



Effects of Frustration Justification on Hostile Aggression

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The present study tested Berkowitz' [1989: Psychological Bulletin 106:59-73] reformulation of the frustration-aggression hypothesis which states that any negative or aversive stimulus such as frustration, even if justified, will result in some measurable tendency to aggress. Participants' attainment of an expected gratification was either blocked in an unjustified manner, blocked in a justified manner, or not blocked at all. Degree of hostile aggression directed at the frustrating individual was measured. As predicted, justified frustration produced less hostile aggression than unjustified frustration, but even justified frustration produced more hostile aggression than no frustration at all. Results support Berkowitz' frustration-aggression reformulation. © 1995 Wiley-Liss, Inc.

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Key words: justified frustration, unjustified frustration, frustration-aggression theory, hostile aggression, attribution theory

INTRODUCTION

"Forgive and forget." This advice consists of two commands; the first is an extremely difficult process; the latter is even more difficult, perhaps impossible. Assuming an individual asks your forgiveness for some transgression or frustration, you do have the capability to comply. You may attribute the source of the harmful act to a temporary lapse, a one-time betrayal, or to some justifiable cause. Interestingly, even if you label the event as justified and perform the cognitive gymnastics necessary to truly forgive, can you truly forget? More specifically, can you eliminate all the hostile feelings and action tendencies that were triggered by the harmful act? An answer to the latter question may be found as a result of a relatively new insight in a theory which explores the relationship between frustration and aggression.

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Origins of Frustration-Aggression Theory

An early attempt at a comprehensive theory of the nature of hostility and aggression was a monograph by Dollard et al. [1939], in which they introduced the frustration-aggression hypothesis. The theory originally stated that 1) all acts of aggression are the result of previous frustration, and 2) all frustration leads to aggression. Frustration was defined as the act of blocking someone from gaining an expected gratification; aggression was defined as any behavior which is intended to injure the individual to whom it is directed.

Shortly after the original theoretical statement appeared, a major modification to the second portion was offered by Miller [1941]: "Frustration produces instigations to a number of different types of response, one of which is an instigation to some form of aggression" (p. 338). In the 50+ years since, considerable research efforts have been devoted to identifying various intervening processes which could reduce aggressive responses to frustration (e.g., response inhibition, decreased instigation, expectedness). Among these processes is the degree to which the frustration is perceived as justified. The effects of justification on aggression constitute the main focus of this article.

The Impact of Justification on Aggression

Pastore [1952] reported the first research which measured levels of aggression as a result of justified or unjustified frustration. Subjects were presented with several hypothetical scenarios which described either justifiably or unjustifiably frustrating events. Results showed that self-reported feelings of hostility engendered by the scenarios were moderated by justification. Frustration that was justified resulted in less intense feelings of hostility than frustration that was unjustified. Cohen [1955] also reported a diminution of aggressive impulses when the source of a hypothetical frustration was justified.

Weiner and colleagues, in their work on attribution theory, have provided one possible explanation for the differences in aggression between justified and unjustified frustrations [Weiner, 1985; Weiner et al., 1982]. These researchers found that subjects will feel anger toward an individual responsible for a negative event to the degree that the individual had control over the event. If someone has control over someone else's negative situation and allows it to occur, as in unjustified frustration, anger will be more prevalent than if that individual has no control over the negative situation, as in some types of justified frustration.

Although the early work on justification and frustration used only hypothetical scenarios, and thus is subject to several uninteresting alternative explanations, later research experimentally manipulated frustration. Of these studies, many replicated the moderating effect of justification on subsequent measures of aggression [Burnstein and Worchel, 1962; Rule et al., 1978; Kulik and Brown, 1979]. However, as noted by Berkowitz [1988], many researchers claim that justification not only reduces the amount of subsequent aggression but that justified, socially proper sources of frustration do not create aggressive tendencies at all.

