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Kicking the (Barking) Dog Effect:

The Moderating Role of Target Attributes on Triggered Displaced Aggression

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Abstract

Sometimes aggression is displaced onto a target who is not totally innocent, but emits a mildly irritating behavior called a triggering event. In three studies we examine stable personal attributes of targets that can impact such *triggered displaced aggression* (TDA). Lower levels of TDA were directed to targets whose attitudes were similar as compared to dissimilar to those of the actor (Experiment 1), and to targets who were in-group as compared to out-group members (Experiment 2). Conceptually replicating the findings of Studies 1 and 2, the manipulated valence of the target (viz. liked, neutral, and disliked) functioned in a similar manner, with positive valence serving a buffering function against a triggering action that followed an initial provocation (Experiment 3). The results from all three studies are consistent with Cognitive Neoassociationist theory (Berkowitz, 1993).

Key words: aggression, displaced aggression, Cognitive Neoassociation Theory, attitude similarity, intergroup relations

Kicking the (Barking) Dog Effect:

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In a common example of displaced aggression, a man is berated by his boss but does not retaliate because he fears losing his job. Hours later, when he arrives home to the greeting barks of his dog, he responds by kicking the dog. *Displaced aggression* (also called the *kicking the dog effect*) is a matter of aggressing against a substitute target: A person has an impulse to attack her provocateur, but attacks someone else instead (Marcus-Newhall, Pedersen, Carlson, & Miller, 2000).

The topic of displaced aggression attained scientific prominence with the publication of *Frustration and Aggression* (Dollard, Doob, Miller, Mowrer, & Sears, 1939), but interest in it soon waned. Nonetheless, meta-analytic findings show that displaced aggression is a reliable phenomenon (Marcus-Newhall et al., 2000).

Triggered Displaced Aggression

With pure displaced aggression, the target of attack is totally innocent. Often, however, the target of aggression is not totally innocent but has committed some minor or trivial offense. This type of displaced aggression is called *triggered displaced aggression*. The triggering event is the minor offense that prompts the displacement of aggression (Dollard, 1938). Triggered displaced aggression is of theoretical interest because an initial provocation and a subsequent triggering event can interact to augment aggressive responding. Specifically, these two events can synergistically combine to produce a level of aggression that exceeds that predicted by the additive combination of the independent effects of the initial and triggering provocations (Miller & Marcus-Newhall, 1997). However, this type of interaction between provocation and trigger

occurs only when the intensity of the triggering event is minor (Vasquez, Denson, Pedersen, Stenstrom, & Miller, 2005). Relative to strong triggering events, *weak* ones are more ambiguous as to whether they constitute a provoking action.

The concept of priming can explain why the initial provocation and the subsequent triggering event interact to augment aggression. Priming effects from the initial provocation can cause such ambiguous stimuli to more readily be noticed (e.g., Higgins & King, 1981). In addition, prior priming might influence people to make the attribution that the triggering is an intentional provocation (Duncan, 1976). Such attributional distortion is less likely in the absence of prior priming by a strong initial provocation. Therefore, when preceded by an initial provocation, a weak trigger can elicit an aggressive response towards a displacement target that greatly exceeds that which would be expected from matching principle wherein a provocation is met by a retaliatory response of equal magnitude (Alexrod, 1984).

Two studies produced the first empirical evidence of synergistically amplified triggered displaced aggression (Pedersen, Gonzales, & Miller, 2000). Although manipulation check data confirmed that the minor triggering event was experienced as aversive in these studies, it had no impact on aggression under conditions of no initial provocation. Under provocation, however, the level of displaced aggression markedly exceeded that induced by the provocation or the trigger alone, or that implied by the additive combination of their independent effects.

Cognitive Neoassociationist Theory and the Function of Target Attributes

The goal of the current research is to extend previous research by providing the first investigation of the priming function of stable *target attributes* on triggered displaced aggression. We also tests deductions from Berkowitz's, (1993) cognitive neoassociation theory. In Stage 1 of this theory, unpleasant events produce negative affect which automatically stimulates various

thoughts, memories, expressive motor reactions, and physiological responses associated *both* with fight and flight tendencies. The fight associations give rise to rudimentary feelings of anger, whereas the flight associations elicit rudimentary feelings of fear. Furthermore, cognitive neoassociation theory assumes that cues present during an aversive event become associated with the event and the thoughts, memories, expressive motor reactions, and physiological responses triggered by it. In Stage 2 of the theory, people may also use higher order cognitive processes to further analyze their situation if they are motivated to do so. They may think about how they feel, make causal attributions for what led them to feel this way, and consider the consequences of acting on their feelings. This more deliberate thought further differentiates feelings of anger, fear, or both. It can also suppress or enhance the action-tendencies associated with these feelings. Furthermore, this process may serve to overcome a *positivity bias* in which people tend to approach others with positive intent (e.g., Klar & Giladi, 1997; Sears, 1983; Wojciszke, Bryez, & Borkenau, 1993).

Overview

In three studies we use provoking events — a provocation followed by a trigger — to prime negative affect. Consistent with Stage 1 of cognitive neoassociation theory, we hypothesize that any triggering event will produce negative affect, irrespective of its source. We propose that in Stage 2, when appraisal and attributional processes can arise, attributes of the triggering individual become relevant. Although previous research has examined effects of target characteristics on direct aggression, we present herein the first research to examine their effects on triggered displaced aggression. Specifically, we hypothesize that (a) attitude similarity (Experiment 1), (b) in-group membership (Experiment 2), and (c) positive target valence (Experiment 3) will mitigate the impact of a triggering action and thereby reduce aggression.

Why might this be so? Negative behavior emitted by an individual with positively valenced attributes is likely to be viewed as unintentional or as due to situational circumstances (Ferguson & Rule, 1983) and therefore more easily dismissed (Kulik, 1983). Despite the occurrence of prior priming from an initial provocation, such external attributions should reduce subsequent aggression towards a triggering person. This reduction in aggressive responding is also consistent with research concerning the primacy of first impressions (Miller & Campbell, 1959; Park, 1986).

EXPERIMENT 1

Two old clichés make opposite predictions about who likes whom. "Birds of a feather flock together" suggests that people like similar others, whereas "opposites attract" suggests that people like dissimilar others. Decades of research produced a clear and definitive winner in this battle of the clichés. The birds of a feather are the ones who end up flocking (and staying) together (Byrne 1971). Perhaps it is time to discard the "opposites attract" cliché. Often "opposites attack" seems to be a more accurate cliché. Numerous studies have shown that people emit more direct aggression toward out-group members than toward in-group members (e.g., Rogers, 1983). Moreover, people also show more direct aggression against individuals whose attitudes are dissimilar to their own (Lange & Verhallen, 1978).

Experiment 1 examines the moderating effect of attitude similarity. Specifically, a minor triggering event is likely to elicit less triggered displaced aggression toward targets with similar, as opposed to dissimilar attitudes. At first glance this hypothesis might appear at odds with previous meta-analytic findings that did not show clear evidence that similarity between the participant and the aggression target moderated the magnitude of displaced aggression (Marcus-Newhall et al., 2000). The authors argued, however, that experimental features of previous

displaced aggression research likely explained this result because similarity was often confounded with target status. Specifically, dissimilar targets were often higher in status (e.g., they were the experimenter) relative to a student participant. The increased dislike typically shown towards dissimilar targets (Judd & Park, 1988) would therefore be counteracted by the lower levels of aggression usually directed towards high status individuals (e.g., Allan & Gilbert, 2002; Epstein, 1965). This situation produced both aggression facilitating and inhibiting effects. Marcus-Newhall and colleagues reasoned that this was responsible for the overall null findings. We addressed this concern in Study 1 by using a target that is of equal status to the participant (i.e., a fellow student). Furthermore, same gender configurations between participants and targets were always employed.

