



Reducing the Tendency to Aggress: Insights from Social and Personality Psychology

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Abstract

The social and personality psychology literature on aggression has largely focused on the factors that are associated with an increase in aggression such as provocation, violent media exposure, and trait anger. This work has been quite important in developing models of aggression. Less emphasis, however, has been placed on examining the factors that reduce this harmful behavior. We use a widely researched model of aggression to examine some factors that are associated with aggression reduction including self-control, pro-social experiences, and appraisal processes. These variables reduce the tendency to aggress, and our review addresses some potential processes involved. We suggest that a stronger research focus on the factors that reduce aggression can aid our understanding of not only why aggression occurs but also how to control it.

After reading the social and personality psychology literature on aggression, an outsider would know a great deal about how to increase aggressive behavior. After all, social and personality psychologists have amassed a long list of variables which can increase the tendency to commit aggression, including violent media exposure (Anderson et al., 2003), weapons (Anderson, Benjamin, & Bartholow, 1998; Klimesmith, Kasser, & McAndrew, 2006), alcohol ingestion (Giancola, Josephs, Parrott, & Duke, 2010), social rejection (Twenge, Baumeister, Tice, & Stucke, 2001), negative affect (Berkowitz, 1989, 2012), provocation (Anderson & Bushman, 1997), and trait anger (Wilkowski & Robinson, 2008, 2010).

This focus on the factors that increase aggression has been fruitful in uncovering numerous causes of this harmful behavior. From a practical perspective, though, human beings' goal is typically to *reduce* aggression. While aggression can certainly be functional under certain conditions (e.g., protection or facilitating obtainment of egoistic goals – Sinaceur, van Kleef, Neale, Adam, & Haag, 2011), it is widely viewed as socially undesirable as it leads to a variety of harmful effects for individuals and society. Indeed, negative emotions in general are antithetical to well-being (Myers & Diener, 1995). As Grinde (2005) states “. . .the idea that most people are happier hugging rather than hitting each other seems to hold” (p. 325). One important focus of research then should be to identify and promote factors which reduce aggression. While research usefully outlines the many causes of aggression, the body of research does not always provide clear guidance as to how it can be reduced. One straightforward suggestion is that factors which increase aggression should be eliminated or at least reduced. This emphasis, however, is not easily carried out as many causal variables cannot be easily eliminated from a society (e.g., provocations, violent media, negative affect, etc.).

We aim to discuss factors that are more amenable to aggression reduction. Our review is organized around a prominent and widely accepted model of aggression, the General Aggression Model (GAM; Anderson & Bushman, 2002; DeWall & Anderson, 2011). Using this model, we identify three factors involved in the reduction of aggression: self-control.

Given the brief format of this review, it cannot possibly be exhaustive. Instead, we seek to illustrate variables at different stages of the GAM which are associated with reduced aggression. We identify three factors involved in this reduction: self-control, pro-social experiences, and appraisal processes. Before turning to this review, we discuss some common definitions and distinctions made in this area of research and provide a brief overview of the GAM.

Definitions, Distinctions, and Theoretical Background

Aggression is typically defined as any behavior designed to harm others who seek to avoid such treatment (Baron & Richardson, 1994; DeWall & Anderson, 2011). Anger and hostility are related terms, but they refer to the emotional (anger) and cognitive (hostility) factors that can lead to aggression. For example, becoming angry or hostile can increase an individual's propensity to commit aggressive behavior.

The GAM (Anderson & Bushman, 2002; DeWall & Anderson, 2011) is a straightforward model of aggression that was created by integrating findings from various theoretical viewpoints. The model focuses on the affective or emotional (Berkowitz, 1989), cognitive (Collins & Loftus, 1975; Huesmann, 1988), and arousal-based (Zillmann, 1971) factors that influence aggressive behavior. The model is illustrated in Figure 1. It includes three stages: inputs, routes, and outcomes. Inputs include situation (e.g., a provocation or exposure to media violence) and person (e.g., traits or gender) variables that can interact or directly lead to the routes that influence aggression. The routes are composed of people's internal states of affect or emotion (e.g., anger or negative affect), cognitions (e.g., hostile thoughts), and arousal (e.g., physiological or psychological arousal). The activation of one or more of these routes can affect people's appraisal and decision-making processes (e.g., interpretations of the situation), which can propel them to commit aggressive behavior (the outcome). For example, an insult (a situational input) can increase one's anger (an affective route) resulting in a hostile interpretation of the remark (appraisal) followed by an aggressive action (a retaliatory insult or shove). Several studies generally support the GAM as a model of why aggression occurs (Anderson & Bushman, 2002; Bartholow, Anderson, Carnagey, & Benjamin, 2005; Barlett & Rodeheffer, 2009; DeWall & Anderson, 2011; Subra, Muller, Begue, Bushman, & Delmas, 2010;).