A Reformulation of the Frustration-Aggression Theory

Berkowitz [1988, 1989] clearly states that justified frustration does, indeed, lead to aggressive tendencies and proposes a model which explains how. Basically, Berkowitz

views frustration as an unpleasant, aversive stimulus which evokes negative affect by automatically eliciting cognitions that are associated with aggressive tendencies. It is important to repeat that this initial process is automatic, requires little cognitive capacity, and, alone, is sufficient to produce aggression-related thoughts and motor impulses. Berkowitz' model also proposes that higher order, cognitive processing (if and when such processing occurs) can lead the individual to attribute a cause to the unpleasant stimulus or to some other individual. These cognitions can produce adjustments to the initial reactions, either suppressing or enhancing further aggressive reactions. This model has been presented as a reformulation of the frustration-aggression hypothesis and includes the following amendment: "Frustrations produce aggressive inclinations only to the extent that they are aversive and give rise to negative affect" [Berkowitz, 1988, p. 3]. Furthermore, he has considered the distinction between hostile and instrumental aggression and, in keeping with the original frustration-aggression hypothesis, has focused solely on hostile aggression.

During the first stages of the model, where negative affect arises and aggressive cognitions are automatically primed, some level of aggressive motivation is instigated. Through potential cognitive appraisals which may follow, justification for the frustrating event can reduce the motive to aggress. However, this reappraisal may not eliminate all aggressive tendencies which automatically arose from the negative affect produced by the initial frustration. Aggressive tendencies have been found to accompany completely "proper" frustrations [unpublished manuscript cited in Berkowitz, 1988] and have been found to be directed at completely innocent individuals [Geen and Berkowitz, 1967; Geen, 1968; Strube et al., 1984].

Berkowitz [1981] directly tested the effects of justified and unjustified frustration on internal and external aggressive reactions toward an innocent third party. Subjects were either unjustifiably frustrated by the deliberate actions of their partner (a confederate), frustrated by justifiable equipment failure, or not frustrated at all. Planned comparisons between the non-frustrated control group and the average of the two frustration conditions revealed that negative, internal reactions as measured by increases in heart rate and changes in mood resulted from frustration. No differences were found between the justified and unjustified frustration conditions.

Following the frustration manipulation, the subject was given an opportunity to reward and punish another individual not associated with the initial frustration. The connection between the individual associated with the initial frustration and the innocent individual consisted solely in the fact that they shared the same name—George. Theoretically, the name "George" would be associated with the negative affect induced by the initial frustration. The fact that the innocent individual's name was also "George" would link this individual to the frustration and raise his quality as a stimulus for aggression. Results showed that, compared to the control group, significantly more punishment was directed toward "innocent George" if the initial frustration was unjustified. Subjects' outwardly hostile feelings for the first individual who was most closely associated with the frustration were also measured. These reactions, which assessed the subjects' desire for further contact with the individual, marginally increased in hostility from the control group to the unjustified frustration group. No increases in overt aggression were found between the control and the justified frustration conditions for either the first George or "innocent George."

An interesting yet distinct prediction from Berkowitz' [1989] model is that com-

pletely justified frustration can result in increased levels of external aggressive behavior directed at the frustrator, relative to aggression produced by a non-frustrated control group. The negative affect resulting from initial frustration, even in the presence of aggression-reducing attributions associated with justification, should be sufficient to induce measurable amounts of overt, external aggression toward the individual most closely associated with the frustration. Berkowitz [1981] measured attitudinal aggression, not behavioral aggression, toward the individual most associated with the frustration. The only direct, overt measure of behavioral aggression taken was toward the innocent third party and revealed no significant increase from the control group to the justified frustration group. There is a theoretical explanation for this finding: the associative cue (i.e., the similar name) between the frustrating individual and the innocent third party may have been too weak to stand against the aggression-reducing causal attributions made by the frustrated subject. This is not a criticism of the design of the study or of the importance of its findings. On the contrary, the results of the study support its major predictions and made an important distinction between internal and external reactions to frustration as a function of justification. Our point here is that there are no studies of the hypothesis that even completely justified frustration can result in increased overt, aggressive behavior directed at the individual most associated with the frustration.

