A Theoretical Model of Triggered Displaced Aggression

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A tit-for-tat matching rule (Axelrod, 1984) describes much interpersonal behavior. Yet, in daily life a retaliatory aggressive response to a trivially mild provocation often inappropriately exceeds that expected from the matching rule. The concept of triggered displaced aggression can explain these exceptions to the matching principle. Building from the Cognitive Neoassociationistic model of aggressive behavior (Berkowitz, 1989, 1990, 1993), we developed a theoretical framework of social and personality factors that moderate and mediate the disjunctively escalated retaliation that can result from triggered displaced aggression. Major explanatory factors in our analysis of such effects are as follows: (a) aspects of the Time 1 provocation and the immediate situation in which it occurred; (b) characteristics of initial provocations and personality factors of the actor that produce the ruminative thought that will temporally extend the effects of a Time 1 provocation, allowing them to interact with a delayed Time 2 minor triggering event; and (c) actions and attributes of the target of displaced aggression that augment these effects.

In daily life a person sometimes experiences a strong provocation in circumstances that preclude retaliation. When that person subsequently behaves aggressively toward an innocent other, it may reflect the displacement of the aggressive inclination toward the initial provocateur. If so, the assumption is that the actor would not have responded aggressively toward the innocent party had he not previously been provoked. Thus, when a man who ordinarily does not kick his dog when she is lying asleep in the entryway of his home, but does kick the poor animal on arriving home from work after having been publicly berated by his boss, he may be exhibiting displaced aggression.

A Historical Perspective on Displaced Aggression

Displaced aggression attained prominence following publication of the related monographs by Dollard, Doob, Miller, Mowrer, & Sears (1939) and by Hovland and Sears (1940) some 60 years ago. Yet, despite sporadic evidence of continued interest in the concept (e.g., Green, Glaser, & Rich, 1998; Hepworth & West, 1988; Mullen, 1986), it appears to have been abandoned by contemporary social psychology. For instance, Geen's (1990) mainstream textbook on aggression devotes 40 words to it, merely defining it in accord with the frustration–aggression theorists (Dollard et al., 1939) and not referencing it in the index.

Our inspection of an availability sample of 18 social psychology textbooks that were published after 1985 (marked with asterisks in the reference section) supported this impression. Only six defined the term, discussed the likely target of displaced aggression, and provided minimal experimental evidence in support of its empirical validity (Aronson, 1988;

Berkowitz, 1986; Brehm & Kassin, 1990; Michener, DeLameter, & Schwartz, 1990; Myers, 1990; Sears, Peplau, & Taylor, 1991). Of the remaining 12 texts, one (Lippa, 1990) described a single study (viz. Miller & Bugelski, 1948), two discussed the inconclusiveness of evidence for it (Schneider, 1988; Worchel, Cooper, & Goethals, 1991), and three only described the Freudian defense mechanism of displacement (Kimble, 1990; Lindzey & Aronson, 1985; Shaver, 1987). Six textbooks never mentioned either the term or the conceptual effects described by it (Baron & Byrne, 1991; Brigham, 1991; Deaux & Wrightsman, 1988; Feldman, 1985; Gergen & Gergen, 1986; Sabini, 1992).

Displaced Aggression in Social Psychology Textbooks

This apparent confirmation of our initial suspicion that contemporary social psychology finds little use for the notion of displaced aggression led us to undertake a more systematic analysis of textbook content. We submitted a convenience sample of 123 social psychology textbooks to a content analysis. To test our impression that Dollard et al. (1939) stimulated a brief, but unsustained interest in the topic, we divided textbooks into three groups based on their publication dates (viz. 1900–1939, 1940–1945, and 1946–present). We then examined the number of sentences in each text devoted to the topic of displaced aggression (see Ensari & Miller, 1998, Appendix A). The analysis of variance outcome, $F(2, 17) = 15.69$, $p < .001$, (yielded by analysis of the log of the medians, to correct for skewness) was followed up by post hoc tests. For the interval of 1940 to 1945 there was more extensive discussion of the concept by comparison with the two other periods. The mean number of sentences in texts from 1940 to 1945 was 22.0 compared to 0 and 4.89 for the intervals 1900 to 1939 and 1946 to present, respectively. Over 60% of the post-1946 texts did not reference the concept at all. In a repetition of this analysis with a subdivision into five groups (i.e., 1900–1939, 1940–1945, 1946–1963, 1964–1981, and 1982–present), $F(4, 15) = 7.42$, $p < .01$, post hoc tests again showed that coverage in 1940 to 1945 exceeded that of other intervals, with no other reliable effect.

These results show that the interest in displaced aggression that followed the publication of Dollard et al. (1939) quickly waned. Moreover, in the decade of 1988 to 1997, we could not locate a single published experimental study concerned with displaced aggression. Inspection of social psychology textbooks that do mention the concept suggests that its empirical status is sufficiently questionable to justify the little attention it currently receives.

Evidence for the Reliability of the Phenomenon of Displaced Aggression

By contrast with its status in social psychology textbooks, meta-analytic examination of experimental research on displaced aggression yields a very different picture (Marcus-Newhall, Pedersen, Carlson, & Miller, 2000). Despite the absence of recent experimental work on it, our literature search produced 50 published articles containing 82 separate studies that examined aggressive behavior by drug-free adults toward a human target other than the person who was the source of provocation. Effect sizes, which are standardized estimates of the mean difference in aggressiveness toward an innocent other by the participants in the provocation and no provocation conditions of each of the 82 studies, yielded a mean weighted effect size of moderate (Cohen, 1988) magnitude (+.55), with a 95% confidence interval (.48 to .61) that excluded zero. Thus, although content analysis of contemporary social psychology textbooks shows displaced aggression to be an abandoned concept, our meta-analysis persuasively shows it to be a highly reliable phenomenon. Provoked participants who are constrained from retaliating against their provocateur aggress more toward an innocent other than those not previously provoked.

The Distinction Between Displaced and Triggered Displaced Aggression

Although displaced aggression is interesting and important in its own right, triggered displaced aggression is of even greater interest (Miller & Marcus-Newhall, 1997). It refers to circumstances in which a person experiences a strong initial provocation that precludes retaliation and then is exposed to a second triggering provocation (Dollard, 1938).

Consider again our opening example of displaced aggression in which a man aggressively kicks his sleeping dog. Imagine instead, that on opening his front door the dog barks loudly, and displaying her typical friendly and loving mode of greeting, jumps all over her entering owner—with tongue licking and tail wagging. If, when having previously been berated by his boss, the man responds by kicking the dog while shouting "get out of the way," this may be an instance of triggered displaced aggression. In this latter case, the potentially irritating aspects of having jumped on his business suit was sufficient to elicit an aggressive response not seen on any previous evening.

In Dollard's (1938) discussion, he emphasized the aggression-arousing potency of minor triggers. Describing the consequences of the minor jostling inherent in rush-hour subway commuting, he noted that when such trivial jostles or bumps are received from Jews (or Blacks), a previously angered commuter will seize on

them as an excuse to emit a hostile or aggressive response quite incommensurate with the typical aggression-arousing effect of an accidental bump. Presumably, had the commuter not been previously berated by his boss (or provoked in some other manner), the triggering jostle would have elicited little or no response.

Dollard viewed such triggering events as serving an especially important role in augmenting displaced aggression. According to the ubiquitous matching principle[1] (Axelrod, 1984), aggressive retaliation escalates in small incremental steps. By contrast with the matching rule, however, in triggered displaced aggression an interactive effect can occur. The form of the interaction shows that the magnitude of aggressive responding exceeds the sum of the independent or unique effects of both the initial provocation and the subsequent triggering action from the second source. Thus, the aggressive response is incommensurate with the level of provocation induced by the triggering provocation. Such aggression is disjunctive. It exceeds the level expected on the basis of the matching rule.

The importance of a paradigm that can reliably produce disjunctively escalated aggression is obvious. It provides a laboratory vehicle for studying a type of aggressive response that may correspond to some, if not many of the instances of seemingly inexplicable aggressive action and violence common in daily life. Such instances may sometimes include spousal and child abuse, as well as road rage. Once the theoretical basis of some of these aggressive acts is elaborated and understood, more effective methods for intervention can be developed with the goal of reducing their occurrence.

Organization of the Article

In this article we first discuss evidence showing that the triggered displaced aggression paradigm can in fact yield such disjunctive escalation of aggressive responding. In the context of this discussion, we delineate the key parameters likely to govern such disjunctive escalation. In the major portion of this article, we develop a theoretical model of triggered displaced aggression. In doing so, we organize our presentation around Berkowitz's Cognitive Neoassociationistic (CNA) model. Consequently, after first presenting a summary of Berkowitz's model (1990, 1993), we then discuss its bearing on the processes that we consider in each of the three sections in which we develop our theoretical model. In a final section, we analyze the relation between the Excitation Transfer paradigm (Zillmann, 1994) and triggered displaced aggression. Like the triggered displaced aggression paradigm, excitation transfer theory provides a theoretical and empirical analysis of temporal carry-over effects that contribute to aggressive responding. In this final section we discuss important conceptual differences between the two paradigms.

Prior Research on Triggered Displaced Aggression

Very few experimental studies have examined triggered displaced aggression. Excepting our own recent experimental work, we located four studies (Baron & Bell, 1975; Carver & Glass, 1978; Geen & Berkowitz, 1967; Worchel, 1966). Yet, only two of these studies contain the full set of conditions needed to assess our predicted interaction between a Time 1 provocation and a Time 2 triggering event. Specifically, Baron and Bell (1975) and Worchel (1966) orthogonally manipulated both provocation and trigger, thereby providing all necessary comparisons. Neither study, however, yielded an interaction in which the Time 1 and Time 2 provocations synergistically combined to yield a level of triggered displaced aggression that exceeded that expected from the additive combination of the two provocations. What accounts for this failure to have confirmed the interactive effect that we had expected on the basis of our theoretical analysis?