The GAM has been used widely in social and personality psychology, and we use it here as a conceptual foundation for examining factors associated with aggression reduction. Although the GAM predicts that aggression can occur because situation or person variables

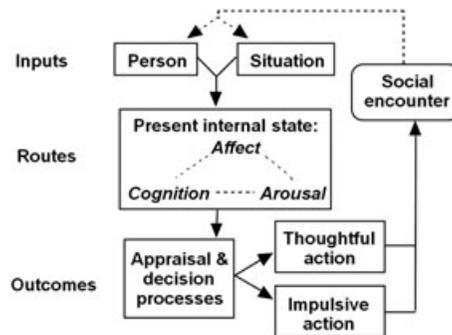


Figure 1. The General Aggression Model – Episodic Processes (Anderson & Bushman, 2002). Reprinted by permission, Annual Review, Inc.

increase anger or arousal, several lines of research involving the GAM have focused on the automaticity of aggression via hostile thoughts. The general idea is that exposure to aggressive situations can prime or activate hostile thoughts in memory and increase subsequent aggression often in an automatic fashion (Anderson & Bushman, 2002; Berkowitz, 1989, 2012; DeWall & Anderson, 2011; Todorov & Bargh, 2002). For example, studies show that aggressive situations unintentionally enhance hostile thoughts and subsequent aggressive behavior (Carver, Ganellen, Froming, & Chambers, 1983) and that participants are unaware of this influence (Bargh & Pietromonaco, 1982; Carver et al., 1983).

This perspective on automatic priming influences has been used to explain the aggression-facilitating effects of exposure to media violence (Anderson et al., 2003; Anderson, Gentile, & Buckley, 2007), weapons (Anderson et al., 1998; Klimesmith Kasser, & McAndrew, 2006), heat (DeWall & Bushman, 2009; Wilkowski et al., 2009), and alcohol consumption (Bartholow & Heinz, 2006; Subra et al., 2010). This research might seem disheartening for efforts aimed at reducing aggression. The GAM, however, suggests that aggression can be reduced by factors that moderate or mitigate the causal inputs, routes, and appraisal processes (Anderson & Bushman, 2002). As noted above, our review will not be exhaustive, but will focus on moderating influences at various stages of the GAM. We specifically focus on self-control, pro-social experiences, and appraisal processes.

Social and Personality Psychology Factors Associated with Aggression Reduction

Self-control

An examination of Figure 1 suggests that aggression can be reduced if the inputs or routes that generally enhance aggression can be mitigated. Self-control may be effective in this regard. Self-control is generally considered to be the ability to override thoughts, behaviors, and feelings of a more automatic or habitual nature (Baumeister et al., 2007). Individuals who know when and how to choose water instead of a mocha frappuccino or jogging instead of TV watching seem to be better off in terms of both mental and physical health (Moffitt et al., 2011; Tangney et al., 2004).

Self-control can be both a situation and person input in the GAM (DeWall et al., 2011). An intriguing theoretical explanation of how self-control operates likens it to a muscle that draws upon limited resources that can be depleted through use (Baumeister et al., 2007; Baumeister et al., 1998; Muraven & Baumeister, 2000). This view contends that the ability to exhibit self-control can be understood via a muscle metaphor in that engaging in self-control can decrease one's ability to exhibit subsequent self-control, a process usually referred to as ego depletion. For example, in an initial test of this model, researchers found that hungry people who inhibited the desire to eat tasty chocolate chip cookies (vs. individuals who ate the cookies) gave up sooner on a subsequent task that required them to complete puzzles that were in reality unsolvable (Baumeister et al., 1998). In other words, individuals who resisted the temptation to eat cookies depleted their self-control and therefore persisted less on a subsequent difficult task.

Researchers have examined aggression and individual differences in self-control (i.e., the ability to limit impulsive behavior across situations). The general finding is that people higher in trait self-control commit less aggression (Archer et al., 2010; Archer & Southall, 2009; Finkel, DeWall, Slotter, Oaten, & Foshee, 2009; Rutter & Hine, 2005). These results suggest that individuals high in self-control can at times regulate the propensity to aggress likely because they are better at limiting the influence of the routes that lead to aggression.