In order to adequately test this specific prediction of Berkowitz' [1989] model, an investigation would need to include the following: 1) a condition where the attainment of an expected gratification is blocked in a truly unjustified manner, 2) a condition where the attainment of an expected gratification is blocked in a truly justified manner; 3) a control condition where the attainment of an expected gratification is not blocked; and 4) following the experimental manipulation, a measure of hostile aggression directed at the frustrating individual. We could find no study containing all four of these specific characteristics.

With the exception of one project, the relevant research in the area focuses on the relative effects of justified and unjustified frustration on aggression and does not include the necessary control group [Pastore, 1952; Cohen, 1955; Kregarman and Worchel, 1961; Rule et al., 1978; Kulik and Brown, 1979]. Burnstein and Worchel [1962] did include a "no frustration" condition along with a "justified frustration" and an "unjustified frustration" condition. Subjects worked on a group task which measured how well they could, together, come to a conclusion on an issue. In the control group, a confederate contributed moderately to the goal. In the frustration conditions, the confederate blocked the group from successfully completing the task in the designated amount of time by asking too many clarification questions. In the "unjustified frustration" condition, the interruptions seemed arbitrary, whereas in the "justified frustration" condition, the confederate wore a hearing aid and justified his questions by stating that, because the battery was low, he could not hear well. Aggressive inclinations toward the confederate, in the form of rejecting him from the group in a future, similar task, were higher in the "unjustified frustration" condition than either the "justified frustration" or "no frustration" condition.

Burnstein and Worchel [1962] provided some interesting findings, but it was not designed to test Berkowitz' [1989] model. It should be no surprise to discover that it does not provide an adequate test for several reasons (nor do we fault them for failing to test a model that had not yet been developed). First, their primary aggression measure was instrumental in nature rather than purely hostile (i.e., removing the frustrating indi-

vidual from the group to ensure success on the following task). Second, as noted in Berkowitz [1989], although one may be sensitive to a handicapped individual, many associate the handicapped with cognitions related to pain and suffering. Stimulating these cognitions may induce negative affect which may lead to pain and suffering. Stimulating these cognitions may induce negative affect which may lead to aggressive tendencies aside from the manipulation of frustration. Third, for their primary aggression measure, no statistical comparison was explicitly made between the justified and control conditions—although the trend was for more aggression in the justified condition. Lastly, it is not entirely clear that the justified frustration was entirely justified.¹

The Present Study

We conducted a more direct test of Berkowitz' model. If initial aggressive tendencies resulting from a frustrating event are cognitively moderated by attributions of control, then frustration that is perceived as arbitrary and controllable should result in more aggression than frustration that is perceived as nonarbitrary and uncontrollable. Further, even if justification reduces the amount of initial aggressive tendencies that result from the automatic stimulation of negative affect, it may not eliminate them. In other words, the conscious moderation of initial aggressive tendencies by consideration of a justified excuse may systematically undercorrect for the automatic aggressive effects of the frustration. Therefore, we proposed the following hypotheses: measures of hostile aggression directed at a frustrating individual will 1) be highest when the frustration is unjustified; and 2) be higher in the justified frustration condition than in the non-frustrated control condition.

METHOD

Subjects

Thirty-six subjects participated in the study as partial fulfillment of an introduction to psychology class. Two people were dropped from the sample because they failed to follow the necessary instructions. The final sample consisted of thirty-four subjects: 12 in the unjustified frustration condition, 13 in the justified frustration condition, and 9 in the unfrustrated control group.

Procedure

Each experimental session required the use of two experimenters, one of whom posed as a subject. This confederate randomly assigned the condition to take place in the upcoming session while the experimenter remained blind to condition. Before each subject arrived, the confederate took a seat in the waiting room.