Key Conditions for Synergistic Interaction Between Time 1 and Time 2 Provocations

Despite these two previous outcomes, we argue (Miller & Marcus-Newhall, 1997) that this paradigm can in fact provide evidence of the disjunctively augmented aggressive responding described by Dollard (1938). Moreover, two studies that are described in the next section of this article (Pedersen, Gonzales, & Miller, 2000) support this contention. Therefore, it is important to consider why Baron and Bell (1975) and Worchel (1966) failed to find disjunctively escalated aggression. By contrast with a key feature of our theoretical argument (Miller & Marcus-Newhall, 1997), and with our own experimental procedures (Pedersen et al, 2000), both Worchel (1966) and Baron and Bell (1975) used strongly provoking Time 2 triggering events. Inspection of their respective procedures suggests that their Time 2 triggering provocations matched, if not exceeded, the intensity of their Time 1 provocations. This was likely to have assured that the Time 2 triggering provocation was readily noted and accurately seen as provoking, irrespective of the presence or absence of prior priming (e.g., Higgins & King, 1981) by their antecedent provocation.

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[1] The norm of reciprocity is widely shared throughout all societies, and with respect to exchanges of all kinds (see Smith & Mackie, 2000). The *norm of reciprocity* is simply another term for the matching rule or the tit-for-tat rule. Negative reciprocity is well-documented in the research literature on close relationships (Holmes & Murray, 1996) and it is pervasive in the negotiation process (Pruitt & Carnevale, 1993).

A strong Time 2 triggering provocation, in addition to precluding the likelihood of any substantial moderation of such attentional processes by the presence or absence of prior priming, also precludes subsequent attributional distortion. That is, the meaning or intentionality of a minor, low level, and trivial Time 2 triggering provocation will be ambiguous. Consequently, as a function of the priming effect produced by a strong antecedent provocation (e.g., Duncan, 1976), it can more readily be subject to attributional distortion regarding its intentionality. By contrast, a strong, manifestly intentional Time 2 provocation is not as susceptible to further attributional distortion as a consequence of the presence or absence of priming by a prior provocation. Instead, it will be seen as intended harm irrespective of a Time 1 provocation.

In sum, then, we believe that the use of Time 2 triggering provocations that were as strong as their initial provocations accounts for the failure of Baron and Bell (1975) and Worchel (1966) to find support for a synergistic aggression-amplifying effect when displaced aggression is triggered by a second provocation. By using triggers that were as provoking as the initial provocation, their experimental paradigms failed to map onto Dollard's (1938) conceptual argument.

An important clarification is needed here. We are not arguing that when minor triggers follow an initial moderately strong provocation, they will produce more displaced aggression then strong triggers. Instead, our point is that minor triggers are more likely to produce in an interactive (synergistic) effect in which aggression will exceed that which would be predicted by the additive combination of the initial provocation and the trigger. In other words, although minor triggers will not produce more triggered displaced aggression, they will produce a more disjunctive escalation of aggression by comparison with the baseline provided by the sum of the independent effects of provocation alone and trigger alone.

Evidence That Triggered Displaced Aggression Can Produce Disjunctively Escalated Aggressive Responding

In two experiments (Pedersen et al., 2000), we present the first evidence showing that trivial Time 2 triggers (which had no effect on aggression in the absence of a prior provocation) can produce such multiplicative escalation of aggressive responding. In 2×2 factorial designs, we crossed the presence or absence of a Time 1 provocation with the presence or absence of a minor provocation by a second person at Time 2 and then assessed aggression toward this second person. In both studies, manipulation checks clearly confirmed the provoking nature of the Time 2 minor triggering action by the target person. Yet, when it was not preceded by a strong prior provocation from another source at Time

1, its presence or absence had absolutely no effect on aggressive responding toward this second person. By contrast, when there was a strong antecedent provocation at Time 1, this same minor triggering action on the part of the second person (at Time 2) reliably yielded incommensurately strong aggressive retaliation (see Figure 1). Finally, comparison of the separate effects sizes of the trigger manipulation check and the manipulation check for the Time 1 provocation confirmed a successful correspondence with Dollard's (1938) analysis. The intensity of the trigger clearly was minor by comparison with that of the initial provocation.

The two studies differed substantially in their implementation of the triggered displaced aggression paradigm and consequently make us confident about the robustness of their results. First, they used highly dissimilar procedures to induce a moderately strong provocation at Time 1. The experimenter in Study 1 provoked participants via insulting negative feedback concerning their performance on a task. Those in Study 2 were provoked by telling them, in an ever-more sarcastic and derisive tone of voice, to speak louder. Second, at Time 2, distinctly different types of minor triggering actions were emitted by the displaced aggression target person. Specifically, in Study 1, the target person was incompetent and irritating while administering a task to the participant, whereas in Study 2, the target gave the participant a mildly negative evaluation of an essay he or she had written, stating the following: "I would have thought that a college sophomore would have written a somewhat stronger essay." And finally, although we (and others) have previously shown that verbal and behavioral measures of aggression are functionally equivalent (e.g., Carlson, Marcus-Newhall, & Miller, 1989; Giancola & Chermack, 1998), we nevertheless varied the dependent measures of aggression. Study 1 used a direct behavioral measure of intended harm: a recommendation that the target person not get (versus get) the job they were (allegedly) applying for in conjunction with their participation in the experiment. Study 2 used
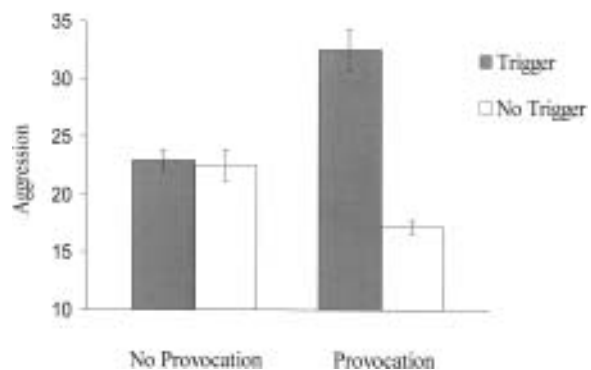

Figure 1. Effect of initial provocation and a subsequent triggering event on the intensity of displaced aggression (from Pedersen, Gonzales, & Miller, 2000, Study 2). Capped vertical bars denote 1 standard error.

instead both a verbal evaluative measure and a hypothetical behavioral measure of aggressive antagonism.[2]

These studies support our contention, showing that the triggered displaced aggression paradigm can produce disjunctively escalated aggression. An initial provocation of moderate magnitude, when followed by a subsequent minor triggering provocation, can yield an interactive effect in which aggression clearly exceeds the sum of that elicited separately by the initial provocation and the triggering provocation. Having established evidence for this contention, we now proceed to develop our theoretical model.

Theoretical Model of Triggered Displaced Aggression

Our theoretical model of triggered displaced aggression contains three major components. The first centers on aspects of the Time 1 provocation that are likely to affect displaced aggression. The second concerns ruminative aggressive thought. It considers cognitive and personality factors that can moderate and mediate the effects of the Time 1 provocation on a second minor triggering provocation. Here, we are particularly concerned with intervals between the two provocations that exceed the 10 or 20 min during which arousal from the initial provocation will persist without the additional contribution of cognitive processes (Fridlander & Averill, 1982; Tyson, 1998). The third major component focuses on actions and attributes of the target of displaced aggression that moderate the magnitude of triggered displaced aggression.

The commonly accepted distinction between provocation and frustration is important for our model. Generally, provocation refers to interpersonal events that elicit anger, whereas frustration refers to interference with task completion. The hypotheses that we develop in subsequent sections are based on consideration of provocations. Nevertheless, we do not rule out the possibility that frustrations might serve as provoking events. As implied from extrapolation of Berkowitz's CNA model of aggression, it is quite conceivable that our model of triggered displaced aggression can be extended to paradigms in which the Time 1 or the Time 2 events are primarily frustrating, rather than provoking. If so, however, we would not expect them to yield escalations of retaliatory aggression that are as potent as those elicited by provocations (Carlson & Miller, 1988; Geen, 1968).

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[2]Subsequent experiments employing physical aggression dependent variables have produced similar theoretically predicted results. Such measures include aversive blasts of white noise (i.e., Bushman et al., 2002), consumption of hot sauce (i.e., Pedersen, Bushman, Vasquez, Bonacci, & Miller, 2002), and immersion of the target's hand in ice water (i.e., Pedersen & Miller, 2002).

Finally, before discussing the three components of the model, we first clarify the distinction between arousal-based and ruminatively-based displaced aggression. Then, to provide a more general theoretical context for our model, we present an overview of Berkowitz's CNA model of aggressive behavior.

Two Processes Underlying Displaced and Triggered Displaced Aggression

Displaced Aggression Based on Arousal Elicited by the Initial Provocation

As previously implied, it makes conceptual sense to separate two types of temporal configurations regarding the Time 1 and Time 2 provocations of the triggered displaced aggression paradigm. On the one hand, aggression in response to the Time 2 trigger may reflect in part the continued presence of affective arousal produced by the Time 1 provocation. Typically, such physiologically-based arousal is short-lived. For instance, arousal induced by movie violence ceased facilitating aggression within 15 min (Doob & Climie, 1972). Some studies have shown even shorter durations of arousal. For example, both Zillmann, Hoyt, and Day (1974) and Day (1976) concluded that the residual arousal produced by exposure to violent stimuli dissipated in a few minutes. Consistent with studies producing arousal by the viewing of violent material, the arousal that is produced by exposure to erotic material dissipates within 5 to 10 min (Zillmann et al., 1974).

In literally all published studies of either displaced or triggered displaced aggression, the interval between the initial provocation and the Time 2 triggering event does not exceed the typical upper-limit 10- or 20-min duration over which arousal will persist. Consequently, all published effects can be interpreted as reflecting the persistence of the negative affective arousal elicited by an initial provocation.

In a fictitious real-world example of this first type, immediately after an office worker has been berated by his supervisor, his office mates will be vulnerable to unwanted displaced hostility or aggressive attack. And, if such displaced aggression does occur shortly after having been berated, it can be attributed to the still-present arousal initially elicited by the supervisor.

Ruminatively-Based Displaced Aggression

Alternatively, under circumstances in which the temporal gap between a Time 1 provocation and a subsequent Time 2 trigger exceeds 20 min or so, displaced aggression may primarily reflect ruminative effects—consequences of a cognitive representation of

aspects of that Time 1 arousal after its direct physiologically arousing effect ordinarily has subsided. By comparison with those who do not ruminate, those who ruminate about a Time 1 provocation over such longer delays will be more likely to aggress when subsequently triggered. For instance, the office worker in the preceding example may stew for several hours about the berating received from his boss, and then, on arriving home, kick his sleeping dog. This example provides an instance of this second type of displaced aggression—ruminatively-based displaced aggression.

