

# Reactance Theory – 40 Years Later

Anca M. Miron and Jack W. Brehm

University of Kansas, Lawrence, KS, USA

**Abstract.** In this paper we review the basic assumptions formulated by Jack Brehm in 1966 in his theory of psychological reactance and we sample some interesting directions of research on reactance that have been carried out by social psychologists during the last 40 years. We conclude that although there has been impressive development in the reactance research, more exciting avenues of investigation lie ahead. Throughout the paper we outline some of these future directions.

**Keywords:** psychological reactance, motivation, difficulty of restoring freedom

## Reaktanztheorie – 40 Jahre später

**Zusammenfassung.** In diesem Beitrag werden die Grundannahmen, die Jack Brehm im Jahre 1966 in seiner psychologischen Reaktanztheorie formuliert hat, sowie einige interessante Forschungsrichtungen aus der Sozialpsychologie der letzten 40 Jahre zur Reaktanz dargestellt. Obwohl es eindrucksvolle Entwicklungen in der Reaktanzforschung gegeben hat, wird geschlussfolgert, dass noch spannendere Forschungspfade für die Zukunft bleiben. In diesem Beitrag werden einige dieser zukünftigen Richtungen dargestellt.

**Schlüsselwörter:** psychologische Reaktanz, Motivation, Schwierigkeiten bei der Wiederherstellung der Freiheit

## The Origins of Reactance Theory

Academic psychology in the USA from the early part of the 20th century to the mid 1950s was dominated by behaviorism and by various forms of stimulus-response theories such as that proposed by Clark Hull (1943), or by reinforcement theories such as that by B.F. Skinner (1938). Although the ultimate goal of these theorists was to understand human behavior, their research evidence was largely gathered from animals such as pigeons and rats. However, due to political developments in Germany beginning in the 1930s, many scientists, especially those of Jewish origin, moved to the USA. In the case of psychology, people such as Kurt Lewin and several Gestalt psychologists brought with them views of human behavior that were not so simplistic as that of behaviorism. This new wave of psychologists pointed out many of the complexities of human behavior and some of the problems with behaviorism and, more importantly, helped create a new *Zeitgeist* in the study of social behavior. The Center for Research in Group Dynamics, initiated by Kurt Lewin at MIT, moved to the University of Michigan after Lewin's death, and served as a major source of training and research on social behavior, including group dynamics. At about the same time, Carl Hovland, at Yale University, established an Attitude Change Program that encouraged a multi-disciplinary approach to the understanding of how the various facets of the communication process (communicators, messages, recipients) accounted for persuasion.

Although Kurt Lewin (e.g., 1939) had pointed the way,

the major revolution in the study of social behavior was provided by Festinger's (1957) statement of cognitive dissonance theory. Festinger carefully kept the theory within the general rules of behaviorism. He accomplished this by referring to dissonance as a motivation similar to hunger, and by operationalizing the theory in terms of observable variables, much as an experiment on rats would be done. Indeed, Lawrence and Festinger (1962) reported a series of experiments demonstrating the application of dissonance theory to rat behavior. In this way, he turned the effect of rewards on its head by predicting that under certain conditions, behavior would be reinforced by less, not more, reward. Key factors in this theory were the relationship between cognitions, the importance of each to the person who held them, and the resistance to change of each. Above all, Festinger had constructed a theory that assumed an inner motivational process rather than assuming that all influences between stimuli and behavior were simple and direct.

It was in this context that Brehm and Cohen (1962), both in the Yale Attitude Change Program at the time, carried out an extensive program of research on persuasion, largely based on dissonance theory, but with some attention to special cases of resistance to social influence. After Bob Cohen had moved to New York University and Brehm had moved to Duke University, the latter became more interested in the occurrence of *resistance* to social influence, and that interest eventuated in the formulation of reactance theory and a program of research (Brehm, 1966). It seemed apparent at the time that the dominant theories were primarily concerned with the conditions that produce influ-

ence, and oppositional effects were largely ignored, though examples of them in research or daily life were not hard to find.

## The Theory and the Data

### Definition and Basic Reactance Concepts

According to the theory, if individuals feel that any of their free behaviors, in which they can engage at any moment or in the future, is eliminated or threatened with elimination, the motivational state of psychological reactance will be aroused. This reactance state is directed toward the restoration of the threatened or eliminated behavior. The classic reactance example is that of parents telling the child to do or not do something, for instance, to wear a particular pair of shoes at school. If the child believes s/he is free to decide what shoes to wear then he or she will experience reactance. Another reactance example is provided in the Broadway musical, *The Fantasticks*, in which neighboring fathers contrive to make their children fall in love with each other by building a fence between their properties. As the fence was a symbolic infringement on the youths' freedom to see each other, they ultimately fall in love with each other.

