

Displaced Aggression Is Alive and Well

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Displaced aggression refers to retaliatory aggression that is misdirected from an initial source of provocation and turned instead upon an innocent other (Denson, Pedersen, & Miller, 2006). For example, a worker berated by his superior does not lash out at him (fearing losing his job) but instead, when arriving home, kicks his dog. Potential explanations for such displacement are unavailability of the provocateur, an intangible source of provocation, fear of retaliation, or inhibition elicited by others' presence (Marcus-Newhall, Pedersen, Carlson, & Miller, 2000). Until recently, experimental examinations of displaced aggression have been relatively rare. Although Dollard, Doob, Miller, Mowrer, and Sears's (1939) work on the frustration-aggression hypothesis produced a brief flurry of research on it, after 1950 interest sharply waned.

Meta-analysis of the displaced aggression literature, however, shows a reliably robust mean effect size (+0.54; Marcus-Newhall et al., 2000). Although meta-analytic results are intrinsically correlational, because this meta-analysis solely examined experimental studies, its results confirm a causal relationship between provocation and displaced aggression. Additional variables moderated its magnitude: intensity of provocation, similarity between provocateur and target, and negativity of the displaced aggression setting (Marcus-Newhall et al., 2000). This last variable has elicited the greatest research interest, launching investigations of "triggered displaced aggression" (TDA).

Triggered Displaced Aggression

Aggressive behavior, like most other social interactions, typically appears to be governed by a norm of reciprocity, as enshrined in the biblical dictate of an "Eye for eye, tooth for tooth, hand for hand, foot for foot" (Exodus 21:24). This norm is referred to as the matching principle (Axelrod, 1984). In TDA, the displacement target provides a trivial second provocation—a trigger. Based on the matching principle, such minor incidents should warrant a corresponding minimal response. Contrary to this expectation, and in accord with Dollard's

(1938) theorizing, when preceded by a strong provocation in a context that precludes retaliation, minor triggers can elicit a magnitude of retaliatory response that noticeably exceeds that predicted by the tit-for-tat matching rule (Axelrod, 1984). Like displaced aggression, TDA is well illustrated by the worker–dog anecdote. One key feature is that minor triggers (e.g., the excited dog who jumps on its owner) elicit no aggression without a preceding provocation (Miller, Pedersen, Earleywine, & Pollock, 2003). Instead, the jumping or barking dog will likely be seen as offering a friendly greeting. Importantly, TDA can explain many real-world instances of aggression that deviate from Axelrod’s matching rule (e.g., spousal abuse, child abuse, and road rage; Miller et al., 2003).

Pedersen, Gonzales, and Miller (2000) provided the first experimentally based proof of TDA. Importantly, they also showed that, as predicted, TDA exceeds the matching rule. One study used an anagram task to manipulate provocation. Under provocation, an exasperated and irritated experimenter stated that the participant’s performance on a difficult anagram task was well below average and a waste of the experimenter’s time. In the nonprovocation condition, participants completed an easy anagram task and were politely told their performance was average. Next, triggered participants responded to prerecorded video questions that were mispronounced, intermixed and jumbled with foils of adjacent questions, and read too quickly. Nontriggered participants heard questions administered slowly and clearly. The results showed a provocation–trigger interaction: Trigger presence or absence left aggressiveness of unprovoked individuals unaffected; only the provocation–trigger combination augmented aggressiveness. Additionally, the provocation–trigger combination produced a level of TDA that exceeded the additive combination of the separate aggression-eliciting effects of the provocation and trigger. Multiple other studies by this research group provide construct validity for TDA, confirming this interaction while showing no instance of displaced aggression in the absence of a trigger. Subsequent studies have examined factors that moderate and mediate it.

Mediators and Moderators of Triggered Displaced Aggression

Mediation

Rumination

For most people, anger and arousal elicited by a provocation are short lived and dissipate within 10–15 minutes (Tyson, 1998). Experimental TDA paradigms typically use 10-minute temporal gaps between the initial provocation and the aggression opportunity. Describing their database, Marcus-Newhall et al. (2000) saw a short average gap that rarely exceeded the 15- or 20-minute duration that affective arousal from the provocation will endure. Instances of real-world displaced and triggered displaced aggression, however, may include gaps ranging from minutes to hours to days. Rumination about a provocation can explain why TDA can occur long after an initial provocation (Miller et al., 2003).