Although this latter type of displaced aggression seems to have more extensive real-world application than the former, as suggested by our examples, both types have ecological validity. With respect to the second, however, current theory and research on rumination has a central role. Assuming that circumstances preclude retaliation against the source of a Time 1 provocation, what factors will affect the degree to which its effect persists substantially beyond a 10- or 20-min interval to affect aggressive responding toward a second target?

There are three sets of relevant factors. A first set concerns the nature of the Time 1 provocation. Note, however, that variables in this set do not solely affect the subsequent magnitude of rumination produced by the Time 1 provocation. They simultaneously are likely to affect the intensity of the arousal that it incites. Thus, the variables in this set are relevant to arousal-based, as well as ruminatively-based, displaced aggression.

A second set consists of situational factors that affect the temporal maintenance of the first set. This set consists of situational variables that affect rumination. Specifically, what environmental circumstances moderate the cognitive availability of a representation of the initial provocation during the interval between the Time 1 provocation and the subsequent point in time at which displaced aggression is manifested.

A third set consists of personality attributes of the actor. These stable attributes can not only affect the impact of the initial provocation; additionally, like situational moderators of ruminative thought, they too can moderate ruminative processes that determine subsequent availability of a cognitive representation of the initial provocation. In turn, these ruminatively-based cognitive representations can function to moderate the intensity of aggressive behavior when, at a later point in time, an opportunity for displaced aggression arises.

Arousal Versus Rumination

Although the foregoing discussion implies a clear conceptual separation between arousal and rumination, we do not mean to imply that in any specific instance it will be possible to specify precisely which of the two will function as the dominant mediator of displaced, or triggered displaced, aggression. Generally,

however, with short temporal intervals (e.g., under 20 min), it seems likely that arousal will function as the dominant mediator of aggression-related behaviors. With longer temporal intervals, we expect that rumination, rather than arousal, will function as the dominant mediator. Nevertheless, we cannot rule out the possibility that when a trigger follows rumination, it might reinstigate arousal associated with the initial provocation. We also cannot dismiss the possibility that persistent rumination engendered by the initial provocation might itself lead to a reinstigation of arousal that is in some sense distinct from that arousal originally experienced following the initial provocation.

Berkowitz's Cognitive Neoassociationistic Model

Our theoretical framework concerning triggered displaced aggression is consistent with the CNA perspective of Berkowitz (1989, 1990, 1993). This model proposes that aversive events produce negative affect that in turn activates various thoughts, memories, physiological responses, and motor reactions contained within an associative network. The properties of the network are such that once a construct is processed or stimulated, activation spreads out along the network links and primes (activates) associated or related constructs. The concept of activation employed by Berkowitz is the same as that used in connectionist models (e.g., McClelland & Rumelhart, 1988; Read & Miller, 1993). Furthermore, any given link will vary in strength depending on the degree of association between the specific constructs in question.

A wide variety of events may serve to activate or prime components of an aggression network. The ones that are especially relevant to our own theorizing are those that already have a strong association with anger and aggression (Berkowitz, 1993). For example, an initial provocation will prime aggression-related constructs that make future aggressive responding more likely. In addition, negative experiences of greater intensity are more likely to result in more widely spread activation, and consequently, stronger aggressive inclinations.

The CNA model proposes that an aversive stimulus can lead to anger and aggressive responding through a multistage process. During the first stage, an aversive event produces negative affect that, in turn, activates associative networks. Berkowitz (1990, 1993) posited that two different sets of reactions are activated simultaneously: (a) a fight tendency comprised of thoughts, feelings, emotions, and motor tendencies linked with aggression; and (b) a flight tendency consisting of an associative network linked to escape and avoidance actions. The first set of reactions is associated with rudimentary anger, whereas

the second is linked with rudimentary fear. Situational influences, along with genetic predispositions and prior learning, determine the relative strength with which these two systems are activated.

Almost immediately after this initial reaction, the second part of the model may become relevant. During this stage, higher-order cognitive processes come into play as people think about what happened and consider the possible consequences. It is at this point that appraisal and attributional processes become influential. These processes will, in turn, elaborate, intensify, or suppress the initial rudimentary emotional reactions. This is the process by which the relatively basic emotions of anger or fear are differentiated into more subtle variations such as annoyance, anxiety, guilt, irritation, and so forth. Berkowitz (1990, 1993) noted, however, that another important assumption of the CNA model is that the higher-order cognitive processes operating during this second stage do not always come into play. That is, the elicitation of anger and aggression do not presuppose the occurrence of attributional processes. This theoretical position allows the CNA model to account for instances of anger and aggression wherein attributions are important, but also, situations wherein they are seemingly irrelevant.

The Time 1 Provocation

Implications of the Cognitive Neoassociationistic Model

Certain types of experiences are more likely to activate associative networks of aggression-related cognitions and emotions. In particular, events that result in particularly intense levels of negative affect will generate strong activation levels in these networks, producing powerful feelings of anger and inclinations to aggress (Berkowitz, 1993). These higher activation levels are likely to strengthen aggressive inclinations. Additionally, however, they are likely to induce attributional distortion regarding a Time 2 minor triggering event. That is, under conditions wherein aggression and anger have been strongly primed, a relatively innocuous trigger is more likely to be interpreted as an intentionally provoking event. Factors that augment the degree of subjective negativity produced by an initial Time 1 provocation should therefore magnify the degree of subsequent triggered displaced aggression. Two such factors are (a) the intensity and (b) the content or type of the provocation.

As indicated, factors discussed under this heading are likely to affect both arousal-based and ruminatively-based displaced aggression. By arousal-based displaced aggression, we refer to situations in which the affective arousal induced by the Time 1 provocation is still present at the time the target of displaced

aggression is encountered, without having been maintained or aided by cognitively-based factors necessarily inherent in rumination.

Specific Attributes of the Time 1 Provocation

Intensity. The stronger the intensity of the Time 1 provocation, the greater the affective arousal. In general, however, negative affect is associated with ruminative thought. By extension, then, the stronger the negative affect the greater the likelihood that it will produce persistent ruminative thought (Horowitz, 1986; Klinger, 1977; Rachman, 1981). Thus, a strong Time 1 provocation will augment both arousal-based and ruminatively-based displaced aggression. The greater its intensity, the greater the magnitude of its interaction with the triggering act on the part of the displaced aggression target. That is, in the presence of a triggering action on the part of the Time 2 target, stronger initial provocation will increase the magnitude of either type of displaced aggression.

In the absence of a trigger, the effect of increased intensity of a Time 1 provocation becomes more complicated. In some experimental situations a contrast effect occurs. By comparison with a no-provocation or no-trigger condition, a provocation or no-trigger condition sometimes produces a less aggressive response toward the Time 2 target person (e.g., Berkowitz & Knurek, 1969; Pedersen et al., 2000). Note that this latter comparison provides the conditions for assessing displaced aggression. Yet, if displaced aggression is a highly reliable phenomenon, as previously argued by our meta-analytic outcome, why do some studies produce an opposite direction of effect? Although a full understanding of the particular circumstances necessary for this contrast effect are not currently understood, it does seem likely that it rests on a social comparison process. By comparison with an initial provocateur, a Time 2 target person who emits no triggering action will appear to be a nicer person. For persons who have not previously been provoked, there is no reason for this comparison-based positive evaluative augmentation of the Time 2 target person to occur. Thus, the comparison of these two conditions can sometimes yield a reliable contrast effect in which an innocent target person receives a positively inflated evaluation. The instances in which it has experimentally been confirmed are constrained to arousal-based displaced aggression. We suspect that its occurrence requires a fairly discernible dissimilarity between the initial provocateur and the Time 2 target person, so as to reduce aggression-facilitating generalization effects from the initial provocateur.

Excepting the specific circumstances within which such contrast effects occur, our theorizing is consonant

with Berkowitz's (1993) CNA model: aversive events (e.g., provocations) produce intense levels of negative affect that activate a network of aggression-related thoughts and tendencies. Furthermore, high intensity provocations are more likely to generate clearly recognizable feelings of anger and are thus not likely to be misattributed to other potential sources of arousal.

Content. Provocations that are generally ego-threatening, in that they attack a sacred value of the actor, publicly embarrass him or her, diminish the actor's status, or constitute a narcissistic attack (Baumeister, Smart, & Boden, 1996), are more likely to increase the impetus for aggressive retaliation. Such attacks not only are likely to be subjectively experienced as more provoking, but also, when retaliation is precluded, they are more likely to intensify rumination over the interval separating the Time 1 provocation from a subsequent opportunity for displaced aggression. Thus, such types of provocation are likely to augment both arousal-based and ruminatively-based displaced, or triggered displaced, aggression.

Based on the work of Davidson and Tomarken (1989), Berkowitz (1993) pointed out that not all types of aversive events are equally likely to produce aggression. For example, negative events that evoke strong feelings of disgust are more likely to result in an avoidance response (i.e., flight) whereas equally intense events that elicit an emotional reaction of anger will more likely cause an aggressive behavioral action.

Extending this theorizing of the CNA model (Berkowitz, 1989, 1990, 1993), the content of the initial provocation might also impact the relative strength of the aggression-related (i.e., fight) versus escape-related (i.e., flight) tendencies that are immediately activated following the occurrence of an aversive event. For instance, provocations that are more ego-threatening in nature may send higher levels of activation into an aggression-related associative network. By contrast, strong provocations that are not generally ego-threatening may primarily activate an escape-related network, resulting in a lower probability of aggressive action.

Activation of Ruminative Thought About the Time 1 Provocation

Implications of the Cognitive Neoassociationistic Model

Although an initial aversive event such as a provocation will prime (activate) aggression-related thoughts, feelings, and motor responses (Berkowitz, 1990, 1993), the degree of activation will subside over time. In particular, over long temporal gaps between the initial provocation and the Time 2 triggering event (e.g., hours or days), the activation level could easily return to baseline levels assuming no additional events served to further prime the network. Under such conditions, a trivial triggering event should not dramatically increase aggressive responding. In daily life, however, there are many instances in which a minor trigger evokes a seemingly inexplicable intense aggressive reaction in the face of an extended temporal delay between the Time 1 and Time 2 events. What could explain such occurrences?

