

DISCUSSION 1%

Human beings are fundamentally social. In this discussion, we will consider connection—from attraction to dissolution, and liking to love—by providing advice regarding various relationship concerns.

Imagine that you are an advice columnist. You regularly respond to readers, providing relationship advice based on social psychological insight. Select one of the following options and craft a reply letter, supporting your answer with scholarly and peer-reviewed sources. Explain to the reader, in layperson's terms, relevant theory and research that addresses the social psychological variables involved. Summarize a clear answer to the question, formulating advice regarding future behavior.

- Should I play hard to get?
- Do looks really matter that much?
- How can I attract a partner?
- Is my relationship at risk of divorce?
- Is there such a thing as a "fatal" attraction?
- We're opposites; are we doomed to fail?
- I'm in a long distance relationship... Will it work?
- Why does my friend stay in an abusive relationship?
- What is love, really?
- Other (as provided/approved by your instructor)

Your initial post should be 500-1000 words in length and must contain a minimum of three scholarly, peer-reviewed references, in addition to required course resources as applicable. Additional credible references are encouraged.

No References Attached
To DISCUSSION 1%

Please Note : Three References
Required For this Discussion

DISCUSSION 2:

Human beings are fundamentally social. In this discussion, we will consider connection—from attraction to dissolution, and liking to love—by providing advice regarding various relationship concerns.

To inform your thinking on this topic, begin by reading "Transmission of Aggressions through Imitation of Aggressive Models" (Bandura, Ross, & Ross, 1961), "'From Jerusalem to Jericho': A Study of Situational and Dispositional Variables in Helping Behavior" (Darley & Batson, 1973), "Bystander Intervention in Emergencies: Diffusion of Responsibility" (Darley & Latane, 1968), "The General Aggression Model: Theoretical Extensions to Violence, (DeWall, Anderson, & Bushman, 2011), "Group Inhibition of Bystander Intervention in Emergencies" (Latané & Darley, 1968), and "Understanding the Psychology of Bullying: Moving Toward a Social-Ecological Diathesis-Stress Model" (Swearer & Hymel, 2015).

Then, imagine that you are an educator. Describe a hypothetical incident of observed antisocial behavior (bullying, relational aggression (i.e., "mean girls"), etc.). Interpret relevant social psychological theory and research to explain the case study you outlined, and assemble key insight from research on prosocial behavior to generate a plan for addressing this specific situation.

Your initial post should be 500-1000 words in length and must contain at minimum required course resources as applicable. Additional credible references are encouraged.

References Attached
FOR DISCUSSION 2:

Record: 1

Title: The general aggression model: Theoretical extensions to violence.

Authors: DeWall, C. Nathan. Department of Psychology, University of Kentucky, Lexington, KY, US, nathan.dewall@uky.edu
Anderson, Craig A.. Center for the Study of Violence, Department of Psychology, Iowa State University, IA, US
Bushman, Brad J.. School of Communication, The Ohio State University, OH, US

Address: DeWall, C. Nathan, Department of Psychology, University of Kentucky, Kastle Hall 201, Lexington, KY, US, 40506-0044, nathan.dewall@uky.edu

Source: Psychology of Violence, Vol 1(3), Jul, 2011. Special Issue: Theories of Violence. pp. 245-258.

Publisher: US : Educational Publishing Foundation

ISSN: 2152-0828 (Print)
2152-081X (Electronic)

ISBN: 1-4338-1084-0

Language: English

Keywords: General Aggression Model, climate change, intergroup violence, intimate partner violence, suicide

Abstract: This article discusses the General Aggression Model (GAM), which provides a comprehensive and integrative social-cognitive framework for understanding aggression and violence. After providing a brief description of the basic components of GAM, we discuss how it can be used to better understand 4 topics related to phenomena that occur primarily outside the laboratory and apply to a broad range of people. Specifically, we apply GAM to better understand intimate partner violence, intergroup violence, global climate change effects on violence, and suicide. We also explain how the tenets of GAM can be used to inform interventions aimed at reducing these forms of violence. Finally, we show how GAM can explain why people do not behave violently, such as in societies where violence is exceedingly rare. Applying GAM to violent behavior that occurs outside the laboratory adds to its explanatory power and enhances the external validity of its predictions. Because the 4 topics apply to such a broad range of people, GAM may have broader influence in fostering understanding of aggression in these domains. By increasing our understanding of the causes of violent behavior, GAM may help reduce it. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

Document Type: Journal Article

Subjects: *Aggressive Behavior; *Intergroup Dynamics; *Intimate Partner Violence; *Suicide; *Violence; Models; Climate Change

PsycINFO Classification: Behavior Disorders & Antisocial Behavior (3230)

Population: Human
Male
Female

Grant Sponsorship: Sponsor: National Science Foundation
Grant Number: BCS-1104118
Recipients: DeWall, C. Nathan; Bushman, Brad J.