Participants in Experiment 1 first wrote an essay on abortion. We manipulated attitude similarity by making a confederate's essay advocate either the same or a different position. The confederate and participants read and rated each other's essay. The presence or absence of a prior provocation and a subsequent triggering action by the confederate were then orthogonally manipulated. Finally, participants had an opportunity to aggress against the confederate.

We predicted an interaction between provocation, a subsequent triggering event, and the attitude similarity of the target. Specifically, among provoked participants, we expected a confederate's subsequent triggering act to increase aggression only when the confederate was attitudinally dissimilar to the participant. Furthermore, among participants who were both provoked and received a subsequent minor triggering provocation, we anticipated higher levels of aggression toward attitudinally dissimilar targets (compared to attitudinally similar targets). We did not expect attitude similarity or a trigger to moderate aggressive responding when

participants were not initially provoked. In such cases, we anticipated uniformly low levels of aggression.

Method

Participants and Design

Participants were 322 undergraduate students (160 women and 162 men) who received course credit for their voluntary participation. Data from two participants were discarded. One left the room before completing the experiment and the other had heard about the experiment from his roommate. Thus, the final sample consisted of 320 students (160 women and 160 men).

Experiment 1 used a 2 (provocation: yes/no) × 2 (trigger: yes/no) × 2 (attitude of aggression target: similar/dissimilar) × 2 (participant gender) between-subjects factorial design. There were 40 participants (20 women and 20 men) in each of the eight experimental conditions.

Procedure

In individual sessions participants were led to believe that they would be interacting with another participant of the same sex (actually a confederate). They were told that the study concerned impression formation within a business context and that they would perform a number of tasks that measured abilities relevant to the business world, including verbal skills, communication skills, ability to make quick decisions, and the competitive instinct.

Similarity manipulation. After providing their consent, participants were given 5 minutes to write a one-paragraph essay on their preferred side of the pro-choice or pro-life abortion issue.[1] When completed, the participant's essay was taken to the "other participant" for evaluation. Meanwhile, the participant evaluated the partner's essay, which advocated either the

same position (*similar attitude*) or the opposite position (*dissimilar attitude*). We controlled for handwriting by having male and female versions of the standard essays.

Provocation manipulation. Next participants solved 14 anagrams, presumably to measure verbal skills (see Pedersen et al., 2000, Study 2). Each anagram was displayed on a computer monitor for 5 sec. Participants then received a prompt to state the anagram answer aloud and to write it down. They wrote and said "I don't know" for anagrams they could not solve. After a 10 sec delay, the anagram answer appeared on the monitor for 5 sec. They were then prompted to use the word in a first-person sentence. Participants were told that the experimenter, who was presumably recording their answers in another room, could communicate with them via an intercom.

Participants were randomly assigned to provocation or no provocation conditions. In the provocation condition they received difficult anagrams to solve (e.g., ENVIRONMENT, LIEUTENANT, PANDEMONIUM), whereas in the no provocation condition they received easy anagrams (e.g., FLESH, WHALE, GRAIN). In addition, those in the *provocation* condition worked while listening to loud, distracting music (viz. Stravinski's *Firebird Suite* played at 80 dB), whereas those in the *no provocation* condition listened to quiet, soothing music (viz., Mannheim Steamroller *Interludes* played at 70 dB). Also, the experimenter insulted participants in the provocation condition, but not those in the no provocation condition. The insult consisted of three (tape recorded) verbal comments delivered via the intercom. After the 4th anagram, the experimenter said: "Look, I can barely hear you. I need you to speak louder please." After the 8th anagram, the experimenter said in a louder and more frustrated voice: "Hey, I still need you to speak louder." After the 12th anagram, the experimenter said in a very frustrated voice: "Look, this is the third time I've had to say this! Can't you follow directions? Speak louder!"[2] In the no

provocation condition, the experimenter simply informed participants when they had completed the 4th, 8th, and 12th anagrams. In prior research this manipulation reliably elicited negative affect (Pedersen et al., 2000). The experimenter then showed the participant the confederate's anagram answers. Regardless of the participant's condition, the confederate always correctly answered three more anagrams than did the participant (and therefore seemed more intelligent). This procedure was employed to reduce suspicion levels when participants were subsequently insulted by the confederate in the trigger condition.

Trigger manipulation. Participants were randomly assigned to trigger or no trigger conditions. The participant rated the confederate's essay performance on the following dimensions: organization, originality, writing style, clarity of expression, persuasiveness of arguments, and overall quality of the essay. All ratings were made using a scale that ranged from 1 (*very poor*) to 7 (*excellent*) with additional room for written comments. In the *trigger* condition, the respective ratings received from the confederate were 3, 3, 3, 4, 4, and 4, and the written comment was: "I know that writing an essay from scratch is hard to do, but I would have thought that a pro-lifer (pro-choicer) would have come up with better arguments." In the *no trigger* condition, ratings were 4, 4, 4, 5, 5, and 5, and the written comment was: "I know that writing an essay from scratch is hard to do, but I thought the other participant came up with fairly good arguments."

Participants also rated anagram performance using the following three items: (a) "Taking into account the difficulty level of the task, the other participant's overall performance on the anagram test seems _____," (b) "If you had to guess, the concentration level used by the other participant on the anagram task appears to be _____," and (c) "Based on the limited information I have, it seems that the likelihood of the other participant performing very well in a college class

that requires good verbal skills is _____." The rating scale paralleled that for the essay evaluation and again had room for written comments. In the *trigger* condition, the respective ratings were 3, 4, and 4, and the written comment was "Although the task was difficult, I would have thought a college student would have performed better." In the *no trigger* condition, the respective ratings were 4, 5, and 5, and the written comment was: "Although the task was difficult, I thought the other participant did a fairly good job."

Dependent measures. Participants then completed a competitive reaction time task with the confederate (Taylor, 1967), allegedly to measure their competitive instincts. They were told that whoever pressed a button slower on each trial would receive a blast of noise. In advance of each trial, the participant set the noise intensity to be received if the confederate lost the competition. Along with a non-aggressive no-noise setting (level 0), the levels varied between 60 (level 1) and 105 decibels (level 10). In addition, the trial winner decided the duration of the loser's suffering because the noise duration depended on how long the winner depressed the button. In effect, each participant controlled a weapon that could blast their partner with loud noise whenever their partner lost.

The reaction time task consisted of 25 trials. After the initial trial, the remaining 24 trials were divided into three blocks of eight trials. The average noise intensity and duration set by the confederate were, respectively, 2.5 and 0.63 sec on block 1, 5.5 and 1.38 sec on block 2, and 8.5 and 2.47 sec on block 3. The participant heard noise on half of the trials within each block (randomly determined). Next, participants were asked the following question: "On a scale from 1 to 10, where 1 is *very dissimilar* and 10 is *very similar*, how similar do you feel you and the other participant are?" Participants were told that their responses were completely confidential and

were instructed to seal their completed form in an envelope and drop it through a slotted locked box. A funnel debriefing (with probe for suspicion) followed.