Bushman, Bonacci, Pedersen, Vasquez, and Miller (2005) assessed rumination’s impact on aggression using provocation–trigger gaps exceeding 25 minutes, thereby precluding any contribution from lingering arousal. Across three studies, they also varied operationalizations of provocation, trigger, aggression measure, and provocation–trigger gap duration. Study 1 provoked all participants via Pedersen et al.’s (2000) procedure. A writing task then manipulated rumination: Under rumination, participants responded to phrases that initiated ruminative thought (e.g., what kind of person they were); under distraction, they wrote about external topics (e.g., layout of their post office, clouds in the sky); and, in a positive mood condition,

they wrote about something that had made them happy. Then, mirroring the video-presented triggering questions of Pedersen et al. (2000), half of each group received a minor triggering provocation. The negativity of each participant's opinion as to whether the undergraduate video-questioning experimenter should receive a highly-sought-after paid assistantship position assessed aggression. Rumination increased displaced aggression only among those triggered. Under positive mood and distraction, displaced aggression was unaffected by the presence or absence of the trigger. Similar results appeared across all three studies, even with an 8-hour provocation–trigger interval. In sum, ruminating about a provocation increases a trigger's aggression-augmenting effect.

Examination of rumination effects in real-world situations, such as those investigating its link to criminal behavior, further emphasizes its importance. Vasquez, Osman, and Wood (2012) showed that gang affiliation (ages 13–16) augments both rumination about provocations and displacing aggression toward various types of targets—even after controlling for trait aggressiveness (see below). These findings are important in that the US National Gang Intelligence Center (2011) finds gangs to be responsible for 48% of violent US crime.

Types of rumination

Rumination can vary in type. Provocation elicits provocation-focused rumination (Denson et al., 2006)—thought about the provocateur, the specific provocation, and retaliation. Alternatively, one can engage in self-focused rumination (Lyubomirsky & Nolen-Hoeksema, 1995)—inward thought and focus on one's faults and emotions.

Both types of rumination augment aggressive behavior (Pedersen et al., 2011). Study 1 again used Pedersen et al.'s (2000) procedure to provoke all participants. Under provocation-focused rumination, participants next wrote about their experiences thus far in the experiment (e.g., feelings about interactions with others in the study). Under self-focused rumination, they responded to internally focused items (e.g., what kind of person they were). In the distraction condition, they wrote about their college campus layout. Then, a word completion task assessed cognitions relevant to the general aggression model (Anderson & Bushman, 2002). It contained three types of words: aggressive action (e.g., hit), aggression-related affect (e.g., mad), and arousal (e.g., lively). Relative to distraction, both self-focused and provocation-focused rumination elicited greater accessibility of aggression-related affect cognitions. In addition, provocation-focused rumination increased accessibility of aggressive actions whereas self-focused rumination increased accessibility of arousal cognitions.

Mediation of rumination effects

To assess whether a particular variable mediates a lawful relationship, most social–psychological research relies on correlational procedures that examine the total, direct, and indirect effects of a causal variable (Hayes, 2009). A more powerful approach to assessing mediation, however, directly manipulates the postulated mediating variable. As noted, Bushman et al. (2005) experimentally manipulated rumination, thereby establishing its meditational role in TDA effects. Moreover, using correlational procedures, they also assessed more specific processes that underlie rumination's mediating effect. Specifically, they showed that negative reactions to the trigger mediated the heightened aggression seen among provoked participants who were both induced to ruminate and subsequently triggered.

Pedersen et al. (2011), too, examined microprocesses underlying rumination's meditational role in amplifying TDA. In examining individuals' physiological response to various forms of rumination, as well as specific mechanisms involved in its aggression-augmenting effects, they

found higher systolic blood pressure under provocation-focused rumination by comparison with self-focused rumination, distraction, and negative event conditions (Study 2). Moreover, angry affect partially mediated the aggression-augmenting effect of both types of rumination. Last, the impact of self-focused rumination on aggression was partially mediated by self-critical negative affect (Study 3).

These studies not only provide strong evidence that rumination mediates TDA but also illustrate the roles of the more molecular mechanisms that underlie its two types.

Moderation

Trait displaced aggression

Most aggression research focuses on both situational and personality factors that impact direct aggression (i.e., retaliating against a provocateur; Anderson & Bushman, 2002). Such research, however, is silent about how individual differences in the propensity to displace aggression affect various aggressive behaviors.

Denson et al. (2006) addressed this lacuna by developing a personality measure of the *propensity to displace aggression*. They postulated that those high in the propensity to displace aggression are more likely to (1) inhibit any direct aggression toward the provocateur; (2) subsequently ruminate about the provocation, hold a grudge, and plan retaliation; and (3) thereby be more likely to displace aggression. Those high in trait displaced aggression exhibit maladaptive aggressive behaviors, including self-reported intimate partner violence and road rage (Denson et al., 2006). Moreover, Denson, Pedersen, Ronquillo, and Miller's (2008) examination of trait displaced aggression shows higher levels to be associated with decreased life satisfaction, increased stress, and more numerous negative somatic symptoms. Interestingly, higher levels were more prevalent among drug users (as indicated by responses to the question "Have you used other illegal drugs in the past weekend?") and, more specifically (Roberts, Pedersen, & Fisher, 2016), to use of crack, marijuana, and cocaine and to violent but not non-violent crime—a relationship mediated by impulsivity.

These studies show that, in addition to the well-established moderating effects of stable individual differences on direct aggression, personality differences in propensity to displace aggression moderate many aggressive and antisocial behaviors.

Alcohol intoxication

In much of the world, acute alcohol consumption is implicated in 35–60% of violent crime. Population-based research shows that alcohol facilitates homicide, sexual assault, intimate partner violence, and child abuse (Foran & O'Leary, 2008; Hoaken & Stewart, 2003). Meta-analyses of placebo-controlled laboratory experiments consistently reveal small-to-moderate effects of acute alcohol consumption on aggressive behavior (Ito, Miller, & Pollock, 1996). Thus, across many situations, alcohol intoxication reliably augments aggression.

Four placebo-controlled experiments have examined the effects of alcohol on TDA. In Aviles, Earleywine, Pollock, Stratton, and Miller (2005), participants consumed either an alcohol (.04 to .06 breath alcohol concentrations) or placebo beverage. Then, using Pedersen et al.'s (2000) procedure, all were provoked. Next, half were mildly triggered by an incompetent confederate and half exposed to that same confederate behaving competently. Ratings of the confederate's suitability for a coveted paid research assistant position assessed aggression. The results in the placebo group replicated standard TDA effects. Alcohol ingestion increased their magnitude.

Denson, Aviles et al. (2008) examined alcohol-induced attentional changes and TDA. Alcohol myopia theory argues that alcohol directs attention toward salient provocative cues and away from less salient inhibitory cues (Giancola, Josephs, Parrott, & Duke, 2010). Participants consumed either alcohol or a placebo (mean breath alcohol concentration = .06). All were then provoked. Next, they listed traits they thought made a great astronaut and ostensibly exchanged their list with another (nonexistent) participant for feedback. The salience of the trigger was then manipulated to assess the effects of alcohol myopia. Under low salience, the triggering statement was embedded in the participant's partner's evaluative paragraph, written entirely in blue ink (viz. "The performance was not great and I think the other person really could do better"). Under high salience, participants received the same blue-ink paragraph, but the same annoying comment was spatially separated, written in red ink, and circled. Then, to assess TDA, participants specified a duration for which the triggering person must submerge their hand in ice water (ostensibly as a physical distraction for the next task). Supporting alcohol myopia theory, TDA of sober participants was unaffected by trigger salience. Intoxicated participants, however, emitted considerably more TDA under high (red-inked) versus low (embedded, all blue) trigger salience. Thus, only intoxication yielded differential TDA as a consequence of cue salience.

