] and on source derogation [ $t(124) = .16, p = \text{ns}, r = -.02$ ] are within sampling error of zero.

TABLE 2  
CORRELATIONS AMONG THE VARIABLES

	Message	Thoughts (+)-(-)	Message Discounting	Source Derogate	Attitude
1	1.00				
2	-0.48*	1.00			
3	-0.14	-0.41*	1.00		
4	0.01	-0.37*	0.72*	1.00	
5	-0.03	0.18*	-0.25*	-0.38*	1.00

\*\*Significant at  $p < .01$  (2 tailed).

As can be seen from Table 1 the effects of the message on attitude at Time 1 [ $t(124) = .35$ , ns,  $r = .03$ ], Time 3 [ $t(124) = -.33$ , ns,  $r = -.03$ ], and attitude change [ $t(124) = -.81$ , ns,  $r = -.07$ ] are trivial. Because initial attitudes did not differ substantially, and because there was no substantial difference in change between message conditions, the more reliable posttest scores, rather than the change scores, were employed in the subsequent analysis of the causal model.

To test the causal model presented in Figure 1 scatterplots were examined initially, and no marked departures from linearity were found for any of the bivariate relationships. Subsequently, the ordinary least squares criterion was employed to estimate the parameters, parameter size was examined, and the fit of the model was assessed. The correlations employed to estimate the model parameters are presented in Table 2, and the path coefficients are given in Figure 2.

From Figure 2 one may observed that all of the path coefficients are both substantial and in the direction predicted. The coefficient linking the message and the thought index was  $-.48$  [ $t(124) = -6.97$ ,  $p < .05$ ,  $P(-.61 \leq \rho \leq -.35) = .95$ ], indicating that those who received the threatening message produced a greater number of negative thoughts, relative to positive thoughts, about the message than did those exposed to the non-threatening message. The thought index, in turn, affected message discounting [path coefficient =  $-.41$ ,  $-.43$  when corrected for attenuation due to error of measurement,  $t(124) = -5.51$ ,  $p < .05$ ,  $P(-.56 \leq \rho \leq -.26) = .95$ ], such that the more positive, relative to negative, thoughts the less the message was discounted. The coefficient linking message discounting with source derogation was  $.72$ ,  $.79$  when corrected for attenuation due to error of measurement [ $t(124) = 16.71$ ,  $p < .05$ ,  $P(.64 \leq \rho \leq .80) = .95$ ], indicating that as message discounting increased, source derogation increased proportionally. Source derogation then had an impact on Time 3 attitudes about the issue of being a serious student [path coefficient =  $-.38$ ,  $-.46$  when corrected for attenuation due to error of measurement  $t(124) = -4.97$ ,  $p < .05$ ,  $P(-.53 \leq \rho \leq -.23) = .95$ ], such that the more the source was derogated, the less positive were attitudes toward being a serious student.

Second, differences between predicted and obtained correlations for all uncon-

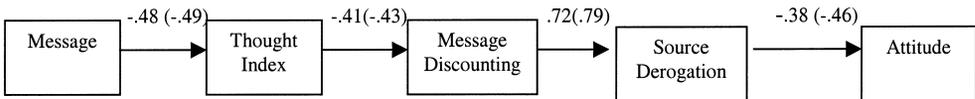


FIGURE 2

PATH MODEL OF THE EGO-DEFENSIVE PROCESS WITH PATH COEFFICIENTS AND PATH COEFFICIENTS CORRECTED FOR ATTENUATION DUE TO ERROR OF MEASUREMENT IN PARENTHESES.

TABLE 3  
 ERRORS FOR PATH COEFFICIENTS

	Message	Thoughts (+)-(-)	Message Discounting	Source Derogate	Attitude
1	0.00				
2	0.00	0.00			
3	.06	0.0	0.00		
4	0.12	0.07	0.00	0.00	
5	0.02	0.07	-0.02	0.00	0.00

strained bivariate relationships were examined. All errors were of small magnitude (see Table 3), and the global test for goodness of fit indicates that the data are consistent with the model [ $\chi^2(6) = 1.72, p > .05$ ]. Because the path coefficients were relatively large, and because the model and parameter estimates predicted accurately the unconstrained correlations, the model and data were judged to be consistent with one another.