The following sections focus on (a) situational factors (other than those discussed earlier) that are likely to affect the tendency to ruminate about an event such as the Time 1 provocation, and (b) personality factors that are also likely to impact the degree of rumination. Thus, these sections are not exclusively concerned with instances of arousal-based displaced aggression (in which the arousal directly stems from the initial provocation).

The CNA model of Berkowitz (1990, 1993) does not manifestly address the issue of rumination. It also does not place great emphasis on personality variables as explanatory factors. Berkowitz (1994) does, however, briefly discuss individuals he terms *emotionally reactive aggressors*—persons who are prone to a violent outburst when threatened. Furthermore, he posited that people with such violent personalities are also likely to be both antisocial in nature and lacking in their ability to exercise self-restraint in anger-producing situations. Given the absence of extensive theoretical development of rumination per se, and relevant aspects of personality within the CNA model, we attempt to provide logical extensions of the CNA model at the beginning of the next two sections.

Situational Factors That Impact Ruminative Thought

With respect to the implications of the CNA model, the act of ruminating about the initial provocation can serve two related functions. First, it can increase the average level of activation of an aggression network over time. An initial provocation activates an associative network, making aggression-related thoughts, memories, and emotions more accessible. Without additional inputs, however, the network should return to baseline levels. If, instead, situational (or personality) factors make an individual more likely to continue thinking about the provocation, new surges that activate the network are likely to be generated. That is, each time a person thinks about or re-lives a provoking incident, a new activation spreads through the network making its components more accessible and subsequent aggressive action more likely.

Second, rumination may also function to prolong the amount of time that the aggression-related network is above baseline levels. Functioning in this manner, rumination can explain augmentation of displaced ag-

gression under conditions of a long temporal lag between the provocation and the trigger.

Against this backdrop, we next discuss specific factors likely to affect ruminative thought.

Self- or internally-focused thoughts. Instructions to engage in self-focused thoughts, relative to conditions of distraction, exacerbate feelings of depression (Lyubomirsky & Nolen-Hoeksema, 1993; Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema & Morrow, 1991). As a potential explanation of the effects of rumination on the negative moods of both anger and depression, Rusting and Nolen-Hoeksema (1998) turned to spreading activation or associative network theories of mood (e.g., Berkowitz, 1990, 1993; Bower, 1981; Clark & Isen, 1981; Forgas, 1992, 1993, 1999; Ingram, 1984; Lang, 1984; Teasdale, 1983). Such theories conceptualize emotions as central nodes linked to memories and sensations associated with that particular emotion. When an individual experiences an emotion, activation spreads through the associated network which in turn prolongs that emotional experience. Rusting and Nolen-Hoeksema (1998) hypothesized that rumination or self-focus on the negative emotion will enhance this spreading activation and therefore exacerbate the emotion. More relevant here, such directed thought can increase angry mood (Rusting & Nolen-Hoeksema, 1998).

According to this logic, when internally-focused thought follows an initial provocation, it is likely to enhance the aggression-eliciting effect of a subsequent triggering event. Internally focused thought is more likely when one is alone; not engaged in another cognitively demanding activity; facing a mirror; or explicitly performing a self-referring task, such as writing an essay about one's current mood (Baumeister, 1991; Pyszczynski & Greenberg, 1987; Rusting and Nolen-Hoeksema, 1998).

Centrality of the goal. Centrality of the goal is another factor relevant to ruminative thought (Wyer & Srull, 1989). Provocations that disrupt an important or central goal are more likely to elicit ruminative activity. As noted in the discussion of types of Time 1 provocation, some provocations are linked more strongly with ego-threat. Consequently, they are also linked to self-esteem maintenance. Because the self routinely is a central object of focus, for these types of provocations, aggressive retaliation is more likely to be a central goal. Therefore, in turn, they will increase the magnitude of displaced and triggered displaced aggression.

Thought suppression. An instruction to engage in active attempts to ignore or suppress thought about the Time 1 provocation can augment ruminative activity. For instance, Wegner and colleagues (e.g., Wegner & Erber, 1992; Wegner, Erber, & Zanakos, 1993; Wegner & Gold, 1995; Wegner, Schneider, Carter, & White, 1987) showed that under cognitive load, instruction to suppress a specific thought has the ironic effect at a subsequent temporal point of increasing accessibility to that thought by comparison with those specifically told to concentrate on that event. Apparently, the active attempt to suppress a conscious thought from direct attention increases its availability. This effect has bearing on the source of the Time 1 provocation, as discussed next.

Aggression toward high status targets often is inhibited. In fact, some discussions of displaced aggression assume that it will only occur toward safe targets, or those with no power over the actor (Miller & Bugleski, 1948; Wilson & Rogers, 1975). Power may be associated with status, race, gender, physical strength, and so forth. Those with greater power tend to receive less aggression than those with less power (e.g., Olweus, 1995). Fear of retaliation reduces aggressive responding (Baron, 1973). Because powerful or high status targets can exert power or fate control over the actor, expression of a negative attitude is suppressed and, instead, the actor will behave more positively (Thibaut & Kelley, 1991). For example, frustrated students aggressed verbally against fellow students more than faculty members (McClelland & Apicella, 1945; Worchel, 1957). Likewise, students reported they would behave more aggressively toward peers (Cohen, 1955) or friends and siblings (Graham, Charwat, Honig, & Weltz, 1951) than authority figures. Thus, in general, power to punish is associated with reduced direct expression of aggression toward the powerful person.

These considerations suggest that by comparison with Time 1 provocateurs who are equal to the actor in their status, a high status provocateur will elicit stronger motivation to suppress an inclination toward aggressive retaliation. Consequently, given our discussion of the consequences of suppression, the high status provocateur will also elicit stronger cognitive rebound effects, that is, stronger, more continuous postsuppression ruminative activity. This suggests that, in turn, the high status provocateur subsequently will elicit stronger triggered displaced aggression.

Countering this expectation, however, are the effects of postbehavioral justification. In countless instances, actors engage in postbehavioral cognitive justification for their prior actions—in this case, the suppression of one's inclination to aggressively retaliate. Indeed, much of the body of empirical research accumulated over the past several decades in support of dissonance theory can be interpreted as evidence for such postbehavioral justification (Beauvois & Joule, 1996; Harmon-Jones & Mills, 1999). Thus, by virtue of their higher status, high status provocateurs provide stronger reasons for such postsuppression justification than do provocateurs whose status is neutral or equal to that of the actor.

Given these latter arguments, an opposing direction of effect is to be expected with respect to the comparison of neutral or equal status Time 1 provocateurs, by comparison with those whose status is lower than that of the actor. Not only will a Time 1 attack from a low status source likely be seen as less justified and therefore be experienced as more distressing than if the source had equal or higher status, but also, low status provocateurs will elicit less cognitive justification of one's inhibited inclination to have retaliated. Consequently, there will be less countering interference with the rebound effects on rumination that are later emitted in response to that inhibited behavior. Thus, the one clear prediction that we make concerning Time 1 provocateurs concerns the comparison between a low status versus a neutral or equal status source: we hypothesize stronger rumination and consequently, heightened triggered displaced aggression from a low status Time 1 provocateur, by comparison with one whose status equals that of the actor.[3]

Presently, no empirical data bear on these intriguing, but contradictory, hypotheses concerning the status of the Time 1 provocateur. Such empirical research will provide an important clarification of this aspect of triggered displaced aggression theory.

Personality Factors That Affect the Experience of the Time 1 Provocation and Subsequent Rumination

Extending the CNA Model

Several traits may contribute to hostility in general, and triggered displaced aggression, in particular. Actors bring these personal qualities with them to each situation, potentially enhancing the probability of hostile responding. Our theorizing suggests that the two principle personality traits central to triggered displaced aggression are as follows: (a) the general dispositional tendencies to express anger or hostility, and (b) rumination. The motivations underlying manifestations of augmented aggressive responding may vary. For instance, persons with high dispositional tendencies to express anger or hostility are likely to ex-

hibit more aggression in the paradigm, irrespective of whether it is based on increased carry-over of arousal or increased rumination. Second, personality traits that are associated with a predisposition to behave more aggressively may covary with a tendency to ruminate. Third, dispositional rumination and its correlates may independently predict triggered displaced aggression.

To our knowledge, virtually no previous empirical research bears directly on the general relationship between personality and aggressive behavior in the triggered displaced aggression paradigm. From a variety of perspectives, it seems clear that research on individual differences will yield information that is useful for our theoretical goal. Within the general field of personality or clinical psychology, however, conceptualizations of its substance widely differ. Consequently, we develop our theorizing by considering separately the different perspectives that dominate the conceptualization of personality. Specifically, we begin with a discussion of categorically-defined personality disorders. Then we turn to consideration of a dimensional model of personality, and how it might be relevant to triggered displaced aggression. Next, we provide an overview of the principle traits and constructs likely to be central to understanding triggered displaced aggression in normal subjects. We conclude with a brief section on the assessment of aggression and rumination.

As indicated, the CNA model (Berkowitz, 1990, 1993) hypothesizes that an aversive event produces negative affect that activates both aggressive-related (fight) and escape-related (flight) networks. Furthermore, Berkowitz (1990) posited that situational influences along with genetic predispositions and prior learning determine the relative strength with which these two systems are activated. Given that genetically determined predispositions and prior learning form the basis for individual differences, personality factors are relevant for the activation of these two systems.

A further extension of the CNA model regarding the impact of personality factors on triggered displaced aggression concerns the strength of the links within aggression-related associative networks. That is, individuals with high levels of certain personality traits (e.g., trait aggressiveness, antisocial tendencies, trait rumination, etc.) are likely to have stronger links between the components of an aggression network. These stronger links might be a function of individual differences or a result of more frequent activation of these networks (i.e., greater rehearsal) and their bidirectional feedback effects. Regardless of the specific nature of the causal mechanisms, the amount of initial activation needed to produce an aggressive response is presumably lower for individuals with a personality characterized by strongly linked aggression networks. Consequently, such individuals presumably are more likely to respond aggressively to minor triggering events.