Because reactance is a motivational state, it possesses energizing properties that drive individuals to engage in freedom-restoration behaviors. Individuals may directly attempt to reassert the freedom through engaging in the option threatened with elimination or may have the freedom restored indirectly by observing others restore the threatened freedom. Sometimes individuals will derogate the threatener or aggress toward the threatening agent if the threat is illegitimate. When a freedom cannot be directly restored, people may instead subjectively decrease the attractiveness of the imposed alternative and increase the attractiveness of the denied option.

As we emphasized, for reactance to be aroused the person must possess the freedom to begin with. Reactance is thus reactive, not proactive, as it exists only in "the context of other forces motivating the person to give up the freedom and comply with the threat or elimination" (Brehm & Brehm, 1981, p. 37).

### The Data

One of the simplest but perhaps least obvious implications of the theory concerns a choice between two attractive alternatives. It seems that what people tend to think of is how much control a choice gives them, which may be well and good, and following that psycho-logic, the more choice alternatives, the better. But if a person can have only one alternative, it is also true that the more alternatives there are, the greater the number of freedoms that have to be

given up when one alternative is chosen, and consequently, making a choice becomes very difficult. Iyengar and Lepper (2000) showed that people experience *choice overload* when offered an extensive array of 24 or 30 alternatives (vs. a limited array of 6) to choose from, which is demotivating. Even though participants liked having an extensive number of choices more than a limited number (jams, chocolate, or optional class essay assignments), they nevertheless were less likely to purchase the product or to undertake the class assignment. Interestingly, participants reported more subsequent satisfaction with their selections and wrote better essays when their original set of options had been limited.

When a person has a choice between two attractive alternatives, as the person contemplates selecting the more attractive one, the person will experience reactance and, as a result, the other alternative will be seen as more attractive. For example, Linder and Crane (1970) presented participants with a choice between two interviewers whose styles were described as quite different. They found that as the time for the decision decreased, the attractiveness of the two interviewers converged. Perceiving the two alternatives as equally attractive means not making a decision yet, which preserves one's freedoms to choose one alternative, to reject the other, or not to make a decision. Giving up even a single freedom may not be pleasant.

The alert reader may wonder how convergence in the attractiveness of alternatives fits with post-choice dissonance reduction, when the chosen alternative is seen as more attractive and the unchosen alternative is seen as less attractive (divergence). As it happens, evidence on this question appeared just prior to the first publications on reactance theory. Festinger and Walster (1964) and Walster (1964) reported two experiments in which the attractiveness of choice alternatives was obtained either after a tentative choice, or at different times after a committing choice. What they found in Festinger and Walster was a strong tendency to reverse preferences when the choice was only tentative, and what Walster found was a clear reversal tendency immediately after a commitment, followed by clear dissonance reduction (favoring the choice made) a few minutes later. Festinger and Walster called the reversal tendency "regret," and within 2 years, it could have been called a "reactance" effect.

But is it giving up a freedom or is it simple frustration that is so unpleasant? After all, if the second most attractive alternative is still very attractive and is qualitatively different from the most attractive alternative, one might really like to have both. Because it is widely thought that frustration leads to hostility and aggression, it is possible to use either of these latter variables as indicators of frustration. This line of reasoning was used in an early study (Worchel, 1974) in which participants were led to expect a choice of one from three attractive items or they expected to be given their most attractive item or they simply expected to be assigned one of the items. A research assistant then simply assigned the most attractive, second most attractive, or least

attractive item to each participant. Thus, frustration should have been greatest when the most attractive item was expected either through choice or assignment, but not when participants expected to be assigned any of the three items. Subsequent ratings of the research assistant (who was clearly responsible for any disappointment) indicated that by far the most hostility was created by having one's freedom taken away, as opposed to either having an expectancy disconfirmed or simply receiving the least attractive alternative. Even participants who expected to have choice and were assigned their most attractive alternative displayed relatively high hostility, indicating it was not frustration about which alternative they received, but loss of choice, that made them upset.