Format Covered: Electronic

Publication Type: Journal; Peer Reviewed Journal

Publication History: First Posted: May 30, 2011; Accepted: Mar 28, 2011; Revised: Mar 23, 2011; First Submitted: Aug 6, 2010

Release Date: 20110530

Correction Date: 20131007

Copyright: American Psychological Association. 2011

Digital Object Identifier: <http://dx.doi.org.proxy-library.ashford.edu/10.1037/a0023842>

PsycARTICLES Identifier: vio-1-3-245

Accession Number: 2011-11061-001

Number of Citations in Source: 81

Database: PsycARTICLES

The General Aggression Model: Theoretical Extensions to Violence

By: C. Nathan DeWall

Department of Psychology, University of Kentucky;

Craig A. Anderson

Center for the Study of Violence, Department of Psychology, Iowa State University

Brad J. Bushman

School of Communication, The Ohio State University;

Department of Psychology, VU University, Amsterdam, the Netherlands

Acknowledgement: This research was supported in part by Grant BCS-1104118 to C. Nathan DeWall and Brad J. Bushman from the National Science Foundation. The opinions and conclusions expressed herein are those of the authors and do not necessarily reflect the opinions of the National Science Foundation.

Nonviolence leads to the highest ethics, which is the goal of all evolution. Until we stop harming all other living beings, we are still savages.—Thomas A. Edison, American inventor

In the distant past, aggression often was an adaptive behavior for our ancient ancestors who lived in small groups. Aggression and related threat displays played an important role in mate selection, protection of offspring and other kin, and survival of the group. As humans became more social and developed culture, however, aggression became less adaptive, especially at the group level. Although one can reasonably argue that even today, minor forms of aggression play an adaptive role in socialization and social control (e.g., Tedeschi & Felson, 1994), more serious forms of aggression are more maladaptive than adaptive. Aggression breeds aggression, and it seems to cause more problems than it solves. Even when it works in the short run, aggression frequently fails in the long run. So, why are people aggressive today? We could blame it on our genes, but that is only part of the story. The purpose of this article is to explain how an overarching framework for understanding aggression and violence —the General Aggression Model, or GAM for short (see Figure 1)— can be applied to violence outside the laboratory: intimate partner violence, aggression between

groups, global warming effects on violence, and suicide. We also discuss how GAM can be applied to interventions aimed at reducing these forms of violence and even nonviolent behavior. Applying GAM to aggression that occurs outside the laboratory not only adds to its explanatory power, but it also enhances the external validity of its predictions.

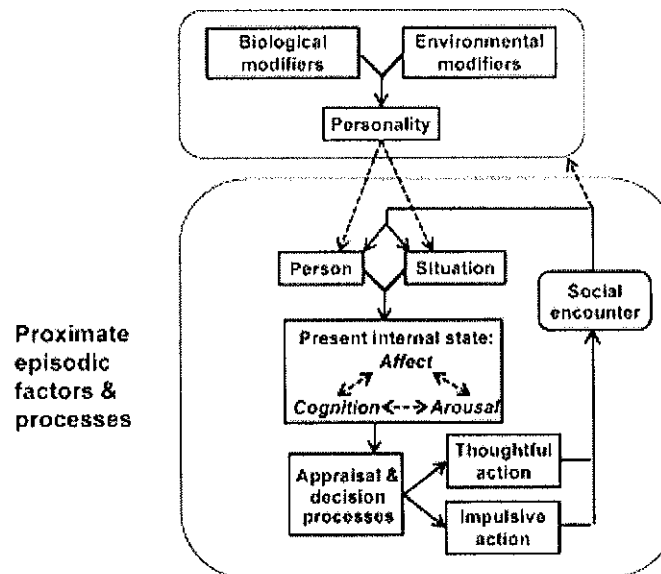


Figure 1. General aggression model.

Psychologists have proposed a variety of theories to understand why people sometimes behave aggressively. Some examples include frustration–aggression theory (Dollard, Doob, Miller, Mowrer, & Sears, 1939), socioecological models (Heise, 1998), cognitive neoassociation theory (e.g., Berkowitz, 1989), social learning theory (e.g., Bandura, 1973; Mischel & Shoda, 1995), script theory (e.g., Huesmann, 1986), excitation transfer theory (e.g., Zillmann, 1983), and social interaction theory (e.g., Tedeschi & Felson, 1994). Each theory offers crucial insight into understanding specific reasons why people behave aggressively. Yet, these minitheories do not provide an overarching framework for understanding human aggression and violence.

GAM integrates minitheories of aggression into a single conceptual framework. In so doing, GAM provides a more parsimonious model of aggression than other theories do, explains aggression that occurs because of multiple motives, and offers empirically validated insights into ways to reduce aggression, including how to stunt the development of aggressive tendencies over time. It is the only social–cognitive model that explicitly incorporates biological, personality development, social processes, basic cognitive processes (e.g., perception, priming), short-term and long-term processes, and decision processes into understanding aggression. Therefore, GAM offers scholars a framework from which to derive and test hypotheses regarding aggression, a framework that is more expansive than any other social–cognitive model. One major focus of the present article is to show how GAM can also increase our understanding of more extreme forms of physical aggression that occur outside the laboratory—violent behavior.