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[3]A scenario different from those described earlier is also worth considering. Targets of differing status are likely to produce differential levels of fear in actors due to their ability to punish or produce adverse consequences for an aggressive response. The examples described earlier argue for augmented levels of postbehavioral justification (and hence, lower aggression) toward a high status target due to this higher level of fear. If, however, retaliation against a high status target was impossible (e.g., the provocateur left the country after delivering the provocation), there should be little postbehavioral justification for failing to retaliate. In such cases, a high status provocateur would not function to reduce subsequent displaced aggression.

Categorical Approach to Personality and Triggered Displaced Aggression: DSM-IV

Many studies link individual differences to aggression. These include various forms of psychopathology and neuropsychological deficits. Some of the most prominent psychological disorders that appear to have consistent, well-established links with augmented aggressive behavior are antisocial, borderline, and narcissistic personality disorders. These disorders are part of the Cluster B category of personality disorders as defined in the Diagnostic and Statistical Manual of Mental Disorders (4th ed. [DSM–IV]; American Psychiatric Association, 1994). Cluster B also includes histrionic personality disorder. Individuals who receive these diagnoses frequently appear emotional, dramatic, and erratic (American Psychiatric Association, 1994).

Antisocial personality. Antisocial personality was formerly known as psychopathy or sociopathy. It is characterized by a pervasive pattern of behavior that shows lack of concern for other persons, violation of social norms, and a general disrespect for societal mores. People with this disorder are known for their acts of aggression. They also show greater responses to laboratory manipulations designed to provoke aggression. For example, after drinking alcohol, they are more likely to respond in a hostile manner on variations of the Buss paradigm (Moeller, Dougherty, Lane, Steinberg, & Cherek, 1998). The exact reasons for their heightened aggression remain unknown. Rumination is not a prominent feature of this disorder. It is, however, believed that arrogance might characterize persons with antisocial personality disorder. Hence, to the extent that the Time 1 provocation poses an ego threat, their response to such insults might be augmented above and beyond that shown by normal persons.

Generally, people with this disorder exhibit disinhibited behavior. They tend to show low performances on neuropsychological tasks that require restraint, forethought, or inhibition of dominant responses. These deficits covary with aggression in other studies (Giancola, 2000). Consequently, persons who fall into this diagnostic category are more likely to react aggressively in response to Time 1 provocations, as well as to Time 2 triggering events. If so, persons with antisocial personality disorder are more likely than others to exhibit both nontriggered and triggered displaced aggression.

These findings, along with theorizing that links rumination to aggression, suggest that studies of antisocial personality disorder, neuropsychological performance, and rumination will prove fruitful. That is, because stronger instigation to aggress is more likely to induce rumination about the instigation, these people are more likely to ruminate about the Time 1 provocation. And if so, they are not only more likely to display arousal-based displaced aggression, but also, ruminatively-based aggression. Thus, it will be important to examine the links between antisocial personality, neuropsychological deficits, and triggered displaced aggression.

Borderline personality. People with borderline personality disorder show heightened aggressive responding in laboratory tests (Dougherty, Bjork, Huckabee, Moeller, & Swann, 1999). Although no studies directly link this disorder to rumination, people with this diagnosis are notorious for their emotionality. Labile moods are a hallmark of their behavior. Dysphoria is common, as is anger. The instability of their self-image probably renders them particularly vulnerable to provocations or triggers that pose threats to self-esteem.

Theory suggests that evaluation of rumination in borderline personality disorder may prove worthwhile. Investigators with exceptional bravery might also attempt to establish whether the exaggerated emotional reactions typical of people with this disorder will lead them to show extreme hostility in the triggered displaced aggression paradigm. We expect that persons with this diagnosis are likely to show augmented aggressive behavior in the triggered displaced aggression paradigm, particularly that which is arousal-based.

Narcissistic personality disorder. Narcissistic personality disorder is typified by a grandiose sense of self-importance and a general view of others as inferior. It may lead to unusually aggressive behavior in response to provocation. Despite—or perhaps, because of—their exaggerated self-esteem, people with this disorder are extremely sensitive to threats or insults. Clinical lore has labeled these reactions "narcissistic rages," which appear frequently when people with this disorder are confronted with characteristics of themselves that are less than perfect. One study found that people who scored high on measures of narcissism were particularly severe in their punishments of people who had insulted them (Bushman & Baumeister, 1998). Nevertheless, the presence of a trigger, particularly one that was psychologically linked to the source or the content of the initial insult that formed the Time 1 provocation, might increase aggression in these people. Research has yet to link narcissism and rumination, but they may covary dramatically, particularly after a threat to the narcissist's exaggerated sense of self-importance.

Dimensional Conception of Personality: The Five Factor Model

The foregoing sections on aggression and rumination, as they relate to personality disorders defined by the DSM–IV, represent a more categorical than dimensional conceptualization of personality. Aside from

clinically-diagnosed disorders, however, it is worthwhile to consider interindividual variation in aggressive and ruminative proclivities in conjunction with behavior in the triggered displaced aggression paradigm. In a dimensional view, few dispute the hypothesis that differences in aggression constitute a feature that is enduring and stable enough to be used to define a personality trait. However, between-person differences in rumination have not garnered as much research attention as have those in aggression. Moreover, traditional dimensional conceptions of personality have not emphasized rumination as a stable or enduring characteristic that is likely to qualify as a personality trait.

The Five Factor model is one of the most widely used dimensional conceptions of personality (e.g., Costa & Widiger, 1994). Its major dimensions are as follows: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Each factor is further defined by approximately six more specific components. The dimension neuroticism, for example, includes the components of anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability. Descriptions of the DSM–IV personality disorders achieved via the Five Factor model are provided by Widiger and colleagues (e.g., Costa & Widiger, 1994).

In formulating the descriptions of the DSM–IV personality disorders using the Five Factor model, however, explanation in terms of the five major dimensions alone is not sufficient. Rather, the conceptual formulation of the categorical disorders requires description of specific components of each dimension. For example, generally, antisocial personality disorder is defined by low conscientiousness, low agreeableness, and high neuroticism. But aside from the expected high scores on the component of hostility within the neuroticism dimension, other components of neuroticism that distinguish persons with antisocial personality are somewhat unclear. Specifically, some antisocials might show elevated anxiety, whereas others might show unusually low levels of anxiety (Costa & Widiger, 1994, p. 45). Because interindividual variation in the major dimensions alone does not uniformly account for categorical disorders defined by DSM–IV, the Five Factor model has received criticism for its failure to provide a parsimonious conceptual framework.

With respect to triggered displaced aggression, however, it seems clear that trait aggressiveness resembles the component of hostility that appears on the neuroticism dimension. However, it is important to note that other components within the Five Factor model might also be important in understanding aggression as a trait. Extremely low scores on the component of compliance—which appears on the agreeableness dimension—can signify antagonistic or oppositional proclivities that contribute to the manifestation of hostility.

The conceptualization of rumination as a trait within the framework of the Five Factor model is unclear. A number of components are likely to affect the proclivity to ruminate. Some of them include anxiety on the neuroticism dimension, and order on the conscientiousness dimension. The purpose of the preceding section has been to suggest some avenues for conceptualizing the interindividual variation in putative personality traits that might affect behavior in the triggered displaced aggression paradigm.

Personality Traits in Normal Participants

Trait aggressiveness. Besides these psychological disorders, many nonpathological personality dispositions also covary with aggression. For example, trait aggressiveness predicts hostile behavior in many domains (Bushman & Wells, 1998). Furthermore, trait aggressiveness may also interact with situational manipulations to predict hostile responses. People who are dispositionally aggressive increase hostile responses after provocation or after watching violent films (Bushman, 1995). Trait aggressiveness, however, does not always interact with situational variables to impact anger or aggression (see Lindsay & Anderson, 2000). The link between trait aggressiveness or other measures of dispositional hostility and displaced aggression remains unknown. Yet, the idea that aggressive people will exhibit more displaced aggression has considerable intuitive appeal. Thus, people who report hostile tendencies seemingly will show them in situations that evoke triggered displaced aggression.

Trait rumination. Rumination may serve as a mechanism that underlies links between personality and triggered displaced aggressive responding. It seems likely that people who dwell on perceived slights and provocations, and elaborate on them with thoughts of retaliation, will behave more aggressively. Caprara (1986), who termed it *dissipation–rumination,* viewed this tendency as part of a cognitive process. The process includes the activation of stored memories of experiences of provocation, and active thoughts of retaliation. The content of these ruminations may exaggerate aggressive responding. For example, people with low scores on the Dissipation–Rumination Scale (Caprara, 1986) did not increase their aggressive responses after provocation. In contrast, people with high scores on the scale reacted to provocation with increased aggression (Collins & Bell, 1997). This trait is likely to be particularly important in triggered displaced aggression. Its psychological connection to the high, but unstable, self-esteem linked by Baumeister et al. (1996) to aggressive responding bears exploration.

When ruminatively-inclined persons have no opportunity to aggress against an initial provocateur, they are more likely than others to ruminate about the situation. Such rumination is likely to intensify dramatic reactions to a subsequent trigger.

Obsession, self-focus, and mood monitoring.   Obsession is the trait that is most obviously related to rumination. Obsessive people report repeated thoughts on a single or several specific topics, usually accompanied by anxiety and arousal. Research, however, has yet to address links between obsession and aggression. People with psychopathology related to obsession, including obsessive–compulsive disorder, repeatedly think of potentially negative events. These thoughts lead to frequent checking, rituals, or fretting that interferes with normal functioning (Taylor, Thordarson, & Soechting, 2002). Yet, they do not stereotypically report hostile actions. Nevertheless, the tendency to obsess may augment hostility in the triggered displaced aggression paradigm in the same way that rumination functions to augment it, thereby leading to increased aggression. A provocation might lead to obsessions about hostility, and in turn create exaggerated reactions to a subsequent trigger.

Self-focus shares some conceptual similarities to rumination. It has been implicated in the intensification of negative affect (e.g., Davies, 1982; Scheier & Carver, 1977). Based on this research, Swinkels and Giuliano (1995) identified an individual difference they call mood monitoring. Mood monitoring refers to a tendency to scrutinize and focus on one's own emotions. This tendency likely promotes rumination and increases negative affect (Swinkels & Giuliano, 1995). It appears to be conceptually distinct, however, from the more general trait of self-monitoring as it is discussed by Mark Snyder (e.g., Snyder & Gangestad, 1982).