Results

Similarity Manipulation Check

All participants correctly recalled the confederate's sex. Over 99% correctly recalled the confederate's position on abortion. Those in the similar attitude conditions judged the confederate to be more similar than did those in the dissimilar attitude conditions, *M*s = 5.9 and 4.3, respectively, $t(318) = 7.88$, $p<.0001$, $d = 0.88$.

Aggression

The primary dependent variable was physical aggression, as assessed by the intensity and duration of noise selected by each participant for blasting the confederate. Noise intensity and duration showed the same pattern of results. To increase the reliability of the aggression measure the two indicies were standardized and summed to form a single index (e.g., Bushman & Baumeister, 1998). The physical aggression data were analyzed with a 4-factor ANOVA that examined the effects of provocation (present vs. absent), triggering event (present vs. absent), attitude similarity (similar vs. dissimilar), and participant gender.

Tukey's (1977) box plots identified extreme outliers from the total sample. Because outlying observations can unduly influence least squares estimates, we removed them (Barnett & Lewis, 1978), leaving 305 participants for analysis (less than 5% were deleted). Fisher's exact test showed removed outliers to be independent of experimental condition.

The most important measure of aggression was the first reaction time trial because it is the only one uncontaminated by tendencies to reciprocate the confederate's level of aggression

(e.g., Bushman & Baumeister, 1998). The expected three-way interaction between provocation, trigger, and group membership was significant, $F(1,299) = 4.01$, $p<.05$. To interpret the 3-way interaction, we examined the two-way interactions between attitude similarity and the trigger event separately for provoked and unprovoked participants. As expected, for provoked participants attitude similarity interacted with trigger, $F(1,299) = 4.36$, $p<.05$. The triggering event was more likely to increase displaced aggression when emitted by a *dissimilar* target than by a *similar* target, $t(299) = 3.85$, $p<.001$, $d = 0.88$ and $t(299) = 0.93$, $p>.3$, $d = 0.19$, respectively. Furthermore, participants were less aggressive towards triggering targets with similar attitudes than targets with dissimilar attitudes, $t(299) = 3.07$, $p<.005$, $d = 0.36$ (see Figure 1a).

For *Unprovoked* participants, as expected, attitude similarity and trigger did not interact, $F(1, 299) = 0.54$, $p>.4$ (see Figure 1b). In addition, no main effects or interactions involved participant gender.

Discussion

Experiment 1 assessed the impact of a target's attitude similarity on triggered displaced aggression. Results showed that in the context of an initial provocation, attitude similarity served a buffering effect in that (a) a triggering act did not increase aggression against attitudinally similar targets, and (b) provoked participants who experienced a trigger displayed less aggression towards a target with similar attitudes than one with dissimilar attitudes. These results are consistent with research on impression formation showing that individuals who possess attitudes similar to the self are both better liked and perceived as more attractive (e.g., Byrne, 1971).

EXPERIMENT 2

Experiment 2 provides the first test within the triggered displaced aggression paradigm of whether in-group/out-group status of the triggering person will moderate aggressive retaliation. Participants and confederates were first randomly assigned to in-group or out-group conditions using a minimal groups procedure. As in Experiment 1, provocation and trigger were manipulated. Finally, participants had an opportunity to aggress against a triggering confederate. As in Experiment 1, we predicted a three-way interaction between provocation, trigger, and target group membership. Specifically, group membership and a triggering event should interact in the presence of an initial provocation (but not in its absence) such that a triggering out-group target, but not an in-group target, will increase aggression.

Method

Participants and Design

Participants were 96 undergraduates (74 women and 22 men) who received course credit for their voluntary participation. The design was a 2 (Aggression target: in-group/out-group target) × 2 (Provocation: yes/no) × 2 (Trigger: yes/no) between-subjects design.

Procedure

Minimal groups procedure. Each participant was paired with a confederate of the same sex. They were told that the researchers were studying imagination, cognitive ability, and impression formation. The experimenter then introduced the "Creative Imagination Test," which was actually a minimal groups procedure (see Marques, Abrams, & Serodio, 2001). Participants were told the task assessed whether a person had a Pictorial or Experiential type of imagination. Additionally, it was explained that research showed that these imagination types were related to fundamental personality characteristics and cognitive abilities. The experimenter then handed

the participant and confederate envelopes containing the Creative Imagination Test and left the room. The task contained a series of nine questions answered from 1 (*strongly agree)* to 7 (*strongly disagree).* Sample items include "My dreams are often very life-like and the images appear in bright colors," and "When I think of something new, the idea often appears in my mind as a picture." There were also seven additional questions wherein participants compared several visual designs and then indicated which of them was least like the others. Upon completion, the experimenter took the responses of both the participant and the confederate to another room, ostensibly to score them.

Group membership manipulation. The experimenter then returned with the ostensible test results. In the *in-group condition*, the participant and the confederate were told they *both* belonged to either the Experiential or Pictorial imagination group (randomly determined). In the *out-group condition*, they were told that one belonged to the Experiential group whereas the other belonged to the Pictorial group (or vice versa, randomly determined). Then, the experimenter gave the participant and the confederate "Experiential Group" or "Pictorial Group" name tags, instructing them to wear their tag for the duration of the study. The experimenter then told the participant and confederate that they would be separated for the remainder of the study, but would periodically exchange information and tasks. The confederate then went to another room, supposedly to work with a different experimenter.

Provocation manipulation. Next, allegedly as a test of cognitive ability, participants received a list of 15 anagrams and were told to solve them. After 3 minutes, the experimenter returned to collect the participant's anagrams (ostensibly to grade them), and showed the participant norms for a sample of engineering students that had done very well solving these

anagrams. Then, the experimenter left again and returned a few minutes later with the participant's anagram score.

Participants were then randomly assigned to provocation or no provocation groups. The provocation procedure paralleled that used in Experiment 1, but there was no loud background music. Specifically, the anagrams in the provocation condition were very difficult to solve (e.g., NVTNIMEREON = ENVIRONMENT). In the *no provocation* condition the 15 anagrams were much easier to solve (e.g., ORBWN = BROWN). In fact, participants in the no provocation group correctly answered an average of 10.73 (*SD* = 2.75) anagrams compared to 4.53 (*SD* = 1.38) in the provocation group. Second, the experimenter reported that the participant's score was much lower (*provocation*) or about the same (*no provocation*) as the average score of the engineering sample. Finally, in the provocation condition, the experimenter insulted the participant, stating that the performance was really poor and that the anagram portion of the experiment should be done over again. He then added in an exasperated and irritated tone that it would be a waste of his own time to rerun the session, and therefore they should just proceed with the study.

Trigger manipulation. Participants were then asked to list desirable traits for an astronaut (Vasquez et al., 2005). The experimenter then pretended to take the participant's responses to the confederate and returned two minutes later with the confederate's responses and an evaluation form. Participants received from the confederate an evaluation assessing the degree to which their performance on the astronaut task exhibited originality, quality, effort, variety among traits listed, and made sense. In addition, an overall evaluation was provided. In the *trigger* condition the individual ratings and overall evaluation were 3, 4, 3, 3, 4, and 4 respectively on 7-point scales (1 = *no good at all*, 7 = *extremely good*), and the written comment:

"The performance was not great. I think a college student could do better." In the no trigger condition, the participant received a neutral evaluation (6, 5, 6, 5, 5, and 5), and the written comment: "My partner did a decent job. I think the task was well done."