### Discussion

The goal of this study was to provide theoretical and empirical insight into the ego-defensive function of attitudes. The process was conceptualized in the following manner. First, receiving a counterattitudinal message about an issue in which one is highly ego-involved is threatening. A preponderance of negative, relative to positive, thoughts about the message characterizes persons' responses to threatening messages. These thoughts, in turn, increase the probability that participants will discount message content. As message content is increasingly discounted, the likelihood of source derogation increases. Finally, as source derogation increases, subsequent attitudes conform less to message assertions. On the other hand, receiving a less threatening message, in this case one that is proattitudinal, leads to a different dynamic. In response to such a message positive thoughts may predominate. Consequently, message content is less likely to be discounted, sources are less likely to be derogated, and attitudes are likely to conform to message assertions. This *process* then serves as a description of the ego-defensive, or external, function of attitudes.

The results were consistent with this description. At the university that was the focus of this study college students are ego-involved highly in being considered a good student. Consistent with predictions a message challenging common beliefs on this highly ego-involving issue caused participants to have more negative than positive thoughts about the message; whereas, a message that did not challenge these beliefs resulted in participants having more positive than negative thoughts about the message. These thoughts affected the extent to which message content was discounted, which, in turn, impacted the extent to which the source of the message was derogated. Source derogation subsequently impacted attitudes toward the issue of being a serious student.

Notably, this study departs substantially from previous examinations of the ego-defensive function for several reasons. First, in this investigation the ego-defensive function is viewed as a process, and not as a variable or a value of a variable. Some functional approaches have treated the set of enumerated functions as various values of a qualitative variable, and for any given attitude have attempted to ascertain the function it serves (Katz, 1960; Smith et al., 1956). Others have treated

each function as a variable, and attempted to measure the *extent* to which a given attitude could be characterized as being ego-defensive, value-expressive, socially adjustive, etc. (e.g., Herek, 1987). Given the difficulties of self-reports to classify or quantify the function of an attitude deemed by previous scholars as primarily unconscious, i.e., ego-defensiveness, this study approached the matter differently. The results suggest that this approach may be fruitful (see also, Hullett & Boster, in press; La France & Boster, 2001; Orrego, 1999).

Nevertheless, there are important limitations to this experiment, and they generate an ample agenda for future research. One important limitation is the absence of an induction check to assess the degree to which the messages were perceived as threatening. Given that when attitudes are ego-defensive, persons are unaware of their reasons for having them, it is doubtful that they have both the ability and willingness to report accurately the extent to which the message threatened them. Perhaps in future research methods other than direct self-reports may be developed to estimate message threat.

A second limitation is that, because the goal of this study was to trace the causal process that is ego-defensiveness, the experiment did not address directly the manner in which one might go about trying to modify attitudes that function ego-defensively. Notably, there is no evidence of substantial attitude change in this experiment. In both the threatening and non-threatening message conditions Time 1 attitudes and Time 3 attitudes were approximately equivalent. Such an outcome was not unanticipated. The process by which persons respond to threatening messages generally precludes or attenuates attitude change. On the other hand, because the non-threatening message was proattitudinal, there was no reason for change for those participants exposed to it. Developing a message strategy to change attitudes that function ego-defensively may be a formidable task. Indeed, it may require employing techniques that are both more subtle and indirect than traditional procedures (e.g., Watzlawick, Weakland, & Fisch, 1974).

A third way in which this experiment was limited is that it focused exclusively on the causal antecedents of attitudes, and did not attend to their consequences. Particularly, the behavioral implications of holding an ego-defensive attitude were not examined. For instance, ego-defensiveness may be manifested behaviorally by avoiding counterattitudinal information or seeking proattitudinal information. The model could be extended profitably by examining these behavioral measures.

Moreover, an analysis of behavior sharpens the focus of strategies designed to change ego-defensive attitudes. For instance, messages could be designed with the intention of modifying participants' view of what constitutes a serious student. Such messages, if successful, might lead either to a change in self-concept or to a change in behavior or both. That is, a message could change participants' self-concept; it could convince them that they are, in fact, not serious students. This new conviction could be motivating, and lead to increased scholarly effort so as to render behavior consistent with self-concept. Alternatively, however, it could lead to rejecting the value of striving for academic excellence, and result in less time spent studying. Perhaps a more effective strategy would involve developing messages that, although not perceived as proattitudinal, are sufficiently subtle so that they are perceived as non-threatening.

Experiments designed to test the effect of such messages would necessarily have to develop measures of attitude change more reliable than those employed in this

study. Certainly the problem of obtaining reliable change score measures is a well known problem, and one that can arise even when pretest and posttest scores are relatively reliable (Guilford, 1954, pp. 393–394). Extensive pretesting of attitude measures will be required to circumvent the problem, and produce highly reliable measures of the pivotal construct, attitude change.

A fourth limitation is the frequently acknowledged problem of the generalizability of results to other attitude domains. The issue of being a serious student was convenient for the purposes of this experiment because most participants in the student sample hold such attitudes (Atkin, 1998). Nevertheless, although highly ego-involving, this topic lacks the highly charged emotional content associated with attitudes normally thought of as ego-defensive, e.g., prejudice. The replication of this experiment with such topics would be of substantial value.

Despite these limitations this study advances knowledge of an important and insufficiently studied theory of persuasion, the functional theory of attitudes. Notably it does so examining the function that is perhaps the most unclearly conceptualized and least studied empirically, the ego-defensive or externalization function. By modeling the ego-defensive function as a causal process, and by providing data found to be consistent with this view, this experiment provides a solid foundation upon which subsequent conceptual refinement and empirical investigation can build.

## Notes

<sup>1</sup>Specifically, Katz (1960) and Smith et al. (1956) can be read as thinking of the concept, attitude function, as a qualitative variable, and the various attitude functions (e.g., ego-defensive, value-expressive, etc.) as values of this variable.

<sup>2</sup>Nevertheless, Herek (1987) employs a self-report inventory, the validity of which is contingent on respondents being both willing and able to report accurately on their attitude, to determine the extent to which an attitude is ego-defensive.

<sup>3</sup>According to Johnson and Eagly (1989) involvement is the “motivational state induced by an association between an activated attitude and some aspect of the self” (p. 293). In the case of ego-involving attitudes the relevant aspect of the self is one’s values.

<sup>4</sup>In a pilot study involving 78 participants ego-involvement for this topic was found to be relatively high, 5.79 on a seven-point response scale [ $P(5.61 \leq \mu \leq 5.97) = .95$ ]. Statistically, this mean is significantly higher than the midpoint of the scale [ $t(77) = 19.52, p < .05$ ].

<sup>5</sup>Pilot study data provide additional evidence consistent with the proposition that participants were ego-involved highly in this topic. On the Twenty Statements Test (Kuhn & McPartland, 1967) 28% of the pilot study sample mentioned “student” or “learner” in response to the question “Who am I?” Approximately 85% described themselves using descriptors such as “smart,” “intelligent,” “knowledgeable,” “hard-working,” “goal-oriented,” and “motivated.”

The pilot also provided evidence of existing school-related behaviors. Participants reported studying an average of 3.56 hours on an average week day ( $S = 2.40$ ), and less on the weekend ( $M = 2.39, S = 1.76$ ). Students also reported that they missed class in the two weeks prior to the study ( $M = 1.97$  days,  $S = 2.11$ ). These data were utilized in message construction.

<sup>6</sup>Confirmatory factor analyses were performed on attitude, ego-involvement, source derogation, and message discounting items. Tests for internal consistency and parallelism indicated that the data were consistent with the four factor model. A three-item, unidimensional solution was found for the ego-involvement scale. Analysis of the attitude, message discounting, and source derogation scales yielded four-item, unidimensional solutions for each scale. The analyses can be obtained from the first author.

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