Vengefulness.   Vengefulness is another trait that may account for variance in triggered displaced aggression. It describes the tendency to seek revenge following interpersonal slights. The desire for vengeance may help justify aggressive acts. It also contributes to destructive interpersonal behaviors like homicide and rape (Counts, 1987; Scully & Marolla, 1985). McCullough, Bellah, Kilpatrick, and Johnson (2001) used seven items from Mauger et al.'s (1991) Forgiveness of Others Scale as indicators of vengefulness. They found that people who reported being seriously offended by someone were more likely to be motivated to seek revenge and more likely to maintain that motivation across time if they were high in vengefulness. Vengefulness also correlated with an index of rumination, a construct we believe is central to triggered displaced aggression.

Assessment of Aggression and Rumination as Dispositional Attributes

Next, we turn to the assessment of the two traits of greatest interest to us here. First, we consider aggressiveness and then we discuss rumination.

Anger scales.   A number of scales have been developed to assess anger (e.g., Spielberger), hostility (e.g., Type A), or both (e.g., Mad). The nature of the relationship between aspects of aggression might include violence, passive–aggressive behavior, or the irritability of the Type A personality, each of which remains an important topic of study in its own right. Moreover, the assessment of aggression as a dispositional tendency is fraught with complexity, due in part to the difficulty that stems from attempting to evaluate the relationships between the many manifestations of aggression in humans. Therefore, although there are a myriad of self-report assessment instruments designed to detect facets of aggression in humans, and although many of them might be quite useful in the study of triggered displaced aggression, we focus our comments on one of the most widely used questionnaires in the field of aggression.

Within what is considered the normal range of behavior, the questionnaires devised by Buss and colleagues (Buss & Durkee, 1957; Buss & Perry, 1992) are probably ones most frequently used to assess between-person differences in aggressiveness. The Aggression Questionnaire (Buss & Perry, 1992) was specifically developed with the goals to update the Buss–Durkee Hostility Inventory, and to ensure adequate reliability and validity as a psychometric instrument. The current Aggression Questionnaire consists of 29 items. It uses a self-report format in which participants rate each item on a 5-point scale that varies from *extremely uncharacteristic of me* to *extremely characteristic of me.* Four factors appear to emerge: physical aggression (e.g., Given enough provocation, I may hit another person); verbal aggression (e.g., My friends say that I'm somewhat argumentative); anger (e.g., I sometimes feel like a powder keg ready to explode); and hostility (e.g., I wonder why sometimes I feel so bitter about things).

The extent to which interpersonal differences in dispositional aggression might mediate triggered displaced aggression is not known. However, the Aggression Questionnaire could profitably be used to assess this relation. A primary question of interest concerns whether interindividual variations in the magnitude of aggression manifested in the paradigm are mediated by total score on the Aggression Questionnaire per se, or whether the Hostility Scale of the Aggression Questionnaire is the most potent as a predictor.

Rumination scales. Martin and Tesser (1996) defined rumination as "a class of conscious thoughts that revolve around a common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts" (p. 12). In their conceptualization, various types of rumination are identifiable along three axes: (a) affective (emotional valence positive or negative), (b) thought content (goal attainment, goal discrepancy), and (c) temporality (past, present, future). Ten of the 12 types of rumination defined by the matrix of these three axes are of theoretical interest. Irrespective of the type of rumination, however, three general and probable consequences of rumination according to Martin and Tesser (1996) include the following: negative affect, due to thought content being devoted to the issue of failed attempt to reach goals; a motivation to stop ruminating, due to the negative affect engendered by rumination in the first place; and a reduced cognitive processing capacity, due to the high cognitive demand required for continued allocation of cognitive resources to sustaining relevant thoughts.

Two scales have been developed with the conceptual goal of assessing rumination. Both of them appear to be attempts to derive a scale that provides an index of dispositional tendencies to ruminate. As such, both scales collapse the temporal axis defined by Martin and Tesser (1996).

The Caprara (1986) scale consists of 20 items, self-rated by the participant using a 6-point scale ranging from *completely false for me* to *completely true for me.* This scale contains items that reflect both positive (e.g., I like people who are free; it is easy for me to establish good relationships with people) as well as negative (e.g., I am often sulky; I am not upset by criticism) emotional valence, but goal attainment and discrepancy are not its focus. Rather, many of the Caprara scale items contain face validity for the assessment of rumination concerning negative interpersonal events (e.g., I do not forgive easily once I am offended; I still remember offenses I have suffered, even after many years). Other items index motivation for revenge (e.g., When somebody offends me, sooner or later I retaliate; the more time that passes, the more satisfaction I get from revenge). Some of the remaining items are general, and could be construed as assessing anxiety (e.g., I often bite my fingernails). The role of social desirability concerns in moderating responses to its items remains unknown (e.g., social norms proscribe holding a grudge). The potential strength of the Caprara scale with respect to triggered displaced aggression lies in its focus on the assessment of rumination as it relates to perceived negative events that are interpersonal (e.g., When I am outraged, the more I think about it, the angrier I feel).

The Scott–McIntosh Rumination Inventory (SMRI; viz. Scott & McIntosh, 1999) consists of nine items. Participants provide self-ratings using 7-point scales with endpoints defined as *does not describe me well* to *does describe me well.* Unlike the Caprara (1986) scale, the SMRI takes as its conceptual point of departure the matrix of rumination types discussed by Martin and Tesser (1996). The specific goal of the SMRI is to assess the proclivity to engage in negative rumination about failed goal attainment. The nine items appear to reflect three facets of this type of rumination: motivation (e.g., When I think about an important goal that I haven't yet reached, it inspires me to work harder to reach it), distraction (e.g., I often get distracted from what I'm doing by thoughts about something else), and emotionality (e.g., When I think about an important goal that I have not yet reached, it makes me feel sad). In contrast to the Caprara scale, none of the SMRI items specifically mention or imply that interpersonal, as opposed to other types of events, are of interest. Hence, because provocation, rather than frustration, is our principle focus, the Caprara scale will probably prove more useful than the SMRI in empirical research on triggered displaced aggression.

Summary

The personality factors related to aggression are obviously extensive and complex. Some of the identified traits may share conceptual overlap. Arguments concerning typological versus dimensional conceptualizations of personality cannot be settled here. We also cannot present convincing empirically-based arguments for the discriminative construct validity of the array of concepts discussed. At the same time, it appears obvious that personality factors will play an important role in moderating and mediating displaced, and triggered displaced aggression. We hope we have been persuasive in this regard. And, in response to the length of this section and to the potential conceptual overlap among its subsections, we have risked oversimplification by highlighting individual differences in trait hostility and ruminative propensity as being particularly important.

Settings, Target Actions, and Target Attributes

Implications of the Cognitive Neoassociationistic Model

As previously noted, the CNA model (Berkowitz, 1989, 1990, 1993) specifies two stages that impact the likelihood of aggressive responding. During the first stage, relatively basic and automatic associative processes are active. It is at this point that negative target actions and characteristics should prime (activate) ag-

gression-related networks that in turn make hostile actions more likely or more intense.

During the second stage, cognitive processes, in the form of higher-order and further associative processing, differentiate anger and fear into more specific emotions such as irritation, annoyance, or anger by suppressing some feelings and enhancing others. According to the CNA model, it is here that target actions and attributes are likely to show their effect, impacting (a) the content of attributions (e.g., more negative attributions for a triggering event when it is committed by an out-group or disliked target), (b) the likelihood that individuals will inhibit their aggressive response based on what they perceive as the consequences of their aggressive actions (e.g., Will I be punished or hurt by this high status person?), and (c) the suitability of the target for an aggressive response (e.g., a disliked or out-group person is a more suitable recipient of aggressive action).

The Setting

Extending the logic of the CNA model (Berkowitz, 1990, 1993), negative settings (hot, humid room), task frustration, and negative interactions (competitive tasks) are likely to function in much the same manner as might minor triggering actions on the part of a displaced aggression target. They are likely to prime negative thoughts and reactions and thereby increase displaced aggression. Those in negative mood states perceive events as more negative overall, whereas those in positive moods see the world through rose-colored glasses (e.g., Isen, 1984, 1987; Isen & Shalker, 1982). Likewise, other research shows that provocation elicits a stronger retaliatory response when situational cues associated with either violence (e.g., Berkowitz & LePage, 1967) or unpleasantness (e.g., Berkowitz & Frodi, 1979) are present. Such cues undermine the cognitively-based inhibitory restraints that ordinarily reduce aggression (Berkowitz, 1982, 1983). In a meta-analysis of the "*weapons effect*" (Carlson, Marcus-Newhall, & Miller, 1990), the presence of cues associated with aggression was shown to reliably increase aggressive responding both by those in the nonprovoked control condition as well as those who had previously been provoked. Although weapons are a special type of negative, aggression-related cue, the effect also occurred for proper names that had been experimentally linked with aggression.

In our meta-analysis of displaced aggression (Marcus-Newhall et al., 2000), we examined the negativity of the setting as a moderator variable. Many of the studies comprising the displaced aggression literature allowed no interaction between the actor and the target of displaced aggression (e.g., Donnerstein & Wilson, 1976). In some, however, there was a negative interaction (e.g., Worchel, Hardy, & Hurley, 1976), whereas in others, it was either neutral (e.g., Baum & Greenberg, 1975), or even positive (e.g., Bell & Baron, 1977). We specifically excluded from the meta-analysis the very few experimental conditions in which the Time 2 target clearly emitted a hostile or aggressive triggering action that by itself is ordinarily viewed as an aggressive act that is likely to elicit direct aggressive retaliation. Nevertheless, consistent with an extension the CNA model and supporting our expectation, analyses confirmed that negativity of the setting was an important moderator of displaced aggression. Moreover, the aggression-augmenting effect of negativity of the setting remained reliable in analyses that controlled for the effects of other moderator variables that were associated with the magnitude of displaced aggression.

These results suggest that other types of cues such as negatively valenced attributes of the target person will moderate triggered displaced aggression. In accord with this expectation, variables such as in-group versus out-group status of the target were meta-analytically shown to moderate the effect of aggression-associated cues (Carlson et al., 1990). This was true for previously unprovoked as well as provoked persons. Taken together, these results imply that it will theoretically be fruitful to examine other differentiations of target actions and attributes.