Situational influences can also affect self-control's impact on aggression. DeWall, Baumeister, Stillman, and Gailliot (2007), for example, depleted or did not deplete participants' self-control resources. In the depletion condition, participants were instructed to refrain from reading irrelevant words at the bottom of a video that they watched, whereas participants in the nondepletion condition were not given specific instructions. The effort required to resist the reading of words in the depletion condition was intended to deplete self-control resources. After the video, participants were provoked or not (i.e., received either positive or negative feedback about an essay they wrote earlier) by an ostensible second participant who, unbeknownst to participants, did not actually exist. Finally, participants were allowed to select the duration and intensity of loud white noise to administer to the other participant as part of a reaction time competition, which is a commonly used measure of laboratory aggression. The intensity and sometimes duration of the noise chosen become the measures of aggression. We note here that it can be difficult to ethically measure aggression in the laboratory and therefore this method and others are necessarily contrived. Nevertheless, behavior in the noise-blast task coincides with the definition of aggression as allocating louder and longer noise blasts will harm someone who seeks to avoid such harm (i.e., loud noise is uncomfortable, irritating, and painful). DeWall et al. (2007) found that depleted participants who were provoked were more aggressive toward the ostensible participant (gave longer and louder white noise) than participants in any of the other conditions. In sum, reducing self-control resources increased the tendency to behave aggressively when provoked.

The results of the research by DeWall et al. (2007) and others (e.g., Denson, Pedersen, Friese, Hahm, & Roberts, 2011; Stucke & Baumeister, 2006) reveal that depleting self-control resources increases the tendency to aggress. This research and the work on individual differences in self-control suggest that having more of the resources necessary to engage in self-control reduces the tendency to aggress. This muscle-metaphor view of self-control implies that exercising self-control should strengthen it just like muscles are strengthened via weight training (Baumeister, Gailliot, DeWall, & Oaten, 2006).

Although such a contention seems a bit farfetched, two fascinating series of studies revealed that training or practicing self-control reduces the tendency to aggress (Denson, Capper, Oaten, Friese, & Schofield, 2011; Finkel et al., 2009). Denson, Capper, et al. (2011), for example, randomly assigned participants to a training or no-training condition. In the training condition, participants were instructed to use their nondominant hand for two weeks on everyday tasks such as brushing one's teeth and opening doors; the control condition participants did not receive such instructions. The idea was that participants in the training condition would strengthen their self-control resources so that situations that normally deplete their ego would be less impactful.

They (Denson, Capper, et al., 2011) expected to reduce aggression among individuals normally prone to this behavior. To test this prediction, they assessed participants' level of trait aggression using standardized questionnaires that reliably measure individual differences in aggressive behavior across situations (Bettencourt, Talley, Benjamin, & Valentine, 2006). After two weeks, participants engaged in the noise-blast task that measures aggression in a controlled laboratory setting. They found that trait aggression significantly predicted higher aggression on the noise blast task in the control condition. However, this relationship was completely eliminated in the self-control-training condition. Self-control training thus reduced aggression for those individuals who are typically more aggressive in their daily lives.

Self-control is an important person and situation variable that can reduce the tendency to aggress. Exhibiting self-control is an effortful process that requires mental resources. Strengthening these resources appears to increase self-control and reduce aggression given a provoking situation. The training study by Denson, Capper, et al. (2011) also found that

trained individuals had less anger than nontrained individuals after the noise-blast task. Such results suggest that increased self-control may reduce aggression by reducing angry affect. It appears that strengthening or increasing self-control through training or other methods could be a reasonable strategy to reduce aggression.

Pro-social experiences

Historically, research on the GAM has focused on aggressive situations, angry affective states, and hostile cognitions as factors that increase aggressive behavior (Anderson & Bushman, 2002; DeWall & Anderson, 2011). Thus, anti-social variables promote aggression at all stages of this model. An interesting counter-point is that pro-social variables may reduce aggression, and they may do so at all points of this model. While aggression involves any action designed to harm another person (Baron & Richardson, 1994), pro-social behavior involves any behavior designed to benefit the welfare of another person (Dovidio, Piliavin, Schroeder, & Penner, 2006). As such, pro-social experiences are fundamentally opposed to and incompatible with angry affect, hostile cognitions, and aggressive behavior. Thus, pro-social experiences may reduce aggressive behavior in the same way that aggression-related experiences increase it. We review some work consistent with this idea below.

In terms of situational inputs, Greitemeyer, Agthe, Turner, and Gschwendtner (2012) randomly assigned participants to play a pro-social, violent, or neutral video game. After game play, participants were able to aggress against an ostensible opponent in the noise-blast task. Greitemeyer et al. (2012) found that participants who played a pro-social video game committed less aggression than those who played either a neutral or violent game. A second study found that pro-social video games reduced aggression likely because they reduced angry feelings and hostile thoughts. Several other studies reveal that a variety of pro-social situational inputs reduce the severity of aggression (e.g., observing pro-social models or engaging in forgiveness: Baron, 1976; Greitemeyer, 2011; McCullough, 2008; Yeo, Ang, Loh, Fu, & Karre, 2011).

Pro-social emotions also seem to be associated with reduced aggression. DeWall, Lambert, Pond, Kashdan, and Fincham (2012), for example, examined gratitude, which generally refers to the feeling people experience when others engage in positive, seemingly altruistic, actions toward them. In one study, DeWall et al. (2012) found that experiencing more gratitude in daily life was associated with less aggression. In a second study, participants who were randomly assigned to write about five things they were grateful for versus five things they would like to do were less aggressive in the noise-blast task against an ostensible opponent who insulted them. DeWall et al. (2012) conclude that individuals who experience gratitude are more empathetic towards others, which reduces aggressive behavior.

Beyond pro-social situations and emotions, pro-social traits are also predictive of reduced aggression. Agreeableness is a trait in the five-factor model of personality (McCrae & John, 1992). It reflects individual differences in the extent to which people strive for social harmony in their interactions with others. People high in agreeableness are predominantly friendly and cooperative, while people low in agreeableness are competitive and unfriendly (Graziano & Tobin, 2009; Graziano & Eisenberg, 1997; Graziano, Jensen-Campbell, & Hair, 1996). Research has shown that agreeableness is negatively related to trait aggression and experiences of anger (Martin, Watson, & Wan, 2000) and positively related to pro-social behavior (Carlo, Okun, Knight, & de Guzman, 2005).

A body of work suggests that people high in agreeableness are less aggressive when confronted with hostile situations (e.g., a provocation) likely because they are able to regulate or control their behavior (Haas, Omura, Constable, & Canli, 2007; Jensen-Campbell,

Rosselli, Workman, Santisi & Bojan, 2002). As discussed above, exposure to aggressive situations can increase aggressive behavior (Bargh & Pietromonaco, 1982; Carver et al., 1983; Neumann, 2000). However, individuals high in agreeableness are capable of overriding this tendency. For example, Meier, Robinson, and Wilkowski (2006, Study 1; also see Meier & Robinson, 2004) assessed participants' agreeableness and randomly assigned them to an aggressive or nonaggressive priming task that required them to determine the synonym of words with an aggressive (e.g., torture or slash) or nonaggressive (e.g., buy or floor) meaning across hundreds of trials. Such tasks prime or activate hostile thoughts (e.g., Carver et al., 1983). Subsequently, participants' aggression was assessed with the noise-blast task. For participants low in agreeableness, the hostility priming reliably increased aggressive behavior. However, this effect was not at all apparent for participants high in agreeableness. This suggests that individuals high in agreeableness have developed a way of overriding the influence of hostile thoughts on their behavior.

Further studies support the idea that individuals high in agreeableness engage in active efforts to override the influence of hostile thoughts. For example, Study 2 of the investigation by Meier et al. (2006) indicated that individuals high in agreeableness activate pro-social thoughts in memory when exposed to hostile information (cf. Haas et al., 2007). Other research shows that such individuals quickly disengage attention from hostile cues but attend more closely to pro-social cues (Wilkowski, Robinson, & Meier, 2006). Across studies, this research suggests that individuals high in agreeableness systematically increase pro-social cognitions presumably to regulate the influence of hostile thoughts.

The studies above led Meier, Wilkowski, and Robinson (2008) to suggest that training people to activate pro-social thoughts when confronted with a hostile situation could reduce their aggression. In the experimental condition of their study, words with an aggressive meaning (e.g., kill) presented on a computer screen were systematically followed by words with a helpful meaning (e.g., love) during a purported memorization task. In the control condition, words with an aggressive meaning were systematically followed by nonsense letter strings (e.g., ssss). The idea was that participants in the experimental condition would learn to pair pro-social rather than aggressive thoughts with hostile primes, which should reduce aggression in response to a hostile provocation. After the training procedure, participants engaged in the noise-blast task. The results indicated that participants who completed experimental training were significantly less aggressive compared to participants in the control condition.

In summary, pro-social variables across stages of the GAM appear to reduce aggressive behavior. This includes pro-social situations (pro-social video games), pro-social emotions (gratitude), pro-social personality traits (agreeableness), and pro-social-cognitions (accessibility of pro-social concepts in memory). In general, pro-social experiences across a range of situations appear to reduce the impact of the inputs and routes that lead to aggression according to the GAM. Thus, promoting pro-social experiences in a variety of ways such as invoking gratitude, exposing people to pro-social media, or even engaging in tasks that aim to activate pro-social thoughts in the face of aggressive situations may be effective in reducing the tendency to aggress.

Appraisal processes

The outcome portion of the GAM involves appraisal or people's interpretation of situations. Anderson and Bushman (2002) contend that quick appraisals can lead to aggression. Their example involves a person who is bumped in a crowded room while experiencing anger or hostile thoughts. That person may immediately appraise the situation as an aggressive

one and respond with aggression. Interestingly, though, when more time and cognitive resources are available, individuals may reappraise a situation or reconsider the cause of an act, which could lead to a less aggressive outcome. Some work has shown that people who are high in trait reappraisal are less likely to experience anger across situations (Mauss, Cook, Cheng, & Gross, 2007; Memedovic, Grisham, Denson, & Moulds, 2010; Ray, Wilhelm, & Gross, 2008), which could reduce aggression.

Reappraisal could be an effective aggression-reduction strategy because it encourages individuals to reassess the circumstances surrounding a situation possibly minimizing hostile interpretations and the aggression that can follow. Barlett and Anderson (2011) conducted an experiment to examine the role of reappraisal on aggression. Their participants wrote an essay to be examined by an ostensible second participant. Participants were randomly assigned to receive negative feedback, positive feedback, or no feedback about their essay. Half of the participants then received mitigating information supposedly sent via instant messenger by the other participant. Participants were told that the reason for the nature of the feedback was because the person just broke up with his/her girlfriend/boyfriend (negative feedback condition), received a raise at work (positive feedback condition), or because he/she was in an okay mood (no feedback condition). In order to examine aggressive behavior, participants were asked to allocate easy, medium, or hard puzzles to the other participant who could win a gift certificate if he/she completed a large number of puzzles in a short time period. Aggressive behavior was defined as the number of hard puzzles assigned as harder puzzles would make it difficult for the participant to win a gift certificate.

When no mitigating information was present, Barlett and Anderson (2011) found that negative feedback increased the number of hard puzzles assigned. However, the presentation of mitigating information eliminated this effect. Participants who received negative feedback were no more aggressive than participants who received positive or no feedback. Thus, a reappraisal of the circumstances surrounding an interpersonal affront reduced people's aggressive responding. Such work suggests that encouraging reappraisal can be a useful aggression-reduction strategy.

Other work by Kross and colleagues (Kross, Ayduk, & Mischel, 2005; Kross, Duckworth, Ayduk, Tsukayama, & Mischel, 2011; Mischkowski, Kross, & Bushman, 2012) points to similar appraisal processes in reducing aggression. Mischkowski et al. (2012), for example, examined anger and aggression in an experimental study following a provocation. After experiencing an anger provocation, participants were randomly assigned to adopt (1) a self-distanced perspective in which they were to think of themselves from a third-person point of view; (2) a self-immersed perspective in which they were to think of themselves from a first-person point of view; or (3) a control condition in which perspective was not manipulated. They found that a self-distanced perspective led individuals to experience less anger and aggression compared to the self-immersed and control conditions. Other research (e.g., Kross et al., 2005) consistently shows that self-distancing reduces anger precisely because it facilitates a reappraisal process. This perspective allows individuals to attain both insight into the angering experience and closure of it. In sum, this work reveals that removing or decreasing the extent to which participants focus on the self reduces the extent to which a provocation increases anger and subsequent aggression.