GAM emphasizes three critical stages in understanding a single episodic cycle of aggression: (1) person and situation inputs, (2) present internal states (i.e., cognition, arousal, affect, including brain activity), and (3) outcomes of appraisal and decision-making processes. A feedback loop can influence future cycles of aggression, which can produce a violence escalation cycle (Anderson, Buckley, & Carnagey, 2008; DeWall & Anderson, 2011). Several articles provide further insight into these basic tenets of GAM (Anderson & Bushman, 2002; DeWall & Anderson, 2011).

Applications of GAM

GAM has received consistent support as a general model of aggression (for reviews, see Anderson & Bushman, 2002; DeWall & Anderson, 2011). Although it was tested primarily using laboratory aggression experiments, it can also be applied to aggression in the “real world” outside the laboratory. Before we go further, however, we need to define the terms *aggression* and *violence*. We define *aggression* as any behavior intended to harm another person who does not want to be harmed (e.g., Anderson & Bushman, 2002; Bushman & Huesmann, 2010). We define *violence* as any aggressive act that has as its goal extreme physical harm, such as injury or death (e.g., Anderson & Bushman, 2002; Bushman & Huesmann, 2010).

In this section, we include several novel extensions of how GAM can inform understanding and research investigating intimate partner violence, intergroup violence, impact of global climate change on violence, and suicide. We chose these topics for two reasons. First, each topic applies to phenomena that occur outside the laboratory, thereby increasing the explanatory potential of GAM and the external validity of its predictions. Second, each topic relates to phenomena that occur relatively frequently in the United States and in other countries. Violence between intimate partners in the United States occurs at alarmingly high rates, with over one in five of couples (Schafer, Caetano, & Clark, 1998) and over one in three college students (Straus & Ramirez, 2002) reporting at least one incident over the past year. Intergroup violence is also very common. In the 40 years after the end of World War II, there were roughly 150 wars and only 26 days of world peace (defined as the absence of international war; Sluka, 1992). In terms of global climate change, the earth is warmer now than it has been at any time in the past 2,000 years (Parry, Canziani, Palutikof, van der Linden, & Hanson, 2007). However, people rarely think of the impact of climate change on violence (Anderson & DeLisi, in press). Suicide also claims the lives of over a million people each year (World Health Organization, 2008). Thus, applying GAM to understand these four topics not only increases the explanatory power of GAM, but it also informs consideration regarding phenomena that impact millions of people worldwide.

Intimate Partner Violence (IPV)

Previous research on GAM has focused primarily on aggression between strangers (e.g., Anderson & Anderson, 2008, Study 2), but we believe that GAM can also provide a useful framework for understanding IPV. As with aggression between strangers, person and situation factors play a significant role in increasing the likelihood of IPV. There are dozens, if not hundreds, of personal factors involved, including trait anger, attachment style, and alcohol abuse (e.g., Finkel, 2007; Follingstad, Bradley, Helff, & Laughlin, 2002; Holtzworth-Munroe, Bates, Smutzler, & Sandin, 1997; Schumacher, Feldbau-Kohn, Slep, & Heyman, 2001). Yet, there is little conceptual organization regarding how and why risk factors influence IPV, leading some scholars to suggest that “theory and research on relationship violence remain uncohesive” (Berscheid & Regan, 2005, p. 52).

Attitudes toward violence are also useful in predicting actual aggression directed toward an intimate partner. In one recent investigation, college students who had more positive attitudes toward IPV were more likely to physically assault and verbally abuse their current romantic partner 14 weeks later (Fincham, Cui, Braithwaite, & Pasley, 2008). Other research has shown that people who have permissive attitudes toward IPV also have the highest perpetration rates (Cote, Vaillancourt, LeBlanc, Nagin, & Tremblay, 2006).

Some situational factors that increase aggression toward strangers also increase IPV, such as alcohol (e.g., Hove, Parkhill, Neighbors, McConchie, & Fossos, 2010). Moreover, meta-analytic findings demonstrate that alcohol increases both male-to-female and female-to-male violence (Foran & O’Leary, 2008). Situations that decrease self-control increase aggression toward both strangers and intimate relationship partners (DeWall, Baumeister, Stillman, & Gailliot, 2007; Finkel, DeWall, Slotter, Oaten, & Foshee, 2009). For example, people

who are made to feel mentally exhausted, compared with people who are not made to feel mentally exhausted, make their romantic partners endure longer painful yoga poses when the partner insults them (Finkel et al., 2009, Study 4).