Dependent variables. Next, the experimenter told participants that the final task examined how sensory distraction affects a person's cognitive abilities. The experimenter indicated that the participant and the "other participant" would receive different distractions. Participants were told that they had been randomly assigned to a visual distraction (e.g., a pleasant nature video), whereas the other participant was assigned to a tactile distraction (e.g., placing their hand in painfully cold water). Participants then put their own hand in the bucket of cold water (10° C, 50° F) for 5 seconds, ostensibly to guide their decision about the length of distraction for the other participant (Vasquez et al., 2005). The participant was also informed that the other participant was simultaneously previewing the nature video and would be making a similar decision.

Next, participants received two envelopes. A form in the first instructed them to circle the duration that the other participant should be distracted using a 9-point scale which started at "1 = *no distraction at all*" (*0 seconds*) and increased by 10 second intervals to "9 = *80 seconds / very strong distraction*". This served as the dependent measure of *physical aggression*. The second envelope contained three measures. First, participants indicated their own and the confederate's imagination group. Second, to check the provocation manipulation, they reported their feelings using a modified version of the Mood Adjective Checklist (Nowlis, 1965),. Third, they indicated how *happy*, *pleased*, *annoyed*, *irritated*, and *angered or upset* they felt about the confederate's evaluation of their NASA task. These items, each rated on 7-point linear scale (1 = *not at all*, 7 =

extremely), checked the adequacy of the trigger manipulation. A funnel debriefing (with probe for suspicion) followed.

Results

Manipulation Checks

Group membership. To assess whether participants correctly identified themselves as being in the in-group or out-group condition, they indicated the imagination type for themselves and their "partners." Only 2 out of 96 participants inaccurately recalled a group membership. These participants were discarded.

Provocation. To assess the effectiveness of the provocation manipulation, participants recalled how they had felt after they had completed the anagram task using a modified Mood Adjective Check List (Nowlis, 1965). On an a priori basis, six adjectives (i.e., *angry*, *irritable*, *defiant*, *annoyed*, *grouchy*, and *frustrated*) that describe an angry mood were analyzed (α = .86). As expected, participants in the provocation group felt more angry than those in the no provocation group, *M*s = 5.74 (*SD* = 5.09) and 2.31 (*SD* = 3.44), respectively, $t(92) = 3.84$, $p<.001$, $d = 0.79$.

Trigger. To assess the effectiveness of the trigger manipulation, participants reported their mood after feedback on the NASA task (i.e., how *irritated*, *happy*, *angered or upset*, *pleased* and *annoyed* they felt). After the *happy* and *pleased* adjectives were reverse scored, items were summed to form a composite measure of negative affect (α = .94). As expected, triggered participants felt more negatively after their evaluation than did non-triggered participants, *M*s = 25.59 (*SD* = 6.03) and 11.64 (*SD* = 5.72), respectively, $t(94) = 11.63$, $p<.001$,

d = 2.38. Furthermore, among those provoked, negative affective reactions to the trigger did not differ as a function of imagination group, $F(1,20) = 0.005$, $p>.10$, $d = 0.03$. This result is consistent with our expectation (derived from the cognitive neoassociation theory) that an aversive triggering event serves to prime negative affect irrespective of its source.

Aggression

A 2 (Aggression target: in-group/out-group member) × 2 (Provocation: yes/no) × 2 (Trigger: yes/no) between-subjects ANOVA revealed both a main effect of Trigger, $F(1,88) = 41.37$, $p<.001$, and a Group × Trigger Interaction, $F(1,88) = 9.59$, $p<.01$. These effects were qualified, however, by the expected three-way interaction between Group membership, Provocation, and Trigger, $F(1,88) = 4.08$, $p<.05$. To interpret it, we examined the Group × Trigger interactions separately for provoked and unprovoked participants. Consistent with Experiment 1, among provoked participants, Group interacted with Trigger, $F(1,88) = 13.06$, $p<.01$ (see Figure 2a). Specifically, the provocation condition showed a simple effect of trigger on aggression for out-group targets, $F(1,88) = 40.99$, $p<.001$, with provoked participants displaying more aggression against an out-group target who emitted a triggering event compared to one who did not. No such simple effect obtained for in-group targets, $F(1,88) = 1.90$, $p>.10$. Nor did this interaction obtain among unprovoked participants, $F(1,88) = 0.58$, $p>.10$ (see Figure 2b). Furthermore, under trigger conditions group membership affected triggered displaced aggression, $F(1,88) = 13.36$, $p<.01$, with participants behaving less aggressively towards an in-group relative to an out-group target (see Figure 2a).

Discussion

Experiment 2 assessed the impact of group membership on triggered displaced aggression. Replicating Experiment 1, group membership moderated triggered displaced aggression effects. Specifically, whereas a trigger augmented aggression towards out-group targets, in-group status mitigated its effect. Furthermore, in the presence of an initial provocation and a subsequent minor triggering event, participants aggressed less against an in-group target than an out-group target. This moderating effect of group membership replicates aspects of meta-analytic findings in the displaced aggression literature (Marcus-Newhall et al., 2000).

EXPERIMENT 3

Experiments 1 and 2 examined the moderating effects of attitude similarity and group status, respectively, on triggered displaced aggression. In Experiment 3 we conceptually replicate these effects by manipulating target valence. Specifically, liked versus disliked persons might serve a moderating function that parallels that of attitude similarity and in-group/out-group status of a triggering person. Liked persons are less likely than disliked persons to be targeted for displaced aggression (e.g. Berkowitz & Holmes, 1960).

Experiment 3 also included a neutral control condition. This allowed us to investigate whether: (a) positive target attributes decrease aggression (as we hypothesize), (b) negative target attributes increase aggression, or (c) a combination of each occurs. Furthermore, in the context of a neutral condition, empirical evidence suggests a *positivity bias* in which people tend to approach others with positive intent and a pro-social attitude (e.g., Klar & Giladi, 1997; Sears, 1983; Wojciszke, Bryez, & Borkenau, 1993). Therefore, under conditions in which the target has not emitted a minor triggering act, we expected reactions toward the neutral target to parallel those elicited by the positive target. Thus, we expected non-provoking liked and neutral targets to produce little aggression. When confronted, instead, by a minor triggering action, the “largesse”

ordinarily extended to a neutral other can justifiably be abandoned. Therefore, under the *trigger conditions*, we expected the neutral target to elicit levels of triggered displaced aggression similar to those elicited by the negative target. Specifically, their neutral attributes will not reduce the effects of priming, cuing, and attributional distortion.

Finally, to demonstrate the robustness of the key findings from Experiments 1 and 2, Experiment 3 employed different operationalizations of: (a) the initial provocation, (b) the subsequent triggering event, and (c) the aggression measure.

It is important to reiterate that the purpose of this set of experiments is not merely to further demonstrate triggered displaced aggression. As indicated, our purpose is to examine the moderating effect of positive and negative attributes of a person who emits a minor triggering provocation. Therefore, Experiment 3 only partially replicates Experiments 1 and 2 in that it does not include no-provocation conditions. While important for demonstrating triggered displaced aggression, the absence of no-provocation conditions does not compromise our examination of the moderating effects of the valence of a person who emits a triggering action – positively, neutrally, or negatively valenced attributes.

All participants in Experiment 3 received an initial provocation. Then they obtained positive, neutral, or negative trait information that supposedly described the confederate's personality. Next, we manipulated the presence or absence of a triggering event. Finally, participants anonymously evaluated the target's qualifications for a coveted research position (viz. the measure of aggression).