While it is quite clear that reactance arousal can result in a great deal of hostility, one should not infer that reactance would always be accompanied by hostility. For example, when a person has the freedom to choose one of five different, attractive, alternatives, and the third most attractive has been eliminated by an irrelevant and impersonal problem (as in Brehm, Stires, Sensenig, & Shaban, 1966, in which one of four phonograph records failed to arrive in a shipment), there seems little reason to expect hostility to occur. There is little or no frustration because, even if the person did not expect to be able to choose which alternative s/he would receive, the probability of receiving one of the top two alternatives would be increased by the disappearance of the third alternative.

## Determinants of the Magnitude of Reactance

It seems obvious that the importance of a freedom that is threatened would be a determinant of the magnitude of reactance, and equally obvious that the number of freedoms threatened, or the proportion of freedoms threatened, would also determine the amount of reactance. An experiment designed to test whether or not the proportion of freedoms threatened affects the magnitude of reactance was carried out by Brehm, McQuown, and Shaban (reported in Brehm, 1966). Briefly, eighth grade students were asked to rate the attractiveness of several movies, and some were told they would be able to choose which movie they wanted to see, while others were told they would be assigned which movie they would see. About half of each of these groups was informed there were three movies involved, and the other half were told there were six movies involved. Subsequently, when it was time for participants to be assigned or to choose, they were all informed that the movie each had initially ranked 2<sup>nd</sup> most attractive would not be available. All participants were asked again to rate the attractiveness of the movies, and as the theory led us to expect, those who lost one of three possible choices showed more increased attractiveness of the second ranked movie than those who lost one of six, and this effect occurred only for

those who expected to be able to choose. It should be noted, however, that subsequent research has provided both confirming and nonconfirming evidence in regard to number and proportion of freedoms threatened (see Brehm & Brehm, 1981).

In addition, threats to freedoms can be implied as well as explicit. For instance, a threat to one's present freedom may imply that threats to one's future freedoms may be imminent (e.g., Brehm & Sensenig, 1966). In the same vein, threats directed to other people's freedoms may imply that one's own freedoms may be at risk (e.g., Andreoli, Worchel, & Folger, 1974; Worchel & Brehm, 1971). But interestingly, Andreoli and her colleagues (1974) found that unsuspecting observers experienced reactance when they heard a threat directed to another person's freedom of choice even when the threat carried *no implications* for their own freedoms.

## Limitations on Freedoms

A threat to the freedom to perform a behavior may instigate reactance in some contexts but not in others; it all depends on how important the freedom is thought to be by the person in each of these contexts. Anyone who has visited a country other than the one he or she grew up in has noticed that the customs can be quite different from those to which s/he is accustomed. In one region (large city) driving a car may not be customary, whereas in another (e.g., a suburb) it may be something very common. Therefore what is actually practiced in any given locale is a better guide to what freedoms people hold and may think important than what principles of freedom are enunciated by public and political leaders. This is one reason, of course, why folk music can be a better guide than a national anthem. Reactance theory thus does not deal with general moral principles but rather with specific behaviors that are context-based. This is one limitation on reactance: in one context a person may feel great reactance when not allowed or when forced to drive a car whereas in another s/he might not care.

Other factors may place limitations on reactance. For instance, a group member who faces pressures not to choose an alternative choice that the other group members have eliminated from the choice array may conform to the group decision rather than feel reactance (e.g., Grabitz-Gniech, 1971). Reactance may also be reduced by threats from powerful communicators (e.g., Heilman, 1976), when a person is committed to future interaction with the freedom threatener (Pallak & Heller, 1971), or when restoring freedom carries negative implications for others (Feldman-Summers, 1977) or for oneself (Crawford, McConnell, Lewis, & Sherman, 2002). In Crawford et al. (2002) study participants were asked to make a decision and received advice from a person to choose a particular choice alternative. When participants were asked to anticipate feeling regret for the negative outcomes they would experience for reacting against the source of influence, they experienced

less reactance than when they were not explicitly asked to anticipate possible future regret. In conclusion, when the counterforces (pressures to conform or costs of resistance) are greater than the motivation to restore freedom, people relinquish freedom.