Affect, cognition, and arousal may also be related to IPV. Currently experienced anger, for example, is related to more aggressive verbalizations among intoxicated maritally violent men (Eckhardt, 2007). In addition, having hostile cognitive biases toward one's spouse is associated with perpetrating more violence against one's partner (Fincham, Bradbury, Arias, Byrne, & Karney, 1997). Relatively little research has examined the role of arousal in IPV. In one relevant study, men who showed diminished sensitivity to their wives' expressions of happiness (an indicator of reduced arousal) were more likely to commit IPV compared with men who showed high sensitivity to their spouse's emotional expressions (Marshall & Holtzworth-Munroe, 2010). Future research is clearly needed on the relationship between arousal and IPV.

The appraisal and decision-making component of GAM is involved in both aggression toward strangers and toward intimate relationship partners. When people do not have sufficient mental resources to engage in reappraisal processing, they are more likely to behave aggressively toward their romantic partners (Finkel et al., 2009). When people are mentally exhausted, they are less likely to control their aggressive impulses when provoked. Just as exercising a muscle strengthens it, people who exercise self-control are buffered from the negative effects of mental exhaustion on IPV (Finkel et al., 2009, Study 5). The implication is that the more self-control strength people have, the more likely they are to carefully consider the negative ramifications of their actions and to choose to behave in a more thoughtful, nonaggressive manner.

Thus, GAM provides a cohesive understanding regarding situational and personal attributes that elevate the likelihood of IPV, mechanisms through which aggressive urges translate into violent behavior and decision-making processes that influence whether people succumb to their aggressive urges or instead engage in thoughtful, nonaggressive behavior. Commonly used theoretical models, such as socioecological models (Heise, 1998) and social learning theory (Bandura, 1973), provide valuable insight into the causes of IPV, but they lack crucial components that limit their explanatory power. For example, socioecological models do not examine the influence of an individual's knowledge structures, attitudes, and beliefs on currently experienced emotions, cognitive processes, and arousal levels, and their influence on whether people engage in impulsive or thoughtful actions toward one's partner. Instead, socioecological models seek to understand the causes of IPV at different levels of analysis (individual, relationship, community, societal), which establishes the source of influence but does not offer clear understanding regarding the role of currently experienced emotion, cognitive processes, or arousal on appraisal and decision-making processes that influence whether people perpetrate IPV. Social learning theory offers a useful framework to understand risk factors for aggression, but it neglects the importance of factors that increase the risk for aggression that are independent of one's learning history, such as genetic predispositions known to heighten the risk for aggression (e.g., monoamine oxidase A gene, serotonin transporter gene; Dolan, Anderson, & Deakin, 2001; McDermott, Tingley, Cowden, Frazzetto, & Johnson, 2009). GAM is a biological-social-cognitive model, which uses both learning history and factors not associated with one's learning history to understand why people perpetrate IPV. For these reasons, GAM offers a more comprehensive model from which to test hypotheses regarding IPV perpetration.

Intergroup Violence

Most aggression theories attempt to explain the causes and consequences of aggression between individuals, leaving open the question of whether similar processes may be involved in explaining aggression between groups. GAM offers a useful framework for understanding how aggression between groups begins and why it persists.

Aggression between groups begins as a result of characteristics that each group brings to a situation and of environmental features that increase aggression. Groups, like individuals, tend to have enduring motivations, attitudes, values, and beliefs that develop out of their prior history. Indeed, research on the discontinuity effect has consistently shown that individuals have internal states that are heavily influenced by group processes (Insko, Schopler, Hoyle, Dardis, & Graetz, 1990). Other research from the attitude literature suggests that exposing people to an in-group member (e.g., a fellow member of one's political party) causes people to express strong attitudes that support their in-group, whereas exposing people to an out-group member has the opposite effect (Ledgerwood & Chaiken, 2007). Within the context of group aggression, the terrorist group Al Qaeda believes that an alliance between Christians and Jews threatens the future of Islam. Most people living in the United States are Christians (78%; Newport, 2009), and most people living in Israel are Jews (76%; Central Bureau of Statistics, 2009). As a result, situations that signal a strong Christian–Jewish alliance, such as activities related to a coalition between the United States and Israel, may increase aggressive affect, negative attitudes, and arousal among members of Al Qaeda. These internal states may, in turn, increase the likelihood that members of Al Qaeda will perpetrate violence against all people associated with a U.S.–Israel coalition, even bystanders and civilians.

GAM's feedback loop also explains why aggressive retaliations between groups persist. Once conflict between two groups begins, the violence escalation cycle is triggered. Group A experiences Group B's retaliation, which causes Group A's members to have high levels of aggressive affect, to perceive Group B as hostile and aggressive, and to experience heightened arousal. These internal states cause members of Group A to act impulsively on their immediate appraisal of Group B as hostile and threatening. Group B then experiences the impulsively aggressive act from Group A, which sets in motion the same set of internal states and appraisal and decision processes that result in an even more aggressive retaliation (see Figure 2). Both groups will trade increasingly aggressive retaliations back and forth, which can result in the widespread destruction of human life and property. To be sure, the feedback loop can only be applied to understand ongoing aggressive retaliations between groups. If Group A refuses to respond to Group B's provocation with aggressive retaliation, then Group A bears no responsibility for any additional aggression provocation it may experience from Group B.