Two main predictions were made. First, we expected to conceptually replicate the results of Experiments 1 and 2. Second, because of the *positivity bias*, in the absence of any triggering action we expected aggression toward neutral targets to parallel the low amounts displayed

against positive targets. Following a triggering event, however, we expected the aggression toward neutral targets to match that displayed against negative targets.

Method

Participants and Design

Participants were 54 undergraduate students (41 women and 13 men) who received course credit for their voluntary participation. The design was a 3 (Target Valence: Positive/Neutral/Negative) × 2 (Trigger: Present/Absent) between-subjects design under constant conditions of initial provocation. The resulting 6 cells each contained 9 participants.

Procedure

Participants were told that they would be engaged in two separate studies on the effects of distraction on problem solving. The first study would examine the effect of music on analytic problem solving ability. They were given 4 minutes to solve 15 difficult anagrams while loud music played in the background (as in Experiment 1). After scoring their answers, the experimenter told them that they scored much lower than a sample of engineering students and insulted them (as in Experiment 2).

They were then told that the Psychology Department had adopted a new policy for hiring paid research assistants whereby participants were to evaluate the performance of applicants for these positions. Thus, participants could intentionally harm applicants by giving them negative evaluations. It was explained that the faculty member overseeing this project regarded these evaluations as very important and urged participants to take their assignment seriously.

Under the guise of helping them form an *initial impression* of such an applicant, participants received an "actual" application form, with sensitive information like name, address,

and Social Security number blacked out. It was accompanied with an official letter, signed by a department faculty member, which stated that the background information material they would receive contained a summary of an applicant's score on the California Personality Inventory (CPI), and that the CPI information should not be discussed with anyone outside the laboratory.

Participants were told to spend 5 minutes reading this background information and then give their initial impressions of the applicant by responding to 7 items that were rated on 11-point scales that ranged from 1 (*strongly agree*) to 11 (*strongly disagree*), with a described midpoint of 4 in order to expand the negative range of the scale. The items asked whether the applicant seemed qualified for the paid position, would probably do a good job working with others, was likable, nice, friendly, possessed many positive qualities, and was a good person.

Valence manipulation. The applicant's CPI profile constituted the manipulation of target valence. Trait descriptors were selected using Anderson's (1968) trait ratings. The traits were selected as follows: (1) six traits were selected for each condition (i.e., positive, neutral, and negative); (2) traits chosen as neutral had an average value close to 3.0 (i.e., the midpoint of the scale); (3) the average values of the positive and negative traits were essentially equidistant from the scale midpoint; (4) to minimize suspicion in the positive and negative conditions, the positive list included one neutral trait and the negative list included two neutral traits. Using these criteria, the mean rating of traits in the positive valence condition (i.e., *mature*, *sincere*, *pleasant*, *understanding*, *reasonable*, and *self-satisfied*) was 4.83 (*SD* = 1.13) (with high scores indicating positivity). Traits selected for the neutral (i.e., *subtle*, *satirical*, *moralistic*, *headstrong*, *conventional*, and *self-satisfied*) and negative valence conditions (i.e., *humorless*, *superficial*, *ungrateful*, *boring*, *conventional*, and *self-satisfied*) had mean ratings of 2.98 (*SD* = 0.69) and 1.56 (*SD* = 0.81), respectively. All mean differences were significant, *p*s < .05

To assess the effectiveness of the valence manipulation, participants then gave their *initial impressions* of the research assistant using 7 items. They asked whether the applicant was qualified for the paid position, would probably do a good job working with others, was likable, nice, friendly, possessed many positive qualities, and was a good person.

Trigger procedure. After giving initial impressions of the applicant, participants were told that the second study investigated the distracting effects of attending simultaneously both to audio and visual cues. It was explained that the applicant they had just evaluated would now be asking them 15 trivia game questions on a videotape. Using the procedures we have used before (Pedersen et al., 2000, Study 1), a videotaped African-American male research assistant both stated aloud the trivia questions while displaying multiple-choice foils for each question. Participants were to correctly answer as many questions as possible. The experimenter then turned on the videotape, left, re-entered at the tape's conclusion, provided a sheet summarizing engineering students' average score on the trivia items, retrieved the participant's answers, and left to grade them.

Trigger manipulation. In the *trigger condition*, the videotaped assistant read the trivia questions too quickly, mispronounced words and names (e.g., Leonardo da Vinci was pronounced Leon de Vinsky), and mixed up the multiple-choice foils (e.g., reading question 9 while presenting the foils for question 10). Then, participants were told they did poorly by comparison with engineering students, but were not insulted about their performance. In the *no trigger condition*, the videotaped assistant read the questions slowly, made no pronunciation errors, and correctly matched the questions with the appropriate foils. In addition, participants were told that their score was about the same as that of the engineering students' average score.

Dependent measures. Next, participants completed the dependent measures. The first series of items consisted of five 11-point scales that constituted the primary measure of aggression — one assessing how strongly they recommend the research assistant for the paid assistantship position and four assessing their attitude toward the research assistant: liking, friendliness, competence, and intelligence. A second series of seven 11-point scales constituted the trigger manipulation check. On four items participants assessed the assistant's performance (i.e., read the questions slowly, spoke clearly, administered the questions efficiently, read the questions correctly) Three items assessed their emotional reaction to the assistant's performance (i.e., irritated, happy, and angered or upset).

To induce a perception of anonymity, participants were instructed to omit their name, student ID number, or other identifying information on their evaluation, seal it in an envelope, and deposit it in a locked slotted box. A funnel debriefing (with probe for suspicion) followed.

Results

Manipulation Checks

Valence. Participants gave their *initial impressions* of the research assistant using the 7 items described previously ($\alpha = .95$). An ANOVA applied to the composite scores revealed a valence effect, $F(2,51) = 46.48$, $p<.001$, $d = 2.22$. Dunnett's T3 post-hoc tests showed reliable differences among all pairwise comparisons (ps <.02). Participants in the positive valence condition had a favorable first impression of the research assistant ($M = 2.86$, $SD = 1.13$), those in the negative valence condition possessed an unfavorable first impression ($M = 6.99$, $SD = 1.65$), and the position of those in the neutral condition ($M = 4.02$, $SD = 1.13$) matched the scale midpoint.

Trigger. Seven 11-point scales, ranging from 1 (*strongly agree*) to 11 (*strongly disagree*), assessed the effectiveness of the trigger manipulation. The high anger portion of each scale was expanded, with the described midpoint being 8, for negatively worded items (i.e., *irritated, angered or upset*) and 4 for the positively worded items (i.e., read the questions slowly, spoke clearly, administered the questions efficiently, read the questions correctly). After reverse scoring positively worded items, the items were averaged to form a composite (α = .95). As expected, those in the trigger condition evaluated the research assistant's performance more negatively (M = 8.46, SD = 1.81) than those in the no trigger condition (M = 3.96, SD = 1.48), $t(52) = 10.04$, $p<.001$, d = 3.75. In addition, consistent with Experiment 2, participants did not differ in their affective response to a triggering event from positive, neutral, or negative targets, $F(2,24) = 1.32$, $p>.10$.