### Modifications to Reactance Theory

The extensive research that has been based on reactance theory has helped to sharpen the meaning of the various concepts involved and to develop one major change in the theory (see, Brehm & Brehm, 1981). This change was prompted by work on human helplessness and more specifically by the Wortman and Brehm (1975) explication of the problem. Briefly, the work on helplessness implied that even when people had a strong expectation to be able to do something (e.g., solve anagrams), the end result of failure on the task was giving up. Obviously, the conditions for reactance exist in this kind of experience: A person begins with a strong expectation that s/he can perform the task successfully, and then slowly (or quickly) learns through experience or feedback that s/he cannot succeed. In moving from the expectation of success to the realization of failure, the individual initially meets the requirements for experiencing reactance, which would constitute increased motivation to succeed at the task. But eventually, no matter how well motivated and no matter how hard one tries, one eventually must give up upon realizing that it has become extremely difficult or impossible to succeed on the task. At this point the expectation of success is lost, as is one's motivation, and what can ensue is a form of temporary depression, which has been called "learned helplessness" (Seligman, 1975).

The required modification of reactance theory was, of course, that when a freedom is clearly *lost* as opposed to simply being *threatened*, reactance may be experienced initially, but it must soon disappear and the individual's belief that s/he had that freedom must be given up. This proposition falls in line with the *energization model of motivation* by Brehm (Brehm, Wright, Solomon, Silka, & Greenberg, 1983; Brehm & Self, 1989; see also Brehm, 1993) and subsequent empirical work (Wright, 1984, 1996; Wright & Brehm, 1989; Wright, Brehm, Crutcher, Evans, & Jones, 1990). This model proposes that motivational arousal to achieve a goal/need or avoid an outcome is a function of potential motivation (how capable or willing a person is to achieve/avoid the outcome) and difficulty of performing the instrumental behavior carried out to achieve that goal. Potential motivation is determined by the importance of the goal or need. In the case of reactance, it is determined by the importance of freedom.

As displayed in Figure 1, when potential motivation is held constant, the intensity of reactance is a cubic function of the difficulty of restoring the freedom. That is, if the person does not know how difficult it will be to restore the threatened freedom, s/he will mobilize as much energy as

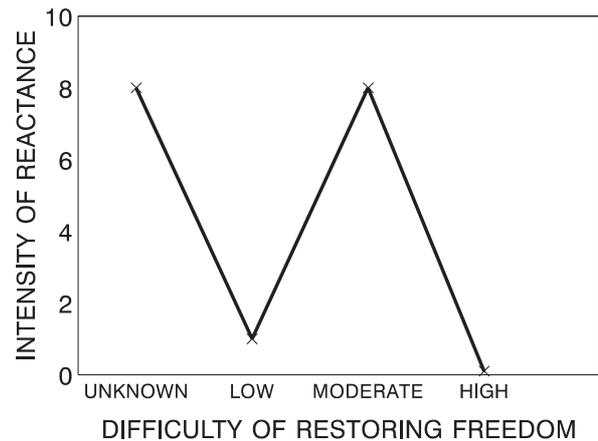


Figure 1. Intensity of reactance as a cubic function of difficulty of restoring freedom.

the goal of restoring freedom is seen to be worth. If the person believes that it would be easy to restore the threatened freedom, s/he will experience little reactance and the intended effort will be proportional to the perceived difficulty of restoration of freedom. The more difficult it becomes to restore the freedom, the more motivation would be mobilized. Thus, if a threatened freedom is perceived as moderately difficult to restore (as in the vast majority of classic reactance studies) reactance motivation should be high and provide the person with energy for restoring freedom. However, if the person realizes that it is impossible to restore freedom, reactance motivation would become low. In other words, just as a goal must lose the positive affect attached to it when it becomes impossible to achieve, so the motivation to recover freedom must disappear when the freedom is no longer viable.

In a study built to test the assumptions made by Brehm's energization model that the magnitude of energy mobilized to carry out instrumental behavior is a cubic function of the difficulty of that behavior, Mikulincer (1988) independently varied the *amount of helplessness training* (i.e., potential motivation) and the *probability of success given prior to performance* (i.e., perceived difficulty of restoring freedom to succeed). Mikulincer hypothesized that very little reactance energization would be generated when the behavior required for motive satisfaction is seen as easy but the energization would increase proportionally to the perceived difficulty of the freedom-restorative behavior, up to the point when motive satisfaction is so difficult that no behavior is sufficient.