Violence Escalation Cycle

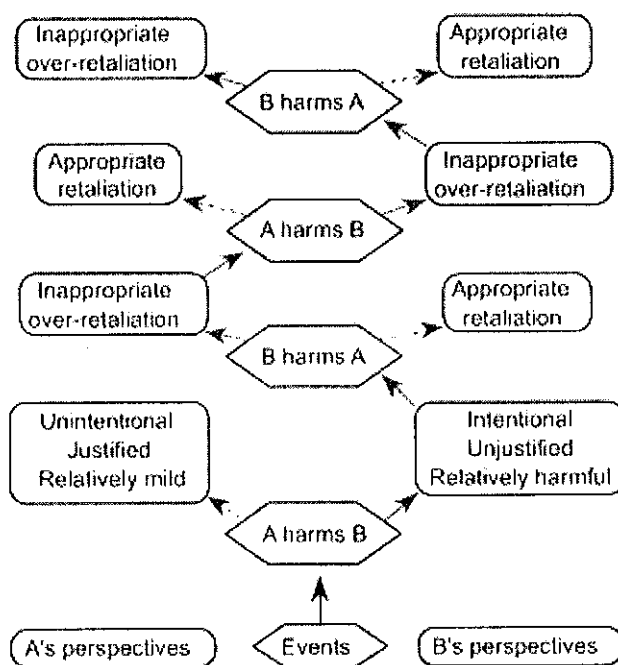


Figure 2. The violence escalation cycle. N. L. From Violent evil and the general aggression model, by C. A. Anderson and N. L. Carnagey, 2004, Chapter in A. Miller (Ed.) The Social Psychology of Good and Evil (pp. 168–192). Copyright 2004 by New York: Guilford Publications. Reprinted with permission of Guilford Press.

Thus, GAM offers a parsimonious and adequate perspective for understanding why intergroup violence begins and persists. Socioecological models and social learning theory offer useful insight into why intergroup violence occurs, but they also suffer significant limitations in terms of the scope of their explanatory power. From a socioecological perspective, understanding intergroup violence begins with understanding the individual within the group, then understanding that individual's relationships with others inside and outside the group, and finally understanding the group's relationship within society. Although these levels of analysis provide information regarding risk and resiliency factors for intergroup violence, they do not offer much in the way of understanding how mechanisms through which the influence of the four-level socioecological model influences the appraisal and decision process that ultimately determines whether groups will engage in violent behavior. According to social learning theory, intergroup violence occurs in large part because members of a group are exposed to violence that taught them to solve group conflict through behaving violently. Unlike GAM, social learning theory does not emphasize the importance of personal factors that enhance or diminish the effect of exposure to violence on subsequent group violent behavior. GAM incorporates the best perspectives of these theoretical models, addresses their limitations, and as a result provides researchers with a strong theoretical framework from which to understand intergroup violence.

Global Climate Change and Violence

Global climate change and its wide-ranging environmental consequences (e.g., flooding, droughts, desertification, food and water shortages) have been recognized by numerous national, military, and international groups as a significant risk factor for social disorder, ecomigration conflicts, and war. Global climate change influences aggression and violence both as a proximate situational factor and as a distal environmental modifier. More specifically, there appear to be three main ways in which rapid global climate change (rapid in geological terms) can increase the risk of violence (Anderson & DeLisi, in press). First, there is a direct effect of heat on aggressive inclinations. This well-researched line of work has shown that uncomfortably hot temperatures can increase physical aggression in laboratory settings and in real-world violent crime studies (Anderson, 2001). Simply presenting people with words related to hot temperatures is enough to increase aggressive thoughts and hostile perceptions (DeWall & Bushman, 2009). Second, many of the environmental risk factors known to increase the likelihood of a child growing up to be an aggression-prone adult will become more widespread worldwide, especially in regions likely to experience flooding as a result of sea level increases, tropical storms, glacial melt, and regions likely to experience drought and resulting food and water shortages. Poor pre- and postnatal nutrition is known to influence a host of aggression-related competencies and proneness to violence (e.g., DeLisi, 2005; Liu, Raine, Venables, & Mednick, 2004). Indeed, recent molecular genetics studies have found specific brain chemistry-related Genetic $\times$ Environment interactions (both physical and social environments) on violent criminality (see Anderson & DeLisi, in press). Third, historical and contemporary research shows that rapid climate change can increase group violence. Specifically, a growing body of literature supports the notion that rapid climate change (heating or cooling) increases civil disorder, political instability, and war, mostly by creating acute and recurring resource shortages that lead to ecomigration and violent conflict. Examples include war in China during 1000–1900 A.D. (Zhang, Zhang, Lee, & He, 2007), civil war in sub-Saharan Africa (Burke, Miguel, Satyanath, Dykema, & Lobell, 2009), ecomigration and violence in Bangladesh and India, and violence associated with the U.S. Dust Bowl and Hurricane Katrina. Similarly, U.S. data reveal a robust relation between increasingly hot years and violent crime rates (Anderson, Bushman, & Groom, 1997; Anderson & DeLisi, in press).