Aggression

To assess aggression toward the applicant, 5 items were averaged to form a composite score (viz. recommendation for the paid assistantship position and the evaluative ratings on *liking*, *friendliness*, *competence*, and *intelligence*) (α = .91). The 11-point scales ranged from 1 (*strongly agree*) to 11 (*strongly disagree*), with higher scores indicating higher levels of aggression. Again, the scales contained an expanded high aggression range with a described scale midpoint of 4. In a 2 × 3 ANOVA, both the main effect for trigger, $F(1,48) = 54.36$, $p<.001$, and the main effect for valence, $F(2,48) = 19.64$, $p<.001$, were qualified by the predicted trigger by valence interaction, $F(2,48) = 5.24$, $p<.01$ (see Figure 3).

Supporting our first hypothesis and replicating results of Experiments 1 and 2, for positive targets aggression did not differ as a function of trigger, $F(1,48) = 2.77$, $p>.10$, but the

trigger did increase aggression toward neutral and negative targets, $F(1,48) = 36.05$, $p<.001$ and $F(1,48) = 26.00$, $p<.001$, respectively. Also, in the *triggered* condition target valence yielded a simple effect, $F(2,48) = 21.19$, $p<.001$. For those who experienced a triggering event Dunnett's T3 post-hoc tests indicated that aggression toward *positive* targets differed from that elicited by both neutral and negative targets (both *p*s <.01), whereas aggression toward the latter two targets did not differ.

Supporting our hypothesis regarding the positivity bias, aggression displayed toward neutral and positive targets did not differ in the absence of a trigger, $F(1,16) = 1.01$, $p>.10$. When they had emitted a trigger, neutral targets received the same amount of aggression as negative targets. Therefore, the presence of a minor triggering event eliminated the impact of the positivity bias that, under conditions of no trigger, functioned to equate the levels of aggressive responding toward positive and neutral target.

Mediation analysis. Mediation analyses examined the relationship between manipulated target valence and aggression separately for non-triggered and triggered participants by using the causal steps method and tests of indirect effects (e.g., Baron & Kenny, 1986). We first examined the mediating role of the impression of the target for *non-triggered* participants. First, we regressed the displaced aggression measure on two separate dummy variables for positive and negative valence conditions (vs. the neutral condition). Results indicated that positive valence did not predict aggression, $\beta = -.19$, *ns*, but negative valence did, $\beta = .49$, $p<.02$. Second, the initial impression of the target was regressed on the positive and negative valence conditions (vs. the neutral condition). Positive valence did not predict the impression of the target, $\beta = -.09$, *ns.* This is consistent with the positivity bias wherein the positive and negative valence targets were

evaluated equally when participants were not exposed to the trigger. Negative valence, however, strongly predicted the initial impression of the target, $\beta = .76$, $p<.001$. This latter finding is consistent with research on impression formation demonstrating that negative information influences person perception more than positive or neutral information (Fiske, 1980). Third, the impression of the target predicted displaced aggression, $\beta = .72$, $p<.001$. Finally, when all three predictors were entered in the regression model simultaneously, the impression of the target remained a significant predictor of aggression, $\beta = .69$, $p<.01$, whereas the positive, $\beta = -.13$, *ns*, and negative valence conditions did not, $\beta = -.15$, *ns*. In addition, negative valence exerted an indirect effect on displaced aggression via impression of the target, $z = 4.07$, $p<.001$. Thus, among non-triggered participants, the impression of the target mediated the relationship between negative valence and displaced aggression.

We also tested this mediational model for *triggered* participants. First, when entered simultaneously, the positive valence condition (negatively) predicted aggression, $\beta = -.66$, $p<.001$, but the negative valence condition did not, $\beta = .13$, *ns*. These findings suggest that when triggered, positive information about the target can reduce aggression whereas negative or neutral information about the target has no effect. Second, both positive $\beta = -.38$, $p<.01$, and negative valence, $\beta = .58$, $p<.001$, predicted the initial impression of the target. Third, the impression of the target predicted displaced aggression, $\beta = .71$, $p<.001$. Finally, when all three predictors were entered simultaneously, the impression of the target, $\beta = .28$, $p<.05$, and the positive valence condition, $\beta = -.57$, $p<.001$, remained predictors of displaced aggression, whereas negative valence no longer predicted displaced aggression, $\beta = .14$, ns, suggesting partial mediation for

the impression of the target. Moreover, there was an indirect effect of target impression, $z = -2.80$, $p<.006$.

A second approach to examining mediation of the relationship between valence and aggression considers the participants' affective reaction to the triggering event. This variable warrants investigation for two reasons. First, because participants experienced the manipulation of valence prior to the trigger, its manipulation might differentially affect their reactions to the trigger, which in turn could influence the degree of displaced aggression. Second, previous research has shown that affective reactions to the triggering event can in fact mediate the aggression of previously provoked participants (Pedersen et al., 2000; Vasquez et al., 2005). There was no evidence of mediation, however, because both positive, $\beta = -.33$, *ns*, and negative valence, $\beta = -.04$, *ns*, conditions failed to predict affective reactions to the triggering event. Moreover, participants' affective response to the triggering event did not vary as a function of target valence, $F(2,24) = 1.32$, *ns*. Although equally angered by the trigger, less aggression was displayed towards positive relative to both neutral and negative targets (see Figure 3). Finally, additional regression analyses indicate that although the affective response to the triggering event predicted the aggression in the neutral and negative conditions, $R^2 = .32$, $F(1,16) = 7.48$, $p<.02$, it did not predict aggression in the positive target condition, $R^2 = .05$, $F(1,7) = 0.36$, *ns*.

Discussion

We confirmed both major predictions in Experiment 3. First, in the absence of a triggering event, the positivity bias ordinarily exhibited toward neutral others appeared to reduce aggressive responding toward neutral targets. The presence of a triggering event, however, eliminated this effect, causing neutral targets to receive as much aggression as disliked targets.

Second, paralleling the findings of Experiments 1 and 2, the trigger moderated aggression towards valenced targets. That is, although the triggering action of neutral and disliked targets elicited different levels of displaced aggression relative to the corresponding no trigger condition, no corresponding difference between trigger conditions was obtained for positive targets. Thus, positive valence appears to serve a buffering function against the effect of a subsequent minor triggering event on the level of triggered displaced aggression.

Furthermore, the difference between positive and negative valenced targets is explained by a *reduction* of aggression toward positive targets (relative to a neutral control condition) and not an augmentation of aggression toward a negatively valenced target.

The relative reduction in aggression by triggered participants toward a positively valenced target, compared to a neutral or negatively valenced target, is consistent with research on the primacy of first impressions (e.g., Asch, 1946). In addition, when confronted with inconsistent information, as when a positive target emits a triggering action, negative behavior is consistently attributed to situational factors and therefore more easily dismissed (Kulik, 1983).

Finally, the results of separate mediation analyses for non-triggered and triggered participants differed. Among non-triggered participants, the impression of the target mediated the relationship between manipulated negative valence and displaced aggression. Specifically, the negative valence manipulation led to more unfavorable impressions of the target, which in turn increased displaced aggression. For triggered participants, manipulated positive valence produced more favorable impressions of the target, which in turn decreased aggression, thus demonstrating the "buffering" effect of positive target valence on displaced aggression.

Turning to affective reactions to the trigger, evidence for mediation was not obtained because variation of target valence did not produce differential affective responses to the

triggering event. Triggered participants were equally angry in response to the trigger, regardless of target valence. As Figure 3 and the previously reported analyses show, however, under trigger conditions positive targets received less aggression than either neutral or negative targets (viz. the "buffering" effect of positive target attributes). In addition, negative affect elicited by the trigger did not predict aggression levels for positive targets, whereas it did predict aggression levels for neutral and negative targets.

General Discussion

The goal of the current set of experiments was twofold. First, this research provided the first evidence that stable *target attributes* moderate triggered displaced aggression. Specifically, positive target attributes (i.e., attitude similarity, in-group membership, positive target valence) reduce the impact of a triggering event on subsequent aggression.

The second goal was to test aspects of cognitive neoassociation theory (Berkowitz, 1993). Consistent with this theory, Experiments 2 and 3 showed that triggering events produce equal amounts of negative affect irrespective of variation in the valence of their source (that is, the attributes of the person who emits the triggering action). Second, although variation in the valence of triggering persons does not affect the amount of negative affect that their triggering acts generate when preceded by an initial provocation, it does differentially impact aggressive behavior towards them (see Figures 1, 2, and 3).

Given the importance that cognitive neo-association theory places on negative affect as the determinant of aggression, what can account for the seeming discrepancy between the affect and aggression measures? Although the current research does not have the type of data that permits definitive conclusions, the results are at least consistent with an attributional perspective. Positive attribute targets violate expectations. Specifically, when an attitude similar/in-

group/liked target emits an aversive triggering action it is affectively inconsistent with the initial positive impression of that target. Behavior that disconfirms a prior expectation produces attempts to explain it (e.g., Hastie, 1984). That is, under such circumstances, attributions become important. Attribution theory proposes that levels of retaliatory aggression are lower when a provocation is seen as unintentional, unforeseeable, uncontrollable, or socially acceptable (e.g., Ferguson & Rule, 1983). Moreover, preexisting knowledge about the target is likely to impact attributions regarding a subsequent triggering act in that such an action is more likely to be viewed as intentional and foreseeable when committed by a disliked target. When a triggering act is emitted, instead, by a person with positive attributes, it is likely to be viewed as unintentional or as due to situational circumstances (Ferguson & Rule, 1983). Thus, under circumstances in which a target person with positive attributes emits a triggering action, the resulting reduction of retaliatory aggression is likely to be due to attributional processes that mitigates the perceived culpability of the target for his or her harmful action (see Pedersen, 2006).

Furthermore, we suspect that from a temporal perspective the positive attitude toward the target was established first and became consolidated (Miller & Campbell, 1959). Thus, cognitive adjustment and integration is likely to be achieved by altering the meaning of the later occurring triggering event. Were the positive attribute information about the character of the target person presented after the occurrence of the triggering event, cognitive adjustments are more likely to be imposed on the information concerning the target person's attributes, leading to a discounting of it or a reduction of its positivity. We think, however, that the temporal positioning that we employed is the one with greater ecological validity.

The purpose of this article was to assess factors that moderate triggered displaced aggression. Specifically, we manipulated the valence of stable personal attributes of people who engage in minor triggering events to examine their effects on displaced aggression. The findings show that positive target attributes reduce aggressive responding.

Taken together, our findings are consistent with cognitive neossociation theory (Berkowitz, 1989, 1990, 1993), in which negative affect activates associated thoughts, memories, feelings, motor responses, and physiological reactions. The activation of any one component activates the others.

Conclusion

Our previous research established that the occurrence of a minor triggering event only augments aggressive responding when it is preceded by a provocation (Pedersen, et al., 2000), and that ruminating about the provocation makes people even more aggressive (Bushman, Bonacci, Pedersen, Vasquez, & Miller, 2005). The current research is important because it demonstrates the role of stable target characteristics in moderating displaced aggression. Similar attitude (Experiment 1), in-group (Experiment 2), and liked (Experiment 3) targets that emit a minor triggering event are less likely to be attacked. This finding has important implications in both inter-group and interpersonal settings in that it can help predict seemingly disproportionate aggressive actions in response to trivial provocations. If a dog barks and its owner is angry, the dog is in trouble if it is ugly or smells bad.

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Notes

[1]Position on abortion did not impact levels of displaced aggression, either alone or interacting with other factors.

[2]The insulting comments were apparently effective. For example, one participant said, "I am following instructions, God-dammit!"

Figure Captions

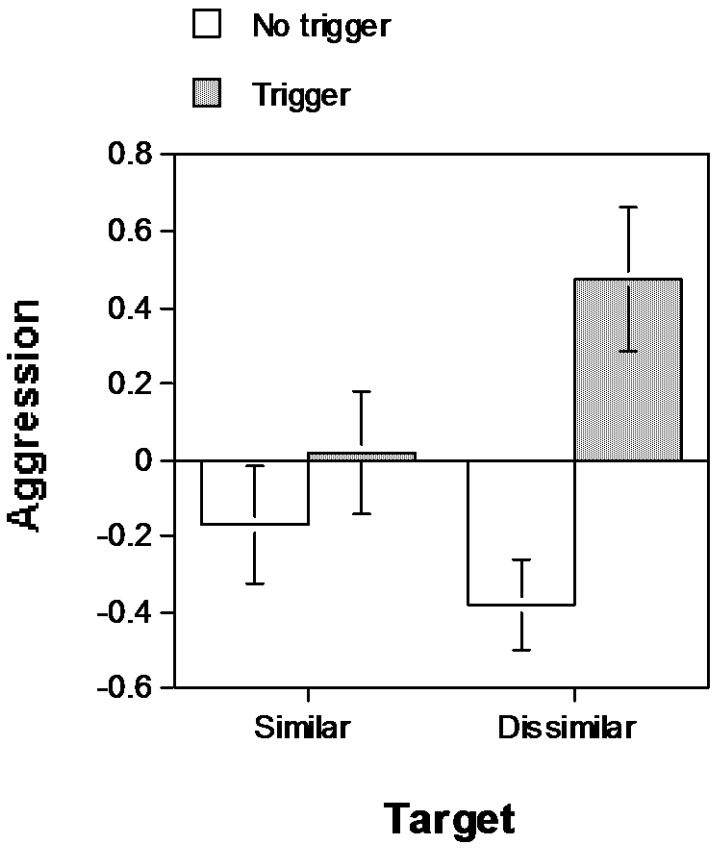
Figure 1a. Effects of attitude similarity and trigger on displaced aggression for *provoked* participants in Experiment 1. Aggression is the level and duration of noise (standardized and summed) that participants gave the "other participant" on trial 1 of the competitive reaction time task. Positive scores reflect more aggression. Capped vertical bars denote 1 SE.

Figure 1b. Effects of attitude similarity and trigger on displaced aggression for *unprovoked* participants in Experiment 1. Aggression is the level and duration of noise (standardized and summed) that participants gave the "other participant" on trial 1 of the competitive reaction time task. Positive scores reflect more aggression. Capped vertical bars denote 1 *SE*.

Figure 2a. Effects of group membership and trigger on displaced aggression for *provoked* participants in Experiment 2. Aggression is the number of seconds the "other participant" had to hold his or her hand in painfully cold water, as determined by the participant. Capped vertical bars denote 1 *SE*.

Figure 2b. Effects of group membership and trigger on displaced aggression for *unprovoked* participants in Experiment 2. Aggression is the number of seconds the "other participant" had to hold his or her hand in painfully cold water, as determined by the participant. Capped vertical bars denote 1 *SE*.

Figure 3. Effects of target valence and trigger on displaced aggression for provoked participants. Aggression is the participant's evaluation of an applicant seeking a highly coveted research position. Higher scores reflect more negative evaluations. Capped vertical bars denote 1 *SE*. The comparison between trigger and no trigger for the positive valence condition is not statistically significant.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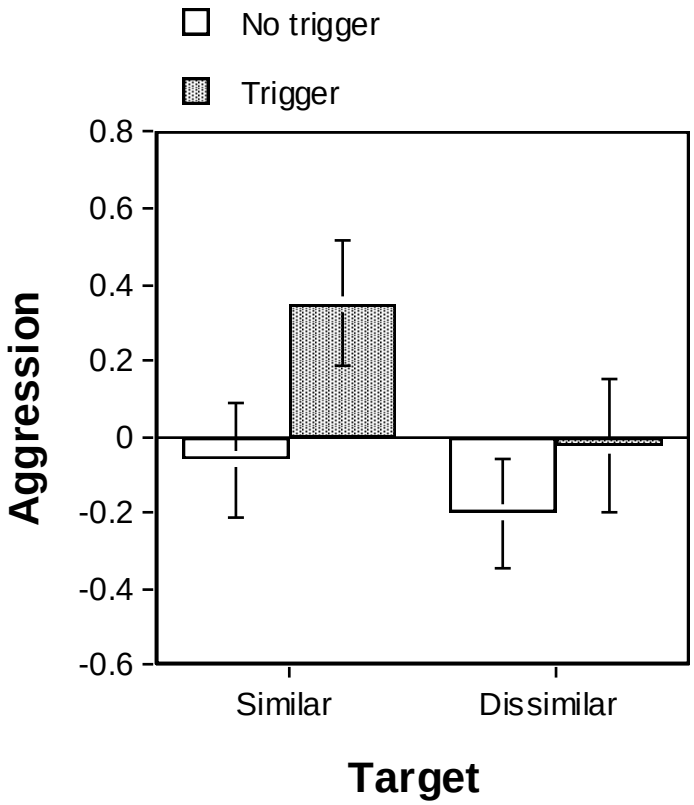
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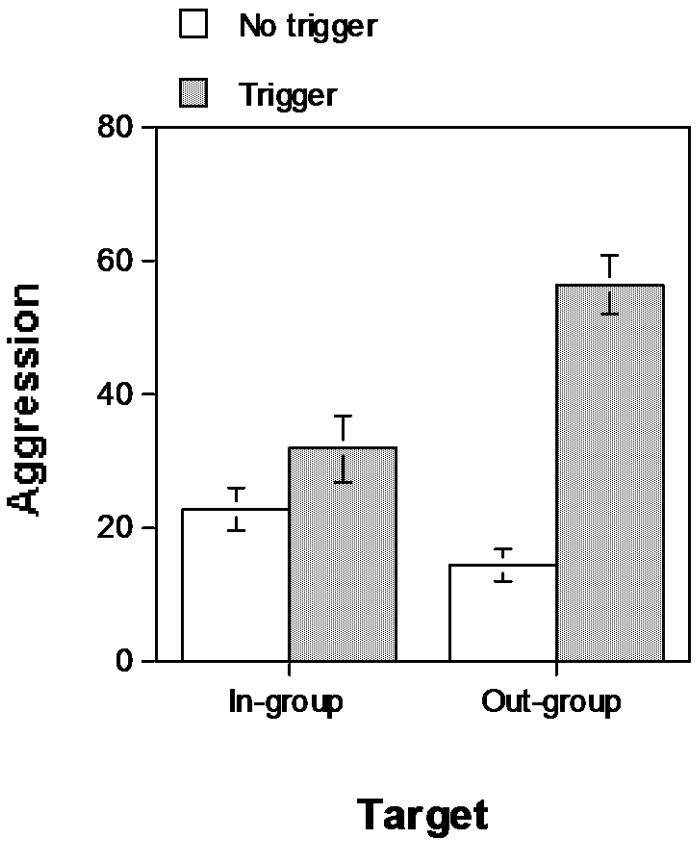
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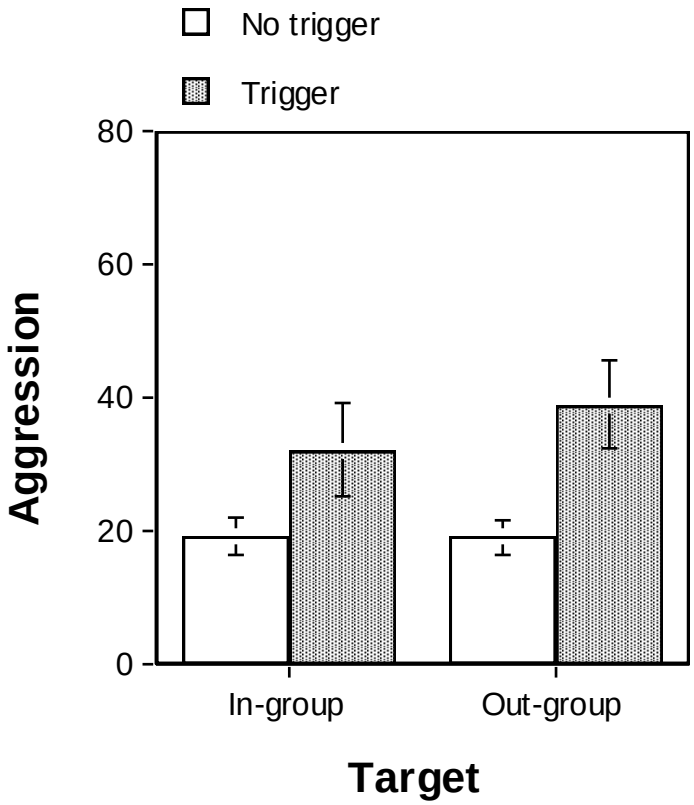
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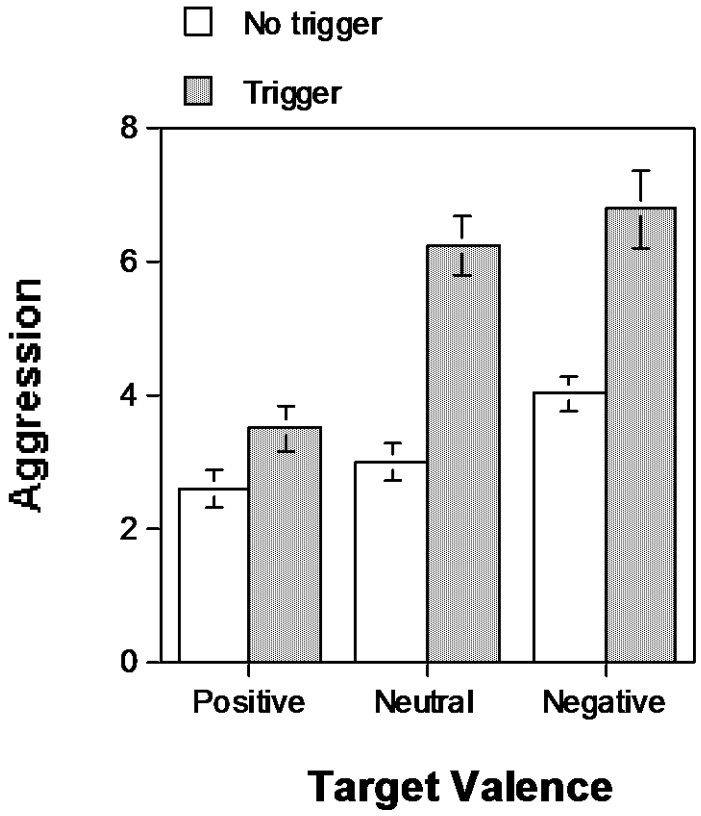
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