In this study, participants were exposed to high, low, or no helplessness training on a series of cognitive discrimination problems and were given information regarding the probability of success on those problems. The amount of helplessness was varied by providing participants noncontingent feedback on one of four problems (low LH), on all four problems (high LH), or no feedback was provided. To manipulate the probability of success (*Ps*), participants

from low and high helplessness conditions were divided into four groups. Participants in the *no information* condition performed the unsolvable problems without any other manipulation. Participants in the other three conditions were told that, on the basis of previous research, the normative probability of success for other undergraduates was 10% (*Low Ps, or Extreme difficulty*), 50% (*Moderate Ps, or Moderate difficulty*), or 90% (*High Ps, or Low difficulty*). Half of the participants were asked questions assessing motivational involvement right after the completion of the training task and before the test task (i.e., the extent to which they wanted to succeed during the training tasks, how attractive the tasks were). All participants then performed the test task and their performance was measured.

The data showed that in the low helplessness condition (high potential motivation), participants who received moderate probability of success information exhibited higher motivation to perform and better performance than participants in the no helplessness condition. Within the low helplessness conditions, both Low Ps and High Ps participants reported lower motivation than those with no information and moderate Ps. Thus, difficulty had a cubic effect on reactance energization only when potential motivation was high, that is, in the low learned helplessness conditions. When potential motivation was low, difficulty of the task had little effect on motivation, which was very low. Moreover, the participants' motivational involvement was a significant predictor of performance in the low helplessness condition.

This study provides the best evidence thus far for Brehm's assumption that reactance arousal is a cubic function of potential motivation to restore freedom and difficulty of restoring freedom. Although this study has a number of potential problems including the fact that not only reactance might have been instigated but also frustration and concern with one's own competence, the paradigm that Mikulincer (1988) used is the only one that has looked systematically at the relationship between reactance motivation and difficulty of restoring freedom.

## New Implications of Reactance

Since Brehm and Brehm's review of psychological reactance in 1981, research has been conducted to investigate basic theoretical reactance ideas as well as applications of the theory to social phenomena. In the next section we will briefly review some of the advances made in the work on reactance.

### Can Reactance Be Measured Directly?

Brehm and Brehm (1981) noted that hypothesizing the existence of reactance allows one to predict a variety of behavioral effects such as perception of attractiveness of the

threatened or eliminated behavior or cognitive effects such as derogating the threatener (Worchel & Brehm, 1971; Wright, 1986). However, reactance could be directly assessed through measurement of the subjective experience (feeling) that accompanies the urge to restore freedom.

So, what do people feel when their freedom of choice is threatened? Certain phenomenological effects may sometimes accompany reactance such as awareness of feelings of discomfort as well as hostile and aggressive feelings (Brehm, 1966; Brehm & Brehm, 1981). Whether anger or other emotion is instigated depends on the specific characteristics of the threat (e.g., legitimacy or illegitimacy of threat, whether the freedom was threatened with intent or by accident). Only a few studies have measured reactance directly in a classic reactance paradigm. For instance, Heilman and Toffler (1976) used "defiant," "uncooperative," and "angry" as indicators of reactance.

Although Brehm has conceptualized reactance as a situational response to a specific threat to freedom, in the clinical psychological area reactance was conceptualized as a trait variable and assessed through the use of individual differences scales, such as the Therapeutic Reactance Scale (TRS, Dowd, Milne, & Wise, 1991) and Merz's Psychological Reactance Scale (1983). Some items in the Hong and Page (1989) reactance scale such as "I become angry when my freedom of choice is restricted," "It irritates me when someone points out things, which are obvious to me," "I become frustrated when I am unable to make free and independent decisions" appear to measure an affective state, but because of the different referent of the items, they usually load on different factors. The explanatory power of these scales is low (cf. Dowd et al., 1991) perhaps because of the different threat situations covered by these scale items. Unless one assumes that people become sensitized to threats to other freedoms when they are reminded of a threat of a specific freedom, it is difficult to understand why some people would score high on all these affective items that mention different threat scenarios. Thus, there is little to gain from the conceptualization of reactance as a personality trait (see Shoham, Trost, & Rohrbaugh, 2004, for a discussion of this point). We think that future research will benefit from the employment of purer affective measures of reactance in response to a situational threat to a freedom. For instance, Shoham et al. (2004) measured participants' content-filtered voice as a gauge of reactance (i.e., the more reactance, the more spiteful, uninhibited, and active the tone of voice sounded).