¹For frustration to be truly justified, it must have originated from outside an individual (external) who was not able to control the event [Weiner et al., 1982]. The confederate in Burnstein and Worchel's paradigm initially distracted the group from their goal by asking the group to repeat the instructions previously stated by the experimenter which were not audible to him. In such an instance, it would have been well within the individual's control to ask the experimenter to speak more loudly and/or repeat the instructions before the clock began counting-down on the group's allotted time. Although throughout the session the confederate distracted the group in a more justified manner, the group's first impressions of the confederate's distraction could have been viewed as unjustified.

Pre-experimental measures of frustration and aggression. Each participant and the confederate were greeted by the experimenter and led into the lab. The subject and confederate were seated adjacent to one another at a table with the experimenter seated facing them from across the table. Following the informed consent procedure, the subject and confederate completed an initial questionnaire which had subjects rate, among other filler items, the degree to which they were at present feeling "frustrated" and "aggressive." Responses to each item were indicated on a scale ranging from 1 (not at all) to 11 (very).

The task. Following the questionnaire, the experimenter explained that the study tested visual-spatial ability in an instructive setting. Specifically, the subjects would be instructed on a paper-folding (origami) task which consisted of folding a piece of paper into a form that resembles a bird. Subjects would later be timed while performing the task alone. It was made clear that instructions would be given only once and that success on the task consisted of quickly and successfully performing the task alone after the instruction period.

The experimenter immediately provided the subject and confederate with a piece of paper and began instructing them on how to perform the task. The experimenter explained and demonstrated that task to the confederate and the subject, fold by fold, while they attempted to fold their papers in the same manner. The speed at which the experimenter worked was intentionally faster than the subject could follow. At a particular, predetermined fold early in the procedure the confederate interrupted, "Excuse me, but could you slow down a little, I'm having a hard time keeping up with you."

Assignment to experimental condition. During this interruption, the confederate made the experimenter aware of the experimental condition by placing his/her hand on the top edge of the table. If the confederate rested three fingers on the top edge of the table (signaling the unjustified frustration condition) the experimenter responded, "I would like to hurry and get this over with. My boy/girlfriend is coming soon to pick me up and I don't want to make him/her wait." If the confederate rested two fingers on the top edge of the table (signaling the justified frustration condition) the experimenter responded, "My supervisor has scheduled someone else in this room very shortly and has pressured me to do this as quickly as I can. I'm afraid I'm not able to slow down." Finally, if the confederate rested one finger on the top edge of the table (signaling the control condition) the experimenter responded, "Oh, O.K., I didn't realize that I was going too fast. Let me back up a little and go more slowly," and slowed down to a more reasonable pace.

Post-experimental measures of frustration and aggression. When the instructions were completed, the confederate (conveniently seated closer to the exit than the subject) was escorted into another lab room so that each individual could perform the task alone. Next, a piece of paper, a timing clock and an envelope entitled "Questionnaire" was placed on the table in front of the subject. The subject was instructed, before beginning the task, to complete the questionnaires within the envelope, place them back in the envelope and bring the packet to the experimenter. As a manipulation check, this questionnaire had subjects rate the degree to which they were at present feeling "frustrated" and "aggressive" as in the pretest questionnaire. Responses to each item were indicated on the same 11 point scale ranging from 1 (not at all) to 11 (very).

Dependent variables. An additional questionnaire was appended to the packet which was described as an evaluation of the university's teaching and research assis-

tants. The questionnaire stated that the feedback obtained from these questions would help the department to detect those who deserve special merit in the form of awards and financial assistance as well as those who deserve disciplinary measures such as verbal reprimands and possible reductions in pay. Subjects were allowed to choose whether or not they wanted their responses kept anonymous.

Two types of dependent variables were then collected. The first was a set of four questions on subjects' specific judgments of and feelings about the experimenter. They were as follows: 1) "The experimenter reflects an appropriate amount of respect toward others" (labeled Respect); 2) "The experimenter has the ability to explain things in an understandable form" (labeled Explain); 3) "The experimenter would be a good teaching assistant for a psychology class" (labeled Good TA); and 4) "I like the experimenter" (labeled Like). All four items were rated on a Likert-type scale from 1 (strongly agree) to 5 (strongly disagree).

The Respect and Like items represent how appropriately subjects felt they were treated by the experimenter and, because these questions tap this same "likeability" dimension of the experimenter's behavior, were combined into an average composite score. Subjects in the justified frustration condition have no reason to feel less positive about the experimenter than subjects in the control condition on this dimension. After all, the experimenter was nice enough to explain why they had to rush so, and the reason was completely justified and beyond their control. Unjustified frustration subjects, though, should give poorer (i.e., higher) ratings on these items than either justified frustration subjects or control subjects.

The Explain and Good TA items assess a different dimension of subjects' perceptions of the experimenter. These questions, which measure how able or competent the subjects' felt the experimenter to be, were also combined into an average composite score. Because subjects in the justified frustration condition experienced the rushed explanation, their ratings of the experimenter on this "ability" dimension are likely to be somewhat poorer (i.e., higher) than ratings by control subjects, but still not as poor as ratings by unjustified frustration subjects.

The second type of dependent variable is more directly related to hostile aggression. The two hostile aggression measures were 1) a general rating of the experimenter on a scale of 1 (horribly incompetent) to 10 (unbelievably wonderful), and 2) a "grade" of either A, B, C, D, or F.

Subjects completed the questionnaire, put it back in the envelope, and contacted the experimenter. Then they were thoroughly debriefed, given credit for their participation, and escorted from the lab.

RESULTS

Self-Reported Measures of Frustration and Aggression

Pre-experimental levels of both frustration and aggression revealed no group differences, F 's < 1. Change scores were calculated by subtracting pre-experimental levels of frustration and aggression from post-experimental levels of frustration and aggression, respectively. These scores, which represent the amount of self-reported frustration and aggression resulting from the experimental manipulation, also revealed no group differences, P 's > .1.

Subjects' Ratings of the Experimenter

Specific measures. The two composite measures—likeability and ability—were treated as a within subjects factor in a mixed model design. All responses were made on a scale of 1 to 5, with higher numbers reflecting attributions of dislike and inability toward the experimenter. The resulting means for these two dimensions by experimental condition can be seen in Figure 1.

A 2 (dimension: "likeability" and "ability") \times 3 (condition: unfrustrated control, justified frustration, and unjustified frustration) ANOVA revealed an uninteresting main effect for dimension, $F(1,31) = 22.93, P < .0001$. More importantly, the difference between the two dimensions in the justified frustration condition was larger than the corresponding difference in both the unfrustrated control condition and the unjustified frustration condition. The contrast testing this specific pattern of means proved reliable, $F(1,31) = 4.66, P < .04$. Inspection of Figure 1 reveals that subjects in the control and justified frustration conditions felt equal "likeability" for the experimenter; those in the unjustified frustration condition expressed significantly less "likeability" for the experimenter. However, justified frustration subjects' ratings on the "ability" dimension did tend to be more directly between the relatively good and bad ratings given by control and unjustified subjects, respectively.

Hostile aggression ratings. For the "grade" variable, an A was assigned a score of 4, a B was assigned a score of 3, and so forth. An omnibus group main effect was found on this "grade" measure, $F(2,31) = 9.06, P < 0.001$. The experimenter was assigned a grade reasonably equivalent to an "A" in the control condition ($M = 3.67$), a "B" in the justified frustration condition ($M = 2.92$), and a "C" in the unjustified frustration condition ($M = 1.92$). Planned comparisons yielded a significant difference between the unjustified frustration condition and the justified frustration condition, $t(31) = 2.37, P <$

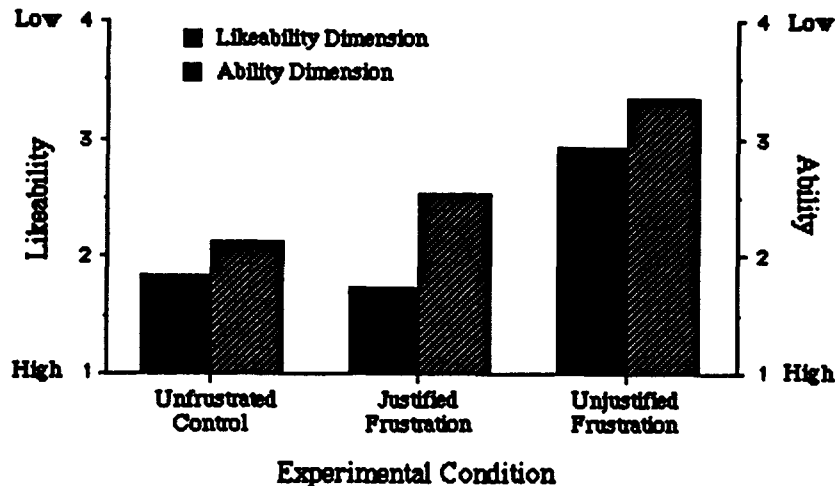


Fig. 1. "Likeability" and "Ability" ratings by condition.

0.04, and a difference between the justified frustration and the unfrustrated control group, $t(31) = 2.32, P < 0.04$.

Subjects also rated the experimenter on a scale from 1 (horribly incompetent) to 10 (unbelievably wonderful). On this rating, an omnibus group main effect was found, $F(2,31) = 6.89, P < 0.004$. The means for the control, justified frustration, and unjustified frustration conditions were 8.33, 7.15, and 5.66, respectively. Planned comparisons yielded significant differences between the unjustified frustration condition and the justified frustration condition, $t(31) = 2.10, P < 0.05$, and a marginal difference between the justified frustration and the unfrustrated control group, $t(31) = 1.93, P < 0.07$. Figure 2 illustrates both of these hostile aggression effects.

DISCUSSION

These results clearly support the position that levels of aggression resulting from unjustified frustration are greater than levels of aggression resulting from justified frustration. More importantly, we also found that even justified frustration results in levels of overt, external hostile aggression higher than those which result in the absence of frustration.

The lack of group differences in the self-reported amount of frustration and aggression is not entirely surprising. This finding is consistent with Kregarman and Worchel's [1961] and Burnstein and Worchel's [1962] criticisms of Pastore's [1952] and Cohen's [1955] work which involved hypothetical scenarios of frustrating events. In such hypothetical paradigms subjects may simply respond in a socially desirable or expected manner. This would likely be true in the self-relevant disclosure of feelings, especially if subjects were hesitant to admit that the experimenter had some impact on their level of socially undesirable feelings. Interestingly, we did find that post-experimental frus-

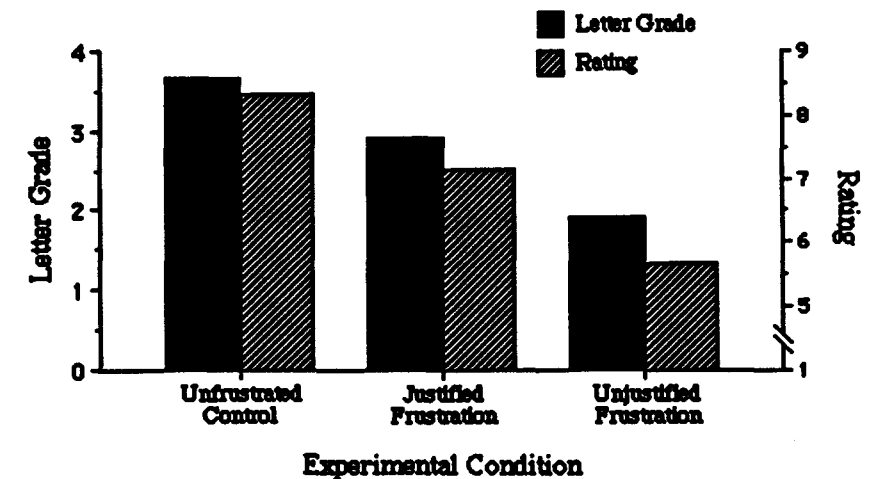


Fig. 2. Assignment of letter grade and rating by condition.

tration levels had the expected correlation with the aggression measure entitled "grade" ($r = .40$). This finding is consistent with the view that frustration induces negative affect, which, in turn, increases hostility toward the experimenter.

In keeping with the view that experimentally manipulating frustration is more impactful than reading hypothetical scenarios of frustrating events, the current study experientially invoked frustration and did so according to the accepted definitions of what constitutes a frustrating event. Subjects were given the expectation of learning a unique and interesting skill which they would later be required to perform. The blocking of this expected gratification was accomplished by the impossibly quick speed at which the experimenter continued through the instructions.

The justification manipulation was based upon Weiner's writings on the relation between attributions and negative emotions such as pity, guilt, and anger. Weiner et al. [1982] showed that anger results toward an individual when that individual commits a transgression which originated internally (i.e., the transgression arose from the desires of the individual) and was controllable. The experimenter's justification that his/her supervisor had scheduled someone else in the room and was therefore unable to slow down is certainly not internal or controllable. However, the unjustified excuse that the experimenter simply did not want to make a boy/girlfriend wait is entirely internal and within the experimenter's control. Therefore, any causal attribution made in the justified condition would have the effect of lowering any hostile feelings the subject may have about the experimenter and, likewise, any causal attribution made in the unjustified condition would have the effect of increasing any hostile feelings the subject may have about the experimenter.

Despite the powerful face value of the justification manipulation, the possibility must be considered that subjects in the justified frustration condition perceived the orders laid down by the experimenter's supervisor as unreasonable and that, consequently, the frustrating actions of the experimenter were at least partially unjustified. The clearest empirical support for our claim that justified frustration subjects saw the explanation as completely justified lies in the ratings for the "likeability" dimension. If justified frustration subjects felt the reason was not wholly satisfactory, they would have liked the experimenter less than control subjects, and would have reported less respectful treatment. The results contradicted this alternative explanation.

According to Berkowitz' [1989] reformulation of the relation between frustration and hostile aggression, when the experimenter blocked a subject's acquisition of the expected gratification, some amount of negative affect was automatically aroused. Negative affect, to some degree, spontaneously primed cognitions associated with aggressive tendencies and established some amount of hostile inclination toward the experimenter. Upon hearing the experimenter's excuse, the subject generated causal attributions as to the origin of the aversive event. If the subject attributed the frustration to the experimenter's intentions (if it was internal and controllable), it was considered unjustified and the initial hostile intentions the subject felt toward the experimenter were intensified. This reasoning was supported by differences in experimenter-directed aggression between the unjustified frustration condition and the justified frustration condition. If, on the other hand, the subject attributed the frustration to some factor outside of the experimenter's intentions (if it was external and uncontrollable), it was considered justified and the initial hostile intentions the subject felt toward the experimenter were suppressed but were not completely over-ridden. This "over-ride" failure

was shown by differences in experimenter-directed aggression between the justified frustration condition and the non-frustrated control group.

In conclusion, the present examination presents evidence supporting Berkowitz' reformulation of the frustration-aggression hypothesis as well as Weiner's attributional analysis of anger and aggression. Further research seems merited, especially that which is designed to test for the presence of the initial negative affect and aggression-related cognitions stimulated by frustration. The stage-like structure of the model, from automatic processes to cognitive moderation, makes the theory amenable to paradigms assessing reaction times and the effects of cognitive busyness. If aggressive cognitions are automatically stimulated by frustration, subjects may be quicker to respond to aggression-related words immediately following a frustrating event than following a non-frustrating event. In addition, if cognitive resources must be applied in order to suppress an aggressive reaction to a frustration which is justifiable, employing a cognitive busyness task immediately after a justified frustration may inflate aggressive responses above that of a non-busy condition. Hopefully, Berkowitz' reformulation will prove to stimulate research in many new directions and, ultimately, increase our understanding of an issue so prevalent in our lives.

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