GAM does a better job of explaining the effects of climate change on violence than other theories of violence. Whereas socioecological theories of violence focus primarily on how people in one's environment influence violence, GAM emphasizes the importance of both people in one's environment and changes in the physical environment itself as relevant to understanding violence. Likewise, social learning theory would explain the relationship between climate change and violence as a function of observing a greater number of people behaving violently, thereby ignoring the importance of changes in the actual environment (irrespective of the people in the environment) and their influence on the higher number of people behaving violently. Thus, GAM is unique in its ability to account for changes in the environment that may have implications for increasing violence, such as increasing ambient temperatures.

Suicide

Why people commit suicide has puzzled social scientists for centuries. Very few interventions aimed at reducing suicide are successful (Van Orden et al., 2010). To prevent suicides, we need to know why they occur. We believe GAM can offer a powerful framework for understanding why people commit suicide.

Many of the same person and situation factors that increase aggression between individuals and groups also increase suicide, sometimes called *self-aggression*. Alcohol intoxication, for example, is common among people who die by suicide (Ohberg, Vuori, & Ojanpera, 1996). Laboratory research has shown that intoxicated people inflict more intense shocks on themselves compared with sober people (McCloskey & Berman, 2003). Feeling rejected and lonely is also robustly associated with aggression toward others (e.g., DeWall, Twenge, Bushman, Im, & Williams, 2010; DeWall, Twenge, Gitter, & Baumeister, 2009) and with suicide (see Van Orden et al., 2010, for a review). One longitudinal study, for example, found that feelings of loneliness at age 12–13 predicted higher suicidal risk 30 years later (Rojas & Stenberg, 2010). Just as poor self-control and serotonergic dysfunction are related to aggression against other people, they are also reliably associated with an increased risk for death by suicide (e.g., Anisman et al., 2008; Brent et al., 1994; Renaud, Berlim, McGirr, Tousignant, & Turecki, 2008).

Affect, cognition, and arousal all play a crucial role in suicidal behavior. People who generally internalize their anger are also more likely to attempt suicide, which is the leading risk factor for suicidal completion (see Van Orden et al., 2010, for a review). Suicidal ideation refers to thoughts related to ending one's life. The more people think about dying by suicide, the more likely they are to die by suicide (Van Orden, Merrill, & Joiner, 2005). In addition, diminished arousal to the pain and distress that are associated with suicidal behavior relate to higher numbers of suicide attempts (Van Orden, Witte, Gordon, Bender, & Joiner, 2008).

Because most people have a strong fear of death, they must acquire the ability to inflict lethal self-injury through repeated exposure to and habituation to fear-provoking stimuli (Van Orden et al., 2010). Simply having the desire to die by suicide is not sufficient to predict who actually will die by suicide. Recurrent exposure to frightening and painful situations desensitizes people to pain and increases their risk for suicide (Nademin et al., 2008). These findings mirror work in the aggression literature, which shows that frequent exposure to violent media desensitizes people to violent images and is associated with higher aggression toward others (Anderson et al., 2010; Bartholow, Bushman, & Sestir, 2006).

For researchers interested in understanding why people die by suicide, GAM provides a social–cognitive framework from which rich and complex hypotheses can be formulated and tested. Socioecological models of violence may identify risk factors for suicide, but they do not elucidate the crucial mechanisms through which these risk factors heighten the risk for suicide. Social learning theorists emphasize that exposure to others who

commit suicide may heighten one's risk for suicide, but they neglect personal factors (e.g., traits, genetic polymorphisms) that may exacerbate or buffer people from this risk.

In contrast, suicide researchers can use GAM to make specific predictions regarding the moderators and mediators of the effects of belongingness and burdensomeness on suicidal behavior. They can also understand how the acquired ability to inflict lethal self-injury develops, and whether experiences of lowered belongingness, which influence physical pain processes (Borsook & MacDonald, 2010; DeWall & Baumeister, 2006; DeWall, MacDonald, et al., 2010; Eisenberger, Lieberman, & Williams, 2003), accelerate the development of people's ability to commit suicide. In addition, GAM offers suicide researchers an extensive toolkit of factors known to increase aggression against others (e.g., media violence) that may have a similar impact on suicidal behavior. Thus, GAM offers a more comprehensive framework for understanding suicidal behavior than existing theoretical models among researchers who wish to explain why people die by suicide from a social–cognitive perspective.