Another way of directly measuring reactance is through the use of physiological measures. Reactance behaviors such as opposition may be measured through the actions that participants undertake but also through changes in autonomic arousal. Barclay (1971) found that male participants who were told that they were expected to feel sexually aroused when watching a pornographic film (reactance condition) showed less sexual arousal than those participants in either of two control conditions, who watched a neutral movie or who were not told that they were expected

to feel sexual arousal. Participants in the reactance condition, whose freedom not to become sexually aroused was threatened, showed a decrease in urinary acid phosphate, a physiological indicator of sexual arousal.

Reactance produces not only attempts to restore freedom but also psychological tension (Brehm, 1972). The experience of having one's goal interrupted or blocked was found to be accompanied by somatic tension in the upper part of the body and sometimes with "holding in" of breath (Price, Barell, & Barell, 1985, p. 32). Reactance in response to a threat to expectation of control was found to be associated with increased activity of the sympathetic nervous system. In a study looking at the effect of contingent and noncontingent feedback on physiological arousal and performance, Baum, Fleming, and Reddy (1986) varied participants' potential motivation (i.e., how willing or capable they were to do well on a task) by sampling them along a continuum of time since unemployment. They also included a control group consisting of people who were employed at the time of the study. The assumption was that the longer unemployed participants were, the lower their potential motivation. Participants who were unemployed for three weeks and those employed showed reactance behaviors when exposed to a small amount of failure (noncontingent feedback) such as more persistence over time on the test task, but also showed higher sympathetic arousal levels (increases in both epinephrine and norepinephrine) compared to participants who were unemployed for more than 3 weeks. In contrast, participants who had not been employed for more than 3 weeks showed decreases in levels of sympathetic arousal and became less persistent over time on the task (learned helplessness) compared to the control and recently unemployed people.

Obviously, more work is needed to chart the physiology of reactance. An investigation of this sort would help explore important questions such as what happens to reactance arousal when one cannot restore an eliminated freedom or whether observers experience reactance arousal when they witness threats to other people's freedoms.

### Routes to Reactance: Direct and Indirect Paths

In the 1981 book, Brehm and Brehm ask how reactance effects such as increased attractiveness of the threatened choice alternative or boomerang attitude change occur. Is there a direct route from threat to attitude change or are there mediating cognitive processes?

To answer these questions, Silvia (in press) exposed participants to a pro-attitudinal communication that included a threat to their freedom to disagree either at the beginning or at the end of the message. He found evidence for two paths from threats to disagreement. In one path, when participants read a pro-attitudinal communication and received a threat to their freedom at the end of the message,

threats to attitudinal freedom directly motivated disagreement. In the other path, when participants read the same message but the threat was at the beginning of the message, negative cognitive responses (i.e., counterarguing, negative perceptions of the source's credibility) fully mediated the threat's effect on disagreement. The two paths had different consequences for sleeper effects (Study 2): disagreement originated in negative cognitive responses persisted, whereas disagreement directly motivated by the threat declined when participants were asked to express their disagreement after a delay (i.e., after participants were given a cognitive task to perform). Interestingly, participants in the threat at the beginning condition showed as much disagreement after the delay as they did right after they finished reading the persuasion attempt.

Silvia did not measure affective responses to threat. Zuwerink and Devine (1996) did. They exposed participants to a counter-attitudinal message and found that participants who considered their attitude high (vs. low) in personal importance were more resistant to the message because they got more irritated and generated more negative thoughts about the message (i.e., more negative cognitive and affective elaborations and less favorable evaluation of the source). Unfortunately, the use of the counter-attitudinal message (instead of pro-attitudinal) might have brought confounds in the form of frustration to being exposed to the message or a desire to distance from a dissimilar communicator.

Nevertheless, these two studies indicate that both the production of cognitions and negative affect toward the communicator potentially account for the effect of the indirect path. This might explain why reactance persisted in Silvia's study even after participants had already restored their freedom to disagree by expressing disagreement with the communicator on an initial questionnaire.

### Categorization Threat and Reactance

Reactance can be aroused when one's behavior is predicted (for instance, via a personality test, Hannah, Hannah, & Wattie, 1975; also see Barclay, 1971, and Goodstadt, 1971) or when one is seen by self or others as possessing a particular trait that "implies a stereotyped, predictable, inflexible pattern of behavior" (Snyder & Wicklund, 1978, p. 198). Explanations of behaviors in terms of stable attributes may be particularly threatening if they have restricting implications for behavior. In these cases, people may attempt to behave inconsistently with the prediction or make ambiguous attributions for their own behaviors (Snyder & Wicklund, 1978).

One type of stable attribute is group membership. Being a mother, for instance, is a social category that has implications for one's present and future behaviors. Categorizing someone as member of a particular group may result in reactance when that person – at that particular moment –

feels free to take on any identity he or she wants (e.g., Romanian or European) and feels capable to exercise the behaviors/capabilities that come with that group membership.

These group categorization threats may interfere with one's distinctiveness (Branscombe, Ellemers, Spears, & Doosje, 1999; S. Brehm, 1983; Gaertner et al., 1993) but also restrict behavioral freedoms. Interestingly, even a positive categorization label, as, for instance, "mother" or any group identity the person values, may create reactance if the person wishes in a particular context to freely self-categorize. Thus, even categorization threats that are legitimate and involve absolute positive outcomes for the targets of threat can create reactance, and as a result, may cause people to distance themselves from the imposed social category (e.g., less commitment to the group) and reassert their threatened identity (Barreto & Ellemers, 2002). Of course, even flattering self-categorizations can create reactance if they carry restricting behavioral implications for the individual.

Kray and her colleagues (Kray, Thompson, & Galinsky, 2001; Kray, Reb, Galinsky, & Thompson, 2004) examined women's negotiating performance at the bargaining table after activating masculine stereotypes either *implicitly* (they were told that effective negotiators are rational, assertive, and unemotional, and have high regard for their own interests) or *explicitly* (blatantly acknowledging that the association between masculine traits and effective negotiation is linked to gender differences). In line with previous work on stereotype threat, Kray et al. found that women confirmed gender stereotypes of poor negotiators at the bargaining table when stereotypes were activated implicitly because the anxiety that they could confirm the gender stereotype interfered with their performance. But when stereotypes were explicitly activated, women exhibited "*stereotype reactance*," becoming more aggressive negotiators and ultimately outperforming men. While this reactance effect is real, little is known about why the explicit instructions create reactance and not stereotype threat.

Unfortunately, in Kray's research the use of a negative trait obscures the contribution of reactance. In the face of a blatant pessimistic "prediction," women might have felt reactance (due to a threat to their freedom to avoid being categorized as women) but also frustration that motivated them to reaffirm the impaired self. Nevertheless, research has shown that even explicit activation of a positive group stereotype leads to choking and poor performance (Baumeister & Showers, 1986). Also, the research by Goodstadt (1971) and by Hannah et al. (1971), in which participants acted in contrary ways even when the imposed traits were positive or preferred, indicates that participants were feeling reactance at being categorized or "predicted" without their choice.

Kray et al. (2004) found that explicit activation of stereotypes led to stereotype reactance only when women had more or same power as the men they were negotiating with. This finding brings support for the theoretical provision that in order for people to experience categorization reac-

tance, they must feel capable to exercise the behaviors/capabilities that come with group membership.

## Cultural Grounding of Choice and Freedom: Is There Such a Thing as "Group Reactance"?

Freedoms are specific beliefs about what a person can and cannot do. People develop these expectations on a situation-to-situation basis and freedoms are bound by what an individual feels capable of doing or having control over. But little is known about how these beliefs develop.

There is some evidence that social context affects the type of beliefs people develop and hence how people in different cultures react to threats to freedom. Iyengar and Lepper (1999), for instance, found that when told that their mother or classmates made a choice for them (types of task or task options), the Anglo American children showed decreased performance and intrinsic motivation whereas Asian American children showed increased performance and intrinsic motivation on the task. The reverse was found when children were given personal choice. These findings may reflect an important difference between individualistic and collectivistic cultures. The children's different responses might have been grounded in the different expectations of control and choice that they learned through socialization. While Anglo American children learn to value personal choice, Asian Americans learn to value input from trusted authority figures (mother or classmates). As the latter did not have expectations of personal choice with regard to the tasks, there was no freedom of choice to threaten in the first place. That being said, one should not expect that reactance processes be different in the two cultures; only the expectations of control should be different. For instance, threats to freedom from individuals outside the group may instigate more reactance in collectivistic than individualistic cultures, whereas the reverse may be true for westerners (see Markus & Kitayama, 1991, for a review of cultural differences). This hypothesis awaits testing. But, in the same vein, Jonas et al. (2005) found in several studies evidence that led them to conclude that people holding an interdependent self-construal were less sensitive to a threat to their individual freedom than people holding an independent self-construal, but were more sensitive if their collective freedom was threatened.