Target Behavior

The preceding arguments suggest that valence of target actions will be an important moderator of displaced aggression. Less displaced aggression is likely when target actions toward the actor are positive or neutral than when the target emits a minor negatively provoking triggering action. This idea has been well-discussed in earlier sections of this article.

A second feature that we have previously discussed is the hypothesized interaction between a Time 1 provocation and ambiguity regarding the degree to which a Time 2 minor triggering provocation reflects intent to harm. Although the CNA model clearly argues that attributional processes, such as intent to harm, are not necessary to explain all instances of aggressive responding (e.g., Berkowitz, 1983, 1989, 1990), these appraisals can serve to intensify anger and subsequent aggression (Berkowitz, 1990). Extending this argument to our work in triggered displaced aggression, with the provocation intensity of the minor Time 2 triggering event controlled, increasing the ambiguity of its intentionality will augment the magnitude of triggered ruminative aggression.

Within the context of the reported main effect for displaced aggression (Marcus-Newhall et al., 2000), stronger Time 1 provocation was associated with less displaced aggression ($b = -0.64$, $p < .0001$). As we noted in a previous section, this meta-analytically re-

liable contrast effect (cf. Berkowitz & Knurek, 1969) appears to be due to social comparison. Apparently, to the degree that the Time 1 provocateur was a nastier person (as indexed by the magnitude of his or her provoking action), the Time 2 target person is seen as a nicer person, or at least, one who is less deserving of an aggressive act. Although such judgmental contrast does not reflect a true attribute of the Time 2 target person, it is consistent with our major theoretical premise that the valenced attributes of the Time 2 target will affect the magnitude of triggered (or nontriggered) displaced aggression. At the same time, our theoretical arguments suggest that under conditions in which displaced aggression has been triggered, the contrast effect produced in response to an increased intensity of the Time 1 provocation will be reversed. That is, in the presence of triggering action on the part of the Time 2 target, increased intensity of the Time 1 provocation is expected to augment triggered displaced aggression, despite its opposite effect with respect to nontriggered displaced aggression. Such triggering action provides justification for aggressive retaliation and thereby undercuts the contrast effect elicited in its absence.

Attributes of the Target

Target valence. Paralleling variation in the valence of target actions toward the actor, target valence can vary. That is, targets can differ in the degree to which they have stable liked or disliked attributes. From the perspective of the CNA model, once a construct is processed or stimulated, activation spreads out along the network links and primes (activates) associated or related constructs. A wide variety of events may serve to activate or prime components of an aggression network, but ones that are especially relevant to our work are those that already have a strong association with anger and aggression (Berkowitz, 1993). For example, a disliked target is more likely to evoke negative thoughts that may in turn activate associated feelings, thoughts, memories, and behaviors (Berkowitz, 1989, 1990, 1993). Consistent with this expectation, disliked persons are more likely to be targeted for displaced aggression than are liked persons (Alcock, Solano, & Kayson, 1998; Berkowitz & Green, 1962; Berkowitz & Holmes, 1960).

When targets emit a minor triggering provocation, however, this expected variation in displaced aggression as a function of target valence might be reduced. Differential aggressive responding is still expected, however, between targets of positive and negative valence because provocations emitted by positively valenced targets are likely to be viewed as unintentional or attributed to situational circumstances (Fergu-

son & Rule, 1983), thus reducing impetus for subsequent aggressive retaliation.

Status. We have discussed previously the status of a Time 1 provocateur as a variable of interest. During the second stage of Berkowitz's (1990, 1993) CNA model, an individual will employ higher-order processes such as a consideration of the consequences of an aggressive retaliatory action against a provocateur. Nonetheless, even though aggression against a high status other is likely to be costly (e.g., retaliating against one's boss might get one fired), after a sufficiently intense provocation such potential costs are sometimes ignored. Extending the CNA model to our own work, the status of the Time 2 target is also likely to be an important attribute that will moderate triggered displaced aggression. Thus, at Time 2, the effects of high status are likely to reemerge. Paralleling the predicted effects for liked others, less displaced aggression will be directed toward high status targets. And, in line with the expectation that minor triggering acts by the displaced aggression target will eradicate the effects of positive target valence, so too should they reduce the constraining effects of higher status. Thus, we expect that the valence of the target person will have stronger moderating effects on displaced, by comparison with triggered displaced, aggression.

Group membership. Group membership will be another important moderator of displaced aggression. Extending again the theorizing of the CNA model, the effects of in-group and out-group status are likely to parallel those anticipated as a function of target valence. That is, out-group status is associated with negativity and therefore likely to prime a network of aggression related thoughts, emotions, and responses. By contrast, in-group membership is a positively valenced attribute and will have no such priming effect. In our meta-analysis of the weapons effect (Carlson et al., 1990), out-group status functioned as a negative cue. It augmented the degree to which the presence of other aggressive cues increased retaliatory aggression in response to a provocation. Thus, in accord with previous discussion of the effects of target valence, out-group targets are likely to elicit higher levels of displaced aggression. Nevertheless, contrary to our previous argument that minor triggering actions by a target will reduce differential displaced aggression as a function of the target person's valence, variation with respect to in-group and out-group membership is likely to have a somewhat different effect. The individual and group discontinuity effect seen in competitive bargaining suggests stronger aggressive escalation at the intergroup level than at the interpersonal level (Schopler & Insko, 1992). When applied to the effects of a minor triggering provocation by the displaced aggression target, it

seems likely that rather than reducing differential displaced aggression as a function of target valence, in-group and out-group target differentiation will augment it.

Target similarity. Another attribute of the target that is likely to moderate displaced aggression is the similarity between the provocateur and the target of displaced aggression. Consistent with this hypothesis, the more similar was a Time 1 provocateur to the target, the greater the displaced aggression (Marcus-Newhall et al., 2000).

The most prominent theoretical treatment of the relation between displaced aggression and provocateur and target-person similarity is Miller's (1948) model. He saw three factors as contributing to the choice of a target for displaced aggression: (a) the strength of aggressive instigation (approach tendencies), (b) the strength of inhibition against direct retaliatory aggressive behavior (avoidance tendencies), and (c) the similarity of alternative targets to the original provocateur (distance from goal). When an individual is provoked, direct retaliation toward the original provocateur becomes the goal. In a psychological sense, provocateur and target dissimilarity can be equated with increased psychological distance from the goal. The relative strength of approach and avoidance tendencies influence the likelihood of aggression toward the original provocateur. For instance, when avoidance tendencies are high as a consequence of fear of retaliation, aggressive retaliation toward the provocateur will be inhibited. Under these circumstances, aggression is likely to be displaced onto an alternative target person. According to the model, however, these same approach and avoidance tendencies generalize to potential alternative targets as a function of their similarity to the initial provocateur. Consequently, strongest aggression will not be directed at a target maximally similar to the original provocateur.

Critical to this theoretical analysis was research in the animal learning literature concerning the slopes of approach and avoidance tendencies as a function of distance from the goal. Avoidance tendencies had a steeper slope as a function of distance from the goal than did approach tendencies. Extrapolating to the effects of target and provocateur similarity, for a highly similar alternative target, the greater strength of the avoidance tendency that had initially inhibited aggressive retaliation against the provocateur will still be present in the generalized approach and avoidance tendencies elicited by the highly similar alternative target. Instead, a target with more moderate similarity to the provocateur will be preferred. Underlying this expectation is the key notion that, by comparison with approach tendencies (aggression), the generalization of avoidance exhibits a steeper decline in response strength as a function of decreasing similarity

between an alternative target person and the provocateur. Because of this difference between the slopes of the generalization gradients of avoidance and aggression, the model predicts that a displaced aggression target of "intermediate" similarity to the provocateur is likely to be most preferred as a target of displaced aggression. For such moderately similar targets, the steeper drop-off slope of the avoidance tendency will have resulted in a relative ascendance of the aggressive approach tendency.

In the experimental literature on displaced aggression, however, a paradigm feature that is common to virtually all studies is that the initial provocateur is never made available as a potential target for aggressive retaliation. This structural feature of the research paradigms suggests a somewhat different prediction with respect to the similarity between provocateur and preferred target for displaced aggression than that derived on the basis of Miller's (1948) model. Specifically, when from the outset of the experiment the interaction between the provocateur and the participant is structured to preclude any possibility of retaliatory aggressive action by the provocateur, there is little reason for the participant to even contemplate fear of further aggressive retaliation by the provocateur. Consequently, by contrast with Miller's (1948) model, which predicts a curvilinear effect as a function of increased similarity, under these conditions we expect a monotonic effect. As similarity between the initial provocateur and the person delivering the Time 2 trigger increases, aggression toward that Time 2 target will monotonically increase.

Rumination processes are likely to be involved in target similarity effects. The rumination processes that may be evoked when retaliation toward the Time 1 provocateur are precluded do not persist at a constant level over time. Instead, they are likely to arise and recede as a function of various situational factors. Rumination is less likely, for instance, when one is highly engaged with an important task. When there is high similarity between the Time 1 provocateur and a potential target for displaced aggression, however, sight of the Time 2 target is more likely to elicit ruminative thoughts about the retaliatory responses toward the Time 1 provocateur that were precluded or interrupted by the existing situational constraints.

The Relation Between Triggered Displaced Aggression and Excitation Transfer Theory

Our theoretical analysis of triggered displaced aggression appears to share conceptual similarities with Zillmann's (1971, 1994) excitation transfer theory. In Zillmann's (1971, 1994) typical paradigm, a manipulation of the presence or absence of an initial provocation

(e.g., an insult) is followed by a subsequent manipulation of arousal such as noise (e.g., Donnerstein & Wilson, 1976; Konecni, 1975), an erotic film (e.g., Cantor, Zillmann, & Einsiedel, 1978; Donnerstein, Donnerstein, & Evans, 1975; Zillmann, 1971), or physical exercise (e.g., Zillmann, Katcher, & Milavsky, 1972). This subsequent manipulation of arousal can be viewed as corresponding, in some sense, to what we have called a Time 2 triggering provocation. In general, the results obtained within the excitation transfer paradigm show that such Time 2 arousal only increases aggression when it is preceded by an initial provocation. Apparently, however, there are occasional exceptions in which arousal-induced increases in aggression appear even in the absence of prior provocation (e.g., Jaffe, Malamuth, Feingold, & Feshbach, 1974).

Despite this potential similarity between the two paradigms, key conceptual differences separate studies of triggered displaced aggression and research on excitation transfer theory. First, research on excitation transfer has been constrained to situations that examine direct retaliatory aggression toward the initial provocateur. That is, although there is nothing about the excitation transfer paradigm that precludes examination of displaced aggression, to our knowledge, the paradigm has never examined it. Yet there is no reason why one could not assess aggression toward a new target, instead of the initial provocateur. In this modified version of the excitation transfer paradigm, the Time 2 event of the triggered displaced aggression paradigm will have been conceptually broadened to include an array of other types of arousal in addition to an aggressive triggering action by a second provocateur. Thus, as types of triggering events, the Time 2 event might consist of extraneous neutrally valenced (e.g., exercise) or positively valenced (e.g. sexual arousal) sources of arousal, as well as negative ones (e.g., task frustration). Were the excitation transfer model to be extended in this manner, it would map onto the triggered displaced aggression paradigm. Nevertheless, as indicated, past research within the excitation transfer paradigm has been constrained to the examination of aggression toward the initial provocateur. Thus, in a descriptive sense, research within the two paradigms differs with respect to this latter key issue.

Second, we have argued that from a theoretical perspective, the disjunctive escalation seen in triggered displaced aggression requires that the Time 2 triggering event must be trivial or low in its capacity for arousal. Specifically, when retaliation toward the source of a prior strong Time 1 provocation is precluded, use of a low-level Time 2 triggering provocation can contribute to variation in the following: (a) responsiveness to priming effects, and (b) attributional distortion of intent as a function of the presence or absence of the Time 1 provocation. By contrast, the Time 2 erotica or strenuous physical exercise typically used in excitation transfer research is not of low intensity. Instead, it is typically designed to elicit moderate to high levels of arousal.

Third, the key theoretical process in excitation transfer research is the carry-over of the Time 2 arousal to the retaliatory aggressive action toward the initial provocateur (as facilitated by a consonant labeling process in which the actor subjectively misinterprets the Time 2 affective arousal as angry aggression). To ensure excitation transfer effects, the interval between the initial provocation and subsequent arousal is carefully constrained so that the latter occurs within approximately 5 min after the former. In a convenience sample of 17 excitation transfer articles, an estimation from the method section yielded a mean temporal lag between the Time 1 and Time 2 incidents of 4.56 min. If the sample is constrained to the 14 articles wherein the provocation temporally preceded the excitation event, the mean estimated time lag was 5.00 min. These time intervals are consistent with evidence suggesting that angry affective arousal caused by an initial event will not by itself persist for more than 10 to 15 min (e.g., Tyson, 1998). By contrast, one of the more interesting aspects of triggered displaced aggression is that it need not rely on the temporal persistence of the anger arousal from the Time 1 provocation to the Time 2 triggering event. Instead, it can rest on ruminative cognitive processes that occur during the interval between the Time 1 and Time 2 events (see Bushman, Pedersen, Vasquez, Bonacci, & Miller, 2002). Participants who were instructed to ruminate (by thinking about how they might explain the poor performance that they had previously been insulted about) responded more aggressively to a trigger when they returned for a second session 8 hr later.

Finally, in virtually all research on excitation transfer, aggression is measured immediately after the Time 2 event. Zillmann has published two studies, however, that are exceptions (viz. Bryant & Zillmann, 1979; Zillmann & Bryant, 1974). In them, measurement of aggression does not occur immediately after the Time 2 event, but instead, after a delay. The findings of Bryant and Zillmann (1979) and Zillmann and Bryant (1974) differ from Bushman et al. (2002) in several important respects. First, the delay in these studies does not map onto the critical temporal gap in the triggered displaced aggression paradigm. That is, Zillmann's delays in the two studies discussed earlier are between the Time 2 provocation and the aggression dependent variable, not the period between the Time 1 provocation and the Time 2 events of the triggered displaced aggression paradigm (Bushman et al., 2002). In fact, even in the two Zillmann and Bryant studies cited earlier, the gap between the Time 1 and Time 2 events, as is characteristic of all work in Zillmann's paradigm, is still very short: it lasts less than 5 min. This must necessarily be the case because residual physiological arousal from the Time 1 exercise

needs to be present to augment the impact of the Time 2 provocation. Therefore, Excitation Transfer Theory per se cannot account for triggered displaced aggression findings such as Bushman et al. (2002) in which a long delay following the Time 1 event has undoubtedly erased any lingering physiological arousal that was directly elicited by the initial provocation. Instead, as Zillmann and Bryant stated, the 8-day delayed effect reported in this one study within the Excitation Transfer literature remains unexplained by any empirically validated process intrinsic to that theoretical model.[4]

At the same time, although Zillmann has not specifically done so, it seems quite reasonable to apply ruminative processes to explain both the delayed excitation transfer effect of Zillmann and Bryant (1974), as well as the effect of delayed triggers in the triggered displaced aggression paradigm. Alternatively, although not an explanation mentioned by them, the delayed effect of Zillmann and Bryant (1974) may be explained as due to one-trial classically-conditioned anger that is elicited by the sight of the face of the target person who provided the Time 2 noxious insult and who was the target for aggression after the 8-day delay (see Lewicki & Litterer, 1985, p. 240, for evidence and discussion of such one-trial classically-conditioned anger toward a redhead). Note, however, that a classical conditioning explanation cannot readily account for the triggered displaced aggression effects of Bushman et al. (2002). In our work on triggered displaced aggression, the eliciting (Time 2) stimulus—the person who provides the triggering event—is not the stimulus initially and strongly associated with anger. In our paradigm, it is the Time 1 person who provides strong insult. Moreover, our dependent measures show that the triggering event provided by the Time 2 person does not by itself reliably induce an aggressive response.

There is another important way in which triggered displaced aggression effects are distinct from, if not opposite to, those predicted by Excitation Transfer Theory. Specifically, according to Excitation Transfer Theory, increases in the salience of the physiological arousal elicited by the Time 1 event will function to decrease the likelihood of the transfer of that excitation to the insult at Time 2. For example, if one exercises very hard at Time 1 and is aware that the arousal currently being felt clearly is due to the exercise, one will be less likely to misattribute that arousal to the Time 2 event (e.g., the provocation). In Study 2 of Bushman et al. (2002), in which there was an 8-hr delay between the initial provocation and the subsequent triggering prov-

ocation, the operationalization of rumination specifically instructed participants to focus on the Time 1 provocation. Specifically, participants were told the following by the experimenter: "Please take your essay and essay evaluation with you so you can think about them during the day. Also think about what you might write to justify your position and explain your essay evaluation to your partner tonight." Consistent with expectation, manipulation check data showed that participants in the rumination condition did indeed think more about the negative essay evaluation (viz. the Time 1 provocation) during the day, by comparison with no-rumination participants. This suggests that the rumination condition made the initial provocation highly salient.

Thus, the results of Bushman et al. (2002) point to a major theoretical divergence from the prediction of Excitation Transfer Theory. If rumination serves to make the Time 1 event (viz. the provocation) more salient (as it did in Study 2 of Bushman et al., 2002), why would rumination augment aggression when coupled with a Time 2 triggering event? According to Excitation Transfer Theory, by making the source of arousal from initial provocation more salient, aggression will be reduced under the rumination condition. Its source, having been made highly salient, cannot readily be misattributed to the subsequent triggering provocation. Instead, rumination had the opposite effect.

Of course, one might argue in rebuttal that both the initial provocation and subsequent trigger are given the same label by the participant (viz. a provoking event). This rebuttal, however, does not work well. The Time 1 provocation and the Time 2 triggering provocation of Bushman et al. (2002) were delivered by two separate people who functioned in two distinct roles. The salience-inducing effect of the rumination induction used in Study 2 of Bushman et al. is only likely to make this distinction more evident to the participant.

In sum, although future work might provide conceptual links between the triggered displaced aggression and excitation transfer paradigms, as argued earlier, their conceptual integration faces a number of important hurdles.

Conclusion

We have argued that triggered displaced aggression is an important and relatively unresearched phenomenon. We have described evidence suggesting that it can produce dramatically escalated aggressive responses that disjunctively exceed the level of aggression predicted by the well-established matching principle (Axelrod, 1984). That is, aggressive responses to minor triggering provocations can be incommensurately strong when preceded by a moderately strong provocation that precluded retaliation. The theoretical model

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[4]In Zillmann and Bryant (1974), the other study in which they have inserted a delay into their paradigm, the delay prior to the measurement of aggression is a mere 6 min. Being only 6 min, this effect is very likely due to the persistence of the combined physiological (primarily sympathetic) affective arousal elicited by the exercise and the subsequent insult.

presented herein points to an array of factors expected to moderate and mediate this fundamental effect.

Throughout our presentation we have linked our theorizing with the more general CNA Model of Aggression developed by Berkowitz (e.g., 1993). Although Anderson's General Aggression Model (e.g., Anderson, Anderson, & Deuser, 1996; Anderson, Deuser, & DeNeve, 1995; Lindsay & Anderson, 2000) might also have served well in this regard, application of Berkowitz's model suggested a number of interesting extensions of Triggered Displaced Aggression theory. Noteworthy among such potential extensions are the notions that pain and frustration can be substituted for human sources both of Time 1 provocations and Time 2 triggering provocations. If so, our theory is far from complete. A number of other theoretical gaps are also apparent. Prominent among them is the need for a theoretical elaboration and understanding of the process events that underlie ruminative effects.

We have argued that triggered displaced aggression may provide an explanation for some instances in which daily life produces seemingly inexplicable strong aggressive responses. In summarizing our application of social and personality factors to an explanation of some of the highly destructive aggressive behavior seen in daily life, it is important to stress three obvious, but important features of social interaction: (a) the generality of the matching rule in social interaction, (b) the fact that social interaction extends in time, and (c) the fact that once the level of slightly incremental aggressive escalation that ordinarily occurs in social interaction is disrupted at an early stage by a sudden disjunctive augmentation of aggressive response, the matching rule will become reinstigated at this new higher level. Moreover, the disjunctive escalation implicit in triggered displaced aggression may itself become an aspect of the implementation of matching behavior. Consideration of these three principles in conjunction with instances of the occurrence of triggered displaced aggression suggests that the usefulness of our theoretical model for explaining highly violent real-world acts such as destructive riots and intramarital physical abuse may not be far-fetched.

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