Using GAM to Inform Violence Prevention Programs

GAM suggests that a knowledge structure approach would be a more useful means of preventing violence compared with existing models. Specifically, it suggests that individual interventions should begin with an assessment of inappropriate aggressive episodes in the individual's life along four dimensions. The first dimension is how much hostile or agitated affect is present. The second dimension is how much a specific thought, feeling, or action has become automatized. The third dimension is how much the primary (ultimate) goal is harming the victim versus benefitting the perpetrator. The fourth dimension is how much the perpetrator considers the consequences of committing the aggressive act. Doing so allows the model to avoid the problems created by various artificial dichotomies of aggressive behavior types, such as the reactive–proactive dichotomy (Bushman & Anderson, 2001). One then could tailor the intervention to the specific aspects that appear most relevant to the individual. A GAM-directed intervention would be more likely to capture all of the critical elements. In what follows, we discuss how GAM can be applied to violence prevention programs for IPV, intergroup violence, global climate change-related violence, and suicide.

IPV

To illustrate the explanatory power of GAM in shaping effective interventions, consider the hypothetical scenario of an intervention to reduce violence in a man who is referred to a psychological clinic because he routinely batters his wife. Although some assessment protocols for preventing IPV involve setting clear-cut goals and expectations (Sonkin & Liebert, 2003), they do not do so within an overarching framework that assesses inappropriate aggressive episodes in the individual's life along the four dimensions noted above.

A GAM-directed intervention would consist of five steps. First, an assessment session would measure how much hostile affect is present in the man; how much a specific thought, feeling, or action related to violence against his wife has been automatized through repetitive exposure or practice; how much the man's primary goal is harming his wife versus benefitting himself (e.g., feeling a sense of power and control in the relationship); and how much the man reflects on the consequences of violently battering his wife. Second, the therapist would provide the man with strategies designed to reduce his hostile affect (e.g., distraction, relaxation) and make him aware of the specific thoughts, feelings, and behavior related to his battering behavior that have become so deeply ingrained in his everyday life that they occur automatically. Third, the therapist would give the man strategies designed to increase his thoughtful awareness of the violent thoughts, feelings, and actions related to his wife. Fourth, the therapist would work with the man to reduce his desire to cause harm to his wife (if that is his primary goal) and to develop a list of other activities he could use to feel

that he plays an important and valued role in his marriage. Fifth, the therapist would provide the man with activities designed to strengthen his self-regulatory abilities, which may increase the likelihood that he will engage in thoughtful decision-making processes when he has the urge to batter his wife. As noted earlier, practicing self-regulation reduces IPV inclinations (Finkel et al., 2009), even when people practice self-regulation in domains that are unrelated to violence. Thus, GAM can inform IPV programs that can be tailored to specific aspects that are most relevant to an individual.

Intergroup Violence

GAM can also help explain how to stop persistent intergroup violence. Whereas previous interventions have focused on improving relationships, increasing care and empathy, and becoming cognitively aware of one's aggressive urges (Shechtman & Ifargan, 2009), GAM suggests that understanding how to break the violence escalation cycle may also prove a useful intervention strategy to reduce intergroup violence. According to GAM, extinguishing persistent intergroup violence should occur under the following circumstances. First, Group A may perceive that the outcome of further aggressive retaliation is sufficiently important and unsatisfying that they should engage in thoughtful, as opposed to impulsive, actions toward Group B. Next, Group B experiences Group A's thoughtful response, which should not increase its aggressive affect, cognition, or arousal. As a result, Group B does not perceive Group A as hostile and threatening, leading it to refrain from further aggressive retaliation. This is an upward spiral rather than a downward one (Slater, Henry, Swaim, & Anderson, 2003).

Thus, intergroup violence should stop in the appraisal and decision process component of GAM. But, of course, this can occur only if the thoughtful process results in a decision to de-escalate. Frequently, in international politics, this does not happen. In fact, formal political policies frequently endorse an escalation strategy on the oft-mistaken notion that "if we show the enemy that their provocations will only hurt them more, then they will back down." There may be cases, however, in which extreme escalation can end a conflict because one or more parties are simply unable to continue the escalation cycle.

Even in cases of vastly unequal power, however, "relative" escalation may occur (Anderson et al., 2008). That is, the weaker side may not be able to retaliate at the same level as the stronger side, but it still may retaliate more strongly than it did before. Indeed, much international terrorism has this characteristic.

The Israel–Palestinian conflict offers one example of how GAM can help explain how intergroup violence begins, persists—and how it can end. This intergroup conflict erupted several decades ago when Jews and Arabs exchanged violent attacks over a strip of land, alternately called Israel or Palestine, which Jews claim is their birthright and Palestinians claim as theirs.

When will the Israeli–Palestinian conflict end? A GAM-derived intervention would begin by encouraging citizens from Israel, Palestine, or both countries to perceive that the outcome of their country's retaliation is both important and unsatisfying. When this occurs, the relenting country will engage in reappraisal processing and thoughtful nonviolent action toward the other country. The opposing country will experience a thoughtful, as opposed to an impulsively aggressive, action from the other country, which will disrupt the internal states and appraisal and decision processes that usually accompany acts from the other group. For this to happen, of course, major belief systems (knowledge structures) must change and be replaced by a set of new beliefs, especially beliefs about each other and about the efficacy of violent competition versus nonviolent cooperation. This could be implemented through the use of advertising and marketing campaigns and changes in the public opinions and apologies expressed by political leaders.