Recent work on mindfulness suggests that it could also be involved in appraisal and aggression. Mindfulness involves a focused attention and awareness of present events and experiences (Brown & Ryan, 2003). It is rooted in Buddhist philosophy, and it has become a widely examined topic in multiple disciplines (Brown, Ryan, & Creswell, 2007). People higher in mindfulness experience their environments less defensively and allow positive and negative thoughts and feelings to occur with less personal significance attached (Kabat-Zinn,

2003). People higher in mindfulness are more aware of their current feelings and actions but are less inclined to allow such information to bias their thoughts and behavior. Rather than becoming upset with undesirable thoughts and feelings, individuals higher in mindfulness allow them to fade more naturally.

Trait and situational mindfulness may affect the appraisal processes that reduce aggression. After all, attaching less personal significance to experienced events is one feature of mindfulness. If so, it should be the case that individuals high in trait mindfulness or individuals experiencing high state mindfulness are less aggressive. Some work has shown that trait mindfulness is negatively related to trait aggression (Heppner et al., 2008; Kelley & Lambert, 2012) and anger (Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Brown & Ryan, 2003; Feltman, Robinson, & Ode, 2009). Furthermore, trait mindfulness has been shown to moderate the impact of alcohol-induced aggression. While alcohol can lead men to engage in more intimate partner violence, Gallagher, Hudepohl, and Parrott (2010) found that this link is eliminated in men high in trait mindfulness.

At least one study involving situational mindfulness coincides with the research on trait mindfulness. Heppner et al. (2008) predicted that a mindfulness induction would cause participants to be less aggressive in the face of a social rejection. Past research (Twenge et al., 2001) suggests that social rejection provokes aggression because rejected people experience an uncomfortable ego threat. Heppner et al. (2008) randomly assigned participants to one of three conditions. In all conditions, they manipulated social rejection by telling participants that either several people (acceptance condition) or no one (rejection condition) wished to work with them on a group task that would take place later. Half of the participants in the rejection condition were first exposed to a mindfulness exercise that involved eating raisins in a mindful way by focusing on the taste, color, texture, and so on, of each raisin. All participants then engaged in a noise-blast task against others. Heppner et al. (2008) found that although rejection increased aggression in the noise blast task, the brief induction of mindfulness attenuated this link. In other words, the mindful-rejected participants were no more aggressive than the accepted participants. Other research in social psychology has assessed mindfulness and social threat and found similar results with nonaggression behavioral variables (Weger, Hooper, Meier, & Hothrow, 2012).

The limited but provocative work on mindfulness and aggression suggests that mindful individuals are more focused on the present and less biased by threatening information that they may encounter in their environments. Strategies that increase mindfulness could be beneficial in lowering people's tendency to aggress in response to provocation. We recognize, however, that much more work is necessary to fully elucidate the factors that underlie inverse relations between mindfulness and aggression. Nonetheless, reappraisal, self-distancing, and mindfulness are important appraisal-related variables that mitigate aggressive behavior.

Summary and Concluding Thoughts

Social and personality psychologists have uncovered a host of variables that increase the tendency to aggress. Such work is critical in developing a better understanding of this behavior. Individuals and societies interested in reducing this harmful behavior though need more than a list of variables that have a causal impact. We believe that psychologists are now in a good position to use the research literature in social and personality psychology to inform aggression-reduction research and strategies. Models that outline why aggression occurs are a good starting point. The GAM has been extensively used to uncover a host of variables and processes that enhance aggression. Our review reveals that it can also be used to uncover variables and strategies that reduce aggression. We examined three broad factors that limit

the tendency to aggress: self-control, pro-social experiences, and appraisal processes. These factors operate at different stages of the GAM and are illustrative of the manner in which this model can be used to uncover aggression-reduction strategies.

It would be impossible and likely unwise to completely remove aggression from a society since it can be an adaptive behavior in some situations. Nevertheless, reducing the tendency to aggress is a worthy goal given that less hostile and more cooperative societies are likely healthier, happier, and more productive. Models like the GAM allow researchers to identify what causes aggression in terms of input variables, route variables, and outcome variables. While this research is important, it is also important to identify strategies or variables that reduce the impact of these inputs, routes, and outcomes.

Short Biographies

Brian P. Meier is an Associate Professor of psychology at Gettysburg College where he teaches courses on general psychology, social psychology, and statistics. He received his PhD in social psychology from North Dakota State University in 2005. His research is focused on social and personality psychology topics including embodiment, emotion, aggression, pro-social behavior, self-regulation, and mindfulness.

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Endnote

We are grateful for a grant to support our work from the John Templeton Foundation.

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