This makes us ask along with Worchel (2004) a more important question: Do groups have freedoms? Worchel posits that groups' free behaviors – behaviors that come with group membership – are the *rights* that people acquire when joining a group and these freedoms define a person's identity.

Given that people internalize the norms of the group when they become full-fledged members of that group, do they also develop expectations of control over the group outcomes? If that were true, is there such a thing as group reactance? To give an example, if people think that as a

group they are entitled to set their country's time shifting rules, a unilateral decision of another country on the same time zone to change those rules by implementing the daylight saving shift earlier in the year would create pressure on the group to make a similar change. This pressure would lead to reactance in all members of the group even though the action might ultimately have positive consequences. In this vein, Worchel and his colleagues (reported in Worchel, 2004) found that groups reacted with anger and protest when an experimenter instructed them on how to arrange their chairs, after first leading them to believe that seating arrangements could be decided by the group.

Given the unity of group members' actions in response to threats to their group's freedoms, can group members experience reactance on behalf of another group fellow? Is there such a thing as *vicarious reactance*, reactance experienced on behalf of another person whose freedom of choice was threatened (a la Andreoli et al., 1974)? Let's say that in a graduate seminar, students are told by the professor that they are free to choose one topic out of three to write their final paper on. An undergraduate student also takes this class and he seems quite competent and the professor acknowledges that in class. If the freedom of the undergraduate student to make a particular choice of a paper topic is threatened by the professor who asks *only* that student to choose a particular topic, would his older colleagues feel reactance on his behalf – even if the threat has no implications for their own freedom of choice? Even though the mechanisms of this vicarious process are unclear, there is the possibility that if the colleagues feel empathy for the undergraduate, they may become motivated to restore his freedom (i.e., experience “empathic reactance,” Miron, 2002).

## Clinical Applications

Recent books have covered various reactance phenomena (reactance theory and applications, Wright, Greenberg, Brehm, 2004; resistance to persuasion, Knowles & Lynn, 2004). The applications of reactance are numerous, as the theory has been useful for the study of persuasion and attitude change, consumer research, interpersonal and intergroup relationships, therapeutic issues, and more generally motivation and emotion.

One of the most prolific domains of reactance applications has been clinical research. One direction was the use of directives in therapy to persuade clients to comply with doctors or clinicians' advice (Fogarty & Youngs, 2000). In the same vein, Rohrbaugh and his colleagues (Rohrbaugh, Tennen, Press, & White, 1981; see also Shoham-Salomon, Avner, & Neeman, 1989) set up a distinction between free (e.g., smoking) and unfree (e.g., panic attacks) symptoms or behaviors and designed specific treatment strategies for each type. They showed that paradoxical interventions that attempt to induce change by prescribing the symptom (“take time to procrastinate”) have been successfully used

to reduce free behaviors (procrastination) because they threaten participants' freedom not to perform the symptom.

Similarly in the context of interpersonal relationships, the examination of ironic effects in romantic relationships appears to be a particularly useful and interesting avenue. Shoham's research (Shoham et al., 2004) on husband-wife dyads showed that failure to give up on a bad habit (e.g., smoking or drinking) may be caused by a chain reaction in which the pressures from the wife on the husband to give up drinking, for instance, may create reactance in the husband who then engages in more “prohibited” behavior, which triggers reactance in wife, and so on. Illustrative for this process is the behavior of one of Shoham's participants: “(. . .) 10 years later, Jack had recovered from alcoholism. He said he did so after Janet (his wife, *our note*) stopped saying, ‘If you loved me enough, you'd give up the booze’: When she gave up on him and said instead, ‘I don't care what you do any more’, Jack enrolled in a treatment program.” (Shoham et al., 2004, p. 177). This line of research on chain reactions may be linked to the work on motivation and difficulty, and has relevance for other social phenomena, such as negotiation of conflict between parties, be they individuals or groups.

## Conclusion

In this paper, we have sampled some interesting directions of research on psychological reactance that have been undertaken by various psychologists during the last 40 years since the theory was formulated. We conclude that even though great developments have occurred since 1966, some of the basic questions put forth by reactance theory have remained unanswered. We hope that future research will consider the various implications of the theory for real world phenomena as well as continue revealing and testing its basic theoretical assumptions.

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Anca Miron

Department of Psychology  
1415 Jayhawk Blvd.  
University of Kansas  
Lawrence, KS 66045  
USA  
E-mail anca@ku.edu/jbrehm@ku.edu