Global Climate Change and Violence

To curb the relationship between global climate change and violence, GAM suggests two approaches. The first involves four steps designed to reduce greenhouse gas emissions and to reduce or slow climate change. Previous research has shown that people can be motivated to invest money in a fund to encourage people to reduce fossil fuel use if doing so can foster a positive social reputation (Milinski, Semmann, Krambeck, & Marotzke, 2006). A GAM-directed intervention would extend this prior work by changing not only aspects of the social situation related to fossil fuel use but also motivating people to change their beliefs regarding global climate change and its influence on violence as opposed to other outcomes.

First, widespread programs would attempt to change people's beliefs regarding the presence of global climate change and their attitudes toward activities that would reduce global climate change. Second, programs would seek to change aspects of the social situation that may increase behavior that would reduce global climate change. For example, organizations and communities can publicly reward their employees for using the fewest carbon emissions each month, which would establish a norm that limiting one's carbon emissions would be met with social acceptance and approval. Third, a GAM-driven intervention would seek to reduce negative emotions, cognitive processes, or arousal that people may experience in response to overtures to change their behavior to reduce global climate change. Among people who report that they do not monitor their carbon emissions because it increases their anxiety, interventionists can provide simple and easy solutions aimed at reducing anxiety or tension associated with changing their behaviors that reduce global climate change. Fourth, interventionists would seek to convince citizens that by not taking action to reduce global climate change, the result will have an important and unsatisfying effect on violence. In so doing, citizens will be motivated to engage in thoughtful action to engage in behaviors that will reduce global climate change. By reducing global climate change, such an intervention provides an effective means of reducing violence that occurs in its wake.

The second approach involves directly addressing the violence-enhancing effects of rapid climate change. Although the basic heat effect on aggressive tendencies is likely so subtle and automatic that it will difficult to short circuit, it may be that widespread education programs that inform people about the effects of heat-induced stress on aggression might well help some people to refrain from acting on aggressive impulses. More important, international programs can intervene on behalf of the other two climate change paths to violence. Well-mother and well-baby nutrition programs for the poor; improved birth control and family planning access and education; and improved education for all, especially for girls, can reduce the effects of poverty and climate-change-induced food and water shortages on the development of violence-prone individuals. Similarly, large-scale investment in flood and drought control and in general environmentally sensitive economic development in regions that have subsistence economies can reduce future resource crises that otherwise are likely to precipitate ecomigration and war.

Suicide

As noted earlier, suicide prevention programs are notoriously ineffective (Van Orden et al., 2010). Previously successful suicide prevention programs have involved providing people at risk for suicide with information about suicidal behavior and frequent follow-up contacts (Fleischmann et al., 2008; Motto & Bostrom, 2001), but it is unclear precisely why these interventions were successful. Because GAM focuses on understanding the mechanisms underlying suicidal behavior, it may provide a useful extension to these previous interventions.

A GAM-directed intervention would take a four-pronged approach to preventing suicide. First and second, therapists would identify personal (e.g., beliefs, attitudes, traits) and social (e.g., social rejection, employment, exposure to violence) factors known to increase the risk for suicide. After identifying an individual's personal and social "risk profile," the therapist would direct the individual to treatments directed at each specific risk

factor. For example, individuals who have positive beliefs about suicide may be exposed to therapeutic treatment aimed at changing the individual's suicide beliefs. Individuals who chronically feel rejected would be given opportunities for renewed affiliation, which quickly reduces the harmful effects of social rejection (DeWall, Baumeister, & Vohs, 2008; DeWall, Twenge, et al., 2010).

Third, therapists would identify whether an individual possesses emotional responses, cognitive processes, or arousal levels associated with a risk for suicide. After identifying those risk factors, the therapist would offer the individual treatments aimed at alleviating each risk factor. Among individuals who have become desensitized to graphic images and physical pain, for example, treatments would center on limiting exposure to situations that might increase such desensitization (e.g., exposure to weapons, violent media) and providing medical attention to limit any physical damage that may enhance the individual's desensitization. Fourth, therapists would motivate individuals to perceive suicide as having an outcome that is deeply important and unsatisfying for them personally and their loved ones. By focusing individuals to engage in such appraisal processes, individuals may be more likely to engage in thoughtful action that does not involve suicide.

Using GAM to Explain Nonviolent Behavior

Whereas the previous sections have emphasized how GAM can be used to explain violence in four novel ways, this section demonstrates that GAM also can be used to explain nonviolent behavior. Most theories of violence are used to explain the causes of these behaviors in contexts in which they occur somewhat frequently. At first blush, it might seem natural for GAM to be used only to explain behavior in societies marked by relatively frequent instances of violence. We argue that GAM also may be used to explain the nonoccurrence of violence in relatively peaceful societies.

There are not very many of them, but there are some societies in which *war* is a foreign word and violence is extremely rare (Bonