

## A skeptical look at dispositional reactance

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### **Abstract:**

Many studies have correlated dispositional reactance scales with other self-report scales, but no experiments have tested whether “trait reactance” replicates “state reactance” effects. Using a conventional reactance paradigm, an experiment examined the construct validity of dispositional reactance. College students (n = 78) read a communication that did or did not threaten their freedom to disagree, and then they reported their agreement. Threatening attitudinal freedom increased disagreement, thus replicating many reactance experiments. Dispositional reactance interacted with threats to freedom, but in a manner contrary to the construct’s predictions—“high reactance” people were more likely to agree with a pushy, coercive message. The findings question the construct validity of dispositional reactance.

Keywords: Reactance; Persuasion; Resistance; Attitudes; Individual differences

### **Article:**

#### **1. Introduction**

After nearly 40 years, reactance theory (Brehm, 1966) remains one of social psychology’s major theories of resistance to social influence (Eagly & Chaiken, 1993). Reactance theory assumes that people feel free to do certain things. When these perceived freedoms are threatened, people are motivated to restore them. One way to restore a threatened freedom is to exercise the freedom. People thus choose forbidden decision options, seek censored material, and show “boomerang effects” in response to coercive messages (Brehm and Brehm, 1981 and Wicklund, 1974).

The study of reactance in social psychology emphasizes situational factors that affect reactance. As Brehm and Brehm (1981) noted, reactance theory comes from a research tradition that usually manipulates variables and ignores individual-differences. Researchers in clinical and personality psychology, however, eventually considered whether state reactance had a trait analog (Dowd et al., 1991, Merz, 1983 and Shoham et al., 2004). This led to the development of scales to measure individual-differences in reactance. An impetus for studying dispositional reactance was an interest in identifying people who were likely to resist complying with psychotherapy (Dowd, 1999), although most of the research has been with non-clinical samples.

A substantial literature on dispositional reactance has accumulated over the last 15 years (see Shoham et al., 2004, for a review). Thus far, research on dispositional reactance sorts into two categories. Studies in the first category assess the psychometric properties of self-report scales of dispositional reactance. The three prominent scales are the Hong Psychological Reactance Scale (Hong, 1992, Hong and Faedda, 1996, Hong and Page, 1989 and Thomas et al., 2001), the Therapeutic Reactance Scale (Buboltz et al., 2002 and Dowd et al., 1991), and the Questionnaire for the Measurement of Psychological Reactance (Hong and Ostini, 1989, Merz, 1983 and Tucker and Byers, 1987). Studies in the second category correlate these scales with other self-report measures of individual-differences, such as vocational interests (Buboltz, Woller, & Pepper, 1999), personality types (Buboltz et al., 2003), and traits such as dominance, aggressiveness, and defensiveness (Dowd and Wallbrown, 1993 and Dowd et al., 1994), in the hopes of creating a nomological net that illuminates the construct’s central features.

Research to date informs the validity of trait reactance, but it is nevertheless indirect evidence. Models of dispositional reactance are explicitly tied to the major constructs and predictions from Brehm's (1966) theory of reactance. As a "trait" counterpart to "state reactance," dispositional reactance should replicate conventional, situational reactance effects. Thus far, no experiments have examined whether dispositional reactance actually predicts reactance, such as disagreement in response to threats to freedom. This is unfortunate—such tests are the most direct and decisive tests of construct validity. Because of the lack of direct evidence that trait reactance resembled state reactance, Shoham et al. (2004) concluded "we have serious doubts regarding the validity of existing measures as indicators of trait reactance" (p. 173).

The present experiment examined the construct validity of dispositional reactance by assessing its role in classic reactance effects. Reactance theory is best-known for its predictions regarding attitudes and persuasion. Many experiments find that threats to attitudinal freedom—the freedom to hold a particular position on an issue—create reactance. Threatening a person's freedom to disagree with a message creates a boomerang effect, in which the person moves away from the position advocated in the message (Carver, 1977, Wicklund and Brehm, 1968, Worchel and Brehm, 1970 and Wright, 1986). A prototypical reactance paradigm was chosen to give an incisive view of the validity of dispositional reactance—if it does not replicate a central prediction of reactance theory, then it would appear not to be a trait version of state reactance.

In the present experiment, people read a message that did or did not threaten their freedom to disagree. Their agreement with the message and their perceptions of threat were then measured. The predictions for between-condition effects are clear—people in the high threat group should disagree more than people in the low threat group, and this difference should stem from differences in the perception of threat. Two predictions can be advanced for dispositional reactance. One prediction is a main effect—people high in reactance should disagree more than people low in reactance, regardless of the level of threat. A second prediction is an interaction with threat—people high in reactance should disagree the most when their freedom is explicitly threatened.

## **2. Method**

### **2.1. Participants and design**

A total of 78 people—54 women, 24 men—enrolled in General Psychology at the University of North Carolina at Greensboro (UNCG) participated as part of a research option. Each person was randomly assigned to one of two between-subject conditions: *Low Threat* or *High Threat*.

### **2.2. Procedure**

People participated in groups of 4–8; the participants did not communicate with each other. The experiment was ostensibly a survey of "how different aspects of personality relate to people's attitudes" as well as "what people think about other people's opinions". People expected to complete a brief personality scale, read an essay written by another student, and then note their impressions and reactions.

#### **2.2.1. Measurement of reactance**

The first page of the questionnaire contained the Hong Psychological Reactance Scale (Hong, 1992 and Hong and Page, 1989). This scale has better psychometric properties than some other scales (see Dowd and Wallbrown, 1993, Hong and Ostini, 1989, Merz, 1983, Thomas et al., 2001 and Tucker and Byers, 1987), and it was intended for use with normal populations (cf. Dowd et al., 1991). This study used the 11-item refined version developed and recommended by Hong and Faedda (1996). Items include "I become angry when my freedom of choice is restricted" and "I resist the attempts of others to influence me". The scale was flanked by filler items to divert attention from the study's true purpose (e.g., "I probably procrastinate more than other people"). People responded using 7-point scales (endpoints: *strongly disagree*, *strongly agree*). Only the scale's total score was analyzed because recent research (Thomas et al., 2001) questions the factorial validity of its four subscales.

### 2.2.2. Manipulation of threat to freedom

After the measure of reactance, people completed “a survey of impressions of other people’s opinions”. The instructions said that approximately 50 students had written short essays about their opinions related to university issues. The researchers now wanted to get other people’s impressions and reactions to the 50 essays. In the *low threat* condition, people read a 130-word essay advocating for the addition of a major in advertising. The author suggested that adding an advertising major would expand choices for students and offer more job opportunities for graduates. In the *high threat* condition, coercive statements were added to the essay. The author began the essay by noting “Here are my reasons for wanting a major in advertising at UNCG. They’re good reasons, so I know you completely agree with all of them. Because when you think about it you are really forced to agree with me because this is a universal student issue”.

This essay had been developed in previous research on reactance (Silvia, 2005 and Silvia, in press). Adding coercive statements to a message is one of the most widely-used manipulations in reactance research (Brehm & Brehm, 1981). The specific threatening statements were based on past experiments (Carver, 1977, Snyder and Wicklund, 1976 and Wicklund and Brehm, 1968). A pro-attitudinal message (i.e., one congruent with the participants’ attitudes) was used to maximize reactance effects. Threats create more reactance when people agree with the position advocated in the message (Worchel and Brehm, 1970 and Wright, 1986). When people disagree, the mere fact of disagreement establishes their freedom to hold a contrary attitude and thus reduces reactance (Brehm and Brehm, 1981 and Eagly and Chaiken, 1993).

### 2.2.3. Measurement of agreement and perceived threat

Following the essay, people completed measures of agreement with the communicator and a manipulation check of the level of threat in the essay. Agreement was measured with two items: How much do you agree with the author? and How similar is your attitude to the author’s attitude? Perceived threat was measured with four items: The author was pressuring me to agree with him/her; The author was trying too hard to persuade me; The author was trying to keep me from making up my own mind about the topic; and The author was pushy. People responded using 7-point scales (endpoints: *not at all*, *very much*). The participants were then debriefed.

## 3. Results

### 3.1. Data reduction

Responses to the 11 items in the Hong Psychological Reactance Scale were averaged to form an overall reactance score. The scale’s scores were modest in reliability ( $\alpha = .58$ ; cf. Thomas et al., 2001). Responses to the two agreement items ( $\alpha = .83$ ) and the four perceived threat items ( $\alpha = .96$ ) were averaged as well. Gender did not predict dispositional reactance ( $F < 1$ ) or participate in any significant effects.

### 3.2. Replication of reactance effects

Before evaluating dispositional reactance, I examined whether the basic reactance effect appeared. Did people agree less when the communicator threatened their attitudinal freedom? The manipulation check of perceived threat suggested that the manipulation was successful,  $t(76) = 6.41$ ,  $p < .001$ . As expected, people in the high threat condition ( $M = 5.06$ ,  $SD = 1.79$ ) viewed the communicator as more threatening to their freedom, relative to people in the low threat condition ( $M = 2.75$ ,  $SD = 1.36$ ). Furthermore, the manipulation of threat caused a boomerang effect,  $t(76) = 3.64$ ,  $p < .001$ . People in the high threat condition agreed less with the communicator ( $M = 4.06$ ,  $SD = 1.18$ ), relative to people in the low threat condition ( $M = 5.00$ ,  $SD = 1.09$ ). The classic reactance effect was thus nicely replicated.

### 3.3. Dispositional reactance and persuasion

To see if dispositional reactance moderated the effects of threats to freedom on persuasion, a multiple regression analysis estimated the interaction between dispositional reactance and the manipulation of threat. Reactance scores were centered prior to analysis (Judd & McClelland, 1989). The main effects of threat and dispositional reactance were entered in the first step ( $R^2 = .150$ ); the interaction between threat and dispositional reactance was entered in the second step ( $R^2 = .237$ ,  $\Delta = .087$ ). The interaction significantly increased the

variance explained by the model,  $F(1, 74) = 8.46, p < .005$ . The analyses indicated a significant main effect of threat,  $\beta = -.422, p < .001$ , no main effect of dispositional reactance,  $\beta = .045$ , and a significant interaction,  $\beta = .297, p < .005$ . To appraise the shape of this interaction, the relationship between reactance and agreement was analyzed at each level of threat (Myers & Well, 2003). The interaction pattern, estimated from the regression equation, is displayed in Fig. 1.

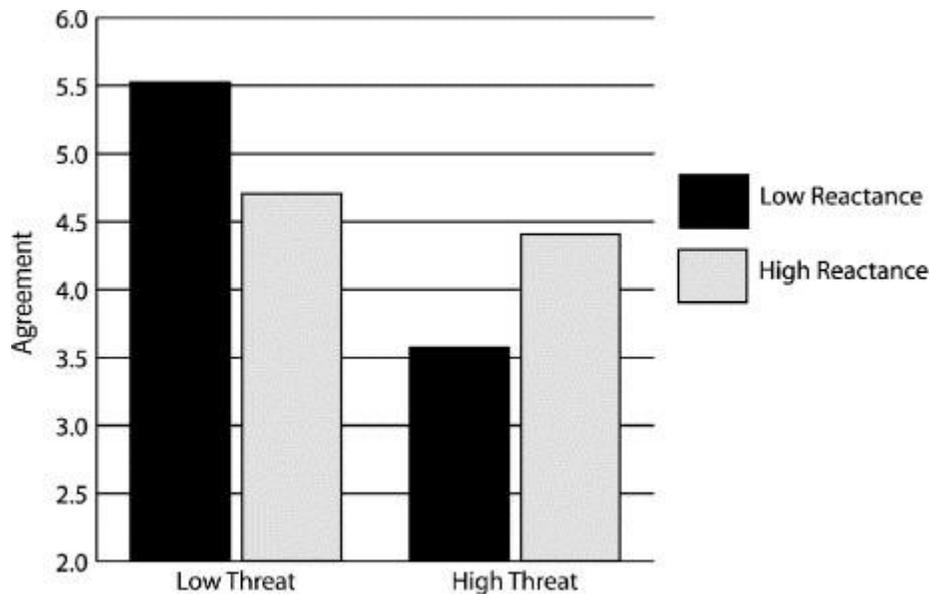


Fig. 1. Estimated effects of threat to freedom and dispositional reactance on agreement.

When threat was low, reactance had a marginal, negative relation to agreement,  $\beta = -.284, p < .079$ . Although marginal, this effect is consistent with the construct of dispositional reactance—people higher in reactance tended to agree less. When threat was high, however, reactance had a significant, positive relation to agreement,  $\beta = .353, p < .028$ . People higher in reactance agreed more, relative to people lower in reactance. This finding is inconsistent with the validity of dispositional reactance—people higher in reactance, by the definition of the construct, should not be more easily persuaded.

#### 4. Discussion

After years of popularity in social psychology, the concept of reactance has gained attention in the study of individual-differences (Buboltz et al., 2002 and Thomas et al., 2001). Despite the recent interest in dispositional reactance, research has not yet conducted experiments that examine whether “reactant people” show reactance. As a trait defined with reference to “state” reactance, individual-differences in reactance should replicate experimental findings. Just as individual-differences in private self-consciousness replicate manipulations of self-awareness (Eichstaedt and Silvia, 2003, Silvia and Eichstaedt, 2004 and Silvia et al., 2005), and just as individual-differences in need for cognition replicate manipulations of message elaboration (Cacioppo, Petty, & Morris, 1983), individual-differences in reactance should replicate manipulations of threats to freedom. For instance, reactant people should disagree more in response to threat, show stronger preferences for restricted activities, and reassert threatened freedoms.

The present experiment found little support for the validity of dispositional reactance. When a message did not threaten freedom, there was marginal effect of reactance—people with high scores on the Hong Psychological Reactance Scale tended to disagree more. Although congruent with the construct, one would expect more disagreement when a threat is present. When a message contained a threat to freedom, the opposite pattern appeared—people scoring low in dispositional reactance disagreed more. Reactant people were more persuaded by the pushy, “hard sell” message. In short, only people scoring low on the scale showed the predicted reactance effect. The validity of the scale in this case was not merely zero (i.e., a failure to find an effect) but was in fact negative (i.e., an effect in the opposite direction). Reconciling this finding with the construct of dispositional reactance seems difficult.

Assessing validity is a continuous process—no single study can make definitive claims about the validity of a psychological construct. To date, research has correlated self-report reactance scales with other self-report measures of individual-differences. A “nomological net” should eventually be cast over behavior and activity (Wicklund, 1990). “Reactant people” should show reactance when placed in conventional reactance-inducing situations. The findings of the present experiment are surely not the last word, but they offer reasons to be skeptical of the validity of dispositional reactance (Shoham et al., 2004).

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