As noted, rumination promotes TDA long after an initial provocation (Bushman et al., 2005). Two additional experiments have examined alcohol's moderation of rumination-augmented TDA (Denson et al., 2011; Denson, White, & Warburton, 2009). In the first, participants received alcohol or a placebo (breath alcohol concentrations = .053 to .067). Then, after provocation via the anagram task, they engaged in a 30-minute self-focused rumination or a distraction task. Next, participants were either triggered or not. TDA was assessed with the ice-water hand-submersion procedure. The results again showed that rumination augmented displaced aggression only among those triggered. More importantly here, intoxication augmented this effect.

Denson et al. (2009) further examined alcohol and rumination effects on TDA (peak breath alcohol concentrations = .07 to .08). After provocation (Pedersen et al., 2000), rather than manipulating self-focused rumination, participants either engaged in provocation-focused rumination or were distracted. All were then triggered by mildly annoying feedback about a video speech they were induced to deliver to a fictitious partner. Aggression was assessed via participants' specification of type and amount of hot sauce (vs. other nonspicy condiments) to be consumed by their partner—who ostensibly hated hot sauce. Again, alcohol and rumination independently augmented TDA. Furthermore, individual difference moderators of alcohol and rumination-induced TDA (viz. trait displaced aggression [Denson et al., 2006] and psychopathy) showed that alcohol ingestion augmented TDA among those high in trait displaced aggression, whereas rumination augmented TDA among those high in psychopathy.

In sum, these experiments show that alcohol ingestion and rumination increase the intensity of TDA, just as they increase other forms of aggressive behavior. Furthermore, alcohol-induced TDA is augmented by highly salient triggers and among people dispositionally prone to displacing aggression.

Public versus private settings and provocation intensity

Marcus-Newhall et al. (2000) speculated that an audience might inhibit displaced aggression. Contrarily, Vasquez et al. (2013) presented the first evidence that public (vs. private) provocations not only increase TDA but do so by augmenting a provocation's perceived intensity. Moreover, this audience effect was shown to be independent of face-saving motivation.

Following a public or private provocation, Study 1 participants were induced to ruminate or were distracted for 20 minutes. They then could aggress against another person who either acted neutrally or was mildly annoying (triggering). Public, compared with private, provocation augmented the differentially greater displaced aggression of those induced to ruminate versus those distracted prior to being triggered. Study 2 replicated these findings and confirmed that public provocations are perceived as more intense. Both Study 3 and Study 4 directly manipulated provocation intensity and showed that it mediated the moderating effect of public versus private provocation found in Study 1. The greater perceived intensity of public provocation increased participants' reactivity to a trigger, in turn augmenting TDA.

Cognitive load

Cognitive load refers to the mental difficulty of a task (Paas, Tuovinen, Tabbers, & Van Gerven, 2003). High levels of it affect information processing, diminishing mental resources available for other simultaneous tasks. In investigating how cognitive load impacts TDA, Vasquez (2009) showed that high load increased aggression only when a trigger was highly salient. He argued that those under high load only processed the most salient environmental cues (e.g., highly salient triggers). High load produced more negative affective reactions to a salient trigger, which in turn augmented TDA. Vasquez and Howard-Field (in press) showed that, among participants both provoked and triggered, cognitive load moderated the ability of inhibitory cues to diminish aggression. Specifically, under low load, inhibiting cues reduced TDA. Those same cues failed to reduce aggression under high load.

In summary, these studies show that high cognitive loads (1) constrict attentional focus, only allowing the processing of highly salient environmental cues, and (2) reduce processing of relevant information. The former increases TDA when the most salient environmental cues are aggression eliciting, whereas the latter diminishes the effectiveness of cues that normally reduce aggression.

Other Moderators of TDA

It has been found that TDA is also moderated by stable target attributes such as attitude similarity, target valence, and ingroup–outgroup status (Pedersen, Bushman, Vasquez, & Miller, 2008). Trigger intensity moderates TDA such that a combination of a provocation and a trigger only interact when a trigger is of minor, as opposed to high, intensity (Vasquez, Denson, Pedersen, Stenstrom, & Miller, 2005).

Three Other Paradigms Seemingly Related to the TDA Paradigm

Social Exclusion and TDA Paradigms: Potentially Isomorphic

Social exclusion research shares conceptual similarities with standard TDA paradigms in that ostracism is one specific type of provocation, among many alternatives, that can be used in TDA research. As such, it can be used to study direct aggression, displaced aggression, TDA, and other dependent variables.

In a typical ostracism experiment, participants experience either social inclusion or exclusion from one or more individuals. Researchers frequently use an online ball-tossing game called *Cyberball*, wherein a participant and two fictitious players repeatedly toss a ball (Williams,

Cheung, & Choi, 2000). DeBono and Muraven (2014) allowed participants in the exclusion condition to receive the ball only twice, whereas each other player passed and received it 28 times. In the inclusion condition, all received the ball 10 times. As in TDA studies, social exclusion studies routinely employ well-validated measures of aggression, including the amount of hot sauce that a target who hates spicy foods must consume, and duration and intensity of painful white noise blasts in the context of a competitive reaction-time game (DeWall, Twenge, Bushman, Im, & Williams, 2010). Such studies routinely evidence displaced aggression. Although no ostracism studies examine the effect of triggers, as indicated, no conceptual or procedural impediments preclude doing so.

Although social ostracism can elicit direct aggression (Ayduk, Gyurak, & Luerssen, 2008; DeBono & Muraven, 2014), many studies of it examine its effects on displaced aggression. In both social exclusion and TDA research, provocation produces similar emotions (e.g., anger; Smart Richman & Leary, 2009), and both focus on aggression toward individuals who were not the source of the provocation (Twenge & Campbell, 2003). Yet, as noted, in research by Miller and his colleagues, the TDA paradigm uniformly fails to evidence displaced aggression in the absence of a trigger. By contrast, social exclusion research, though never employing triggers, routinely elicits displaced aggression. Currently, there is no explanation for this discrepancy.

Leary, Twenge, and Quinlivan (2006) discuss nine possible explanations of why social exclusion elicits aggression. It causes pain, frustration, threatened self-esteem, disinhibition, and loss of self-control. Additionally, its ensuing aggression provides retribution, improves mood, exerts social influence, and reestablishes efficacy and control. Leary et al. (2006) conclude that “most of these explanations have both conceptual and empirical support, and the current literature is inadequate to eliminate any of them. At present, it seems likely that rejection may lead to aggression via a number of independent routes, which may explain why the effect is so robust” (p. 124). Thus, one potential explanation of the discrepancy between social exclusion and TDA is the large number of possible processes (mediators) proposed by Leary et al. as underlying ostracism. This explanation, however, is challenged by the likelihood that most, if not all, of Leary et al.’s nine explanations equally apply to the provocations used in TDA research.

The desire to be connected with others is fundamental to humans and likely has evolutionary roots (DeWall & Bushman, 2011). Thus, a more likely explanation of these contradictory social exclusion and TDA findings is that ostracism is more painful than the typical provocations used in TDA research (e.g., negative feedback on participants’ anagram task performance).

Somewhat related to differences in the painfulness of the respective provocations used in social exclusion and TDA paradigms is the effect of the typical difference in the temporal gap that separates their manipulations of social exclusion or provocation and the opportunity to displace aggression. A typical social exclusion study manipulates ostracism and, following completion of a few mood items (e.g., the Positive and Negative Affect Schedule; Watson, Clark, & Tellegen, 1988), immediately assesses displaced aggression. In our examination of a convenience sample of social exclusion studies, the temporal gap between social rejection and the aggression measure is always very short (estimated at 3–5 minutes). This very short gap likely allows strong contributions from arousal, having provided little time for its dissipation. By contrast, the average 10-minute gap in TDA studies suggests less residual aggression-inducing arousal, perhaps explaining the absence of displaced aggression therein. Marcus-Newhall et al.’s (2000) meta-analysis, however, challenges both the arousal and pain intensity accounts for this TDA anomaly. Like ostracism results, it solidly evidenced displaced

aggression. Yet, its average time gap exceeded (i.e., had less residual arousal than) that of TDA studies, and its provocation intensities paralleled those of TDA studies (i.e., were lower than those in ostracism research). Resolution of this TDA anomaly must await more research.

Vicarious Retribution: Similar yet Distinct

Vicarious retribution is a more abstract form of TDA in that neither a perpetrator nor a triggering target is directly involved in a displaced retaliatory aggressive response (Lickel, Miller, Stenstrom, Denson, & Schmader, 2006; Stenstrom, Lickel, Denson, & Miller, 2008). It refers to instances of aggression against an outgroup member where the actor or other ingroup members were never directly harmed by either that or another outgroup member (Lickel et al., 2006).

For example, on September 15, 2001, Balbir Singh Sodhi was killed while planting flowers at his Mesa, Arizona, gas station. Earlier that day, to honor victims of the 9/11 attacks, he had purchased from Costco an American flag and flowers to display at his gas station. Later, while planting the flowers, a vehicle approached and an occupant shot him (Saldef.org, 2011). His murderer was neither directly harmed by the 9/11 attacks nor did he have any relatives who were directly harmed. Ultimately, he claimed that he had wanted to “kill a Muslim” and chose Sodhi because he had a beard and wore a turban (British Broadcasting Corporation, 2003; Saldef.org, 2011). Sodhi was an Indian immigrant. Vicarious retribution is widespread, as seen, for instance, between Catholics and Protestants in Northern Ireland beginning in the late 1960s and still continuing today (Cairns & Darby, 1998); in the constant feuding between the Blood and Crip gangs in Los Angeles County (Decker & Curry, 2002); and in the enduring conflicts between India and Pakistan (Kocs, 1995).

What causes an individual to seek retribution for an event in which neither they nor the target of their retribution was involved? Some groups, such as gangs, cannot control provocateurs by appealing to external centralized and coercive powers such as police forces or governments. Consequently, they seek retribution, often aiming it beyond the initial provocateur to include other outgroup members (Vasquez, Lickel, & Hennigan, 2009). Other outgroup members may be easier targets, being less formidable and more readily available than the original provocateur (Cadinu & Reggiori, 2002). Thus, although Sodhi was attacked because he appeared to be an outgroup member, he was perhaps also attacked because he was unarmed and was within reach, whereas the 9/11 attackers were neither, all being dead.

Other factors, such as ingroup identification, influence the likelihood of vicarious retribution. Social identity theory proposes that individuals evaluate themselves within the context of their ingroup (Tajfel, 1974, 1982; Stenstrom et al., 2008), making ingroup identification central to one’s self-worth, self-esteem, and self-concept. Thus, a positive group identity is key to an overall positive self-identity (Stenstrom et al., 2008). When ingroup membership more strongly contributes to one’s self-concept, it augments ingroup favoritism (Doosje, Spears, & Koomen, 1995). Threats to one’s ingroup become self-threats because ingroup welfare strongly affects one’s well-being (Stenstrom et al., 2008). Consequently, strong ingroup identification augments retribution because harm to any ingroup member threatens all ingroup members, including oneself.

Although ingroup identification explains retribution against an attacker of other ingroup members, it does not explain retribution against outgroup members uninvolved in the initial provocation. Stenstrom et al. (2008) posited that outgroup entitativity plays a key role in motivating retribution against nonprovoking outgroup members. Entitativity, a term coined by D. T. Campbell (1958), refers to group cohesiveness. It reflects how tightly knit the

outgroup is perceived to be—the degree to which it is perceived as a unified, coherent unit (Campbell, 1958; Crump, Hamilton, Sherman, Lickel, & Thakkar, 2009). Stenstrom et al. (2008) found that individuals who both identified highly with their ingroup and saw the outgroup as highly entitative more strongly exhibited vicarious retribution.

In sum, although vicarious retribution appears to be a more generalized or symbolic form of TDA, vicarious retribution and TDA differ in ways related to their respective actors, targets, and, most particularly, some of their underlying processes. Consequently, though manifestly similar in some respects, the two paradigms likely possess discriminative construct validity.

Excitation Transfer Theory: Seemingly Similar but Conceptually Distinct

There are also conceptual similarities between TDA and excitation transfer (Zillmann, 1971). In a typical excitation paradigm, presence or absence of an initial provocation (e.g., an insult) is followed by a manipulation of arousal, using noise, an erotic film, or physical exercise. This manipulated arousal corresponds to a Time 2 triggering provocation within TDA research. Notwithstanding occasional exceptions (Jaffe, Malamuth, Feingold, & Feshbach, 1974), excitation transfer results (like those of TDA) show that such a subsequent arousal (a trigger) only increases aggression when preceded by an initial provocation.

Despite this manifest similarity, key empirical and conceptual differences separate these paradigms. First, excitation transfer research uniformly examines retaliatory aggression toward the provocateur, not a subsequent source of arousal (a triggering person), meaning that it measures direct, and not displaced, aggression. Although nothing precludes examination of displaced aggression within the excitation transfer paradigm, to our knowledge, no excitation transfer research has pursued this line of enquiry. Were studies to do so, the Time 2 event of the TDA paradigm would have to be conceptually broadened to include the elicitation of an array of other types of triggering events, such as extraneous neutrally valenced (e.g., exercise) or positively valenced (e.g., sexual arousal) arousal, as well as negative arousal (e.g., task frustration). Though such extensions clearly map onto the TDA paradigm, because excitation transfer research only examines direct aggression toward the initial provocateur, as currently implemented it both descriptively and conceptually differs from TDA.

Second, a key theoretical process in excitation transfer research is a labeling process wherein the actor subjectively misattributes the exercise-based arousal to the provocateur. Importantly, an inspection of excitation transfer effects (Miller et al., 2003) shows that excitation researchers typically constrain the interval between initial provocation and subsequent arousal to 5 minutes, ensuring an ongoing presence of some arousal at the time aggression is measured. By contrast, though arousal can undoubtedly augment TDA, TDA need not rely on its persistence. Instead, it can rest on ongoing ruminative cognitive processes and occur 8 hours later (see Bushman et al., 2005).

Third, although salience plays a key role in both paradigms, there appears to be a discrepancy in its effects. Excitation transfer theory argues that increased salience of the physiological arousal elicited by exercise, erotica, or loud noise (“triggers”) *decreases* the trigger’s likelihood of being misattributed to the provocateur. If one exercises hard and is aware that that exercise has caused one’s arousal, one will be less likely to mistakenly attribute that arousal to an insulting provocateur. This means that, in excitation transfer studies, higher salience of the exercise (trigger) reduces aggression. By contrast, at least in the presence of some moderators of TDA, such as intoxication or cognitive load, high trigger salience *increases* aggression. How the presence of these moderators might play out in excitation transfer research remains unknown.

In sum, it seems clear that excitation transfer studies typically examine direct aggression. Although the effects of excitation transfer on aggression toward persons other than the provocateur could in fact be studied, currently, we do not know of any studies that do so. Moreover, under some conditions, a higher salience of the exercise-produced arousal (the trigger) seems to have effects opposite to those produced under some of the circumstances wherein salience has been studied within the TDA paradigm. Thus, to some degree, intransigent conceptual hurdles seemingly preclude integration of the two paradigms.

Conclusion

Displaced aggression is reliable and robust. TDA provides a theoretical framework for understanding many real-world aggressive actions, such as road rage and spousal abuse, that deviate from standard tit-for-tat responding. Experimental evidence shows that TDA is mediated and/or moderated by a host of important factors including rumination, alcohol, cognitive load, and features of the provocateur and target of aggression. This chapter has discussed three other bodies of research that seem manifestly linked to the TDA paradigm. With regard to the effects of social ostracism on aggression, as far as we can tell, no studies have examined the triggering effects explored in TDA research. Yet, although TDA studies fail to show evidence of the displaced aggression routinely found by social exclusion researchers, we see few conceptual problems that might impede integration of these two bodies of research. With respect to vicarious retribution research, however, our discussion points to differences in actors, targets, and, most importantly, underlying processes that separate it from TDA and thereby support the discriminative construct validity of the two concepts. Vicarious retribution extends TDA research, promoting increased understanding of the dynamics involved in intergroup conflict and, thereby, potentially reducing its occurrence. Finally, unlike social exclusion and vicarious retribution research, excitation transfer research has not studied displaced aggression. Instead, emphasizing underlying processes that seem to differ from those at work in TDA, it has only examined direct aggression toward the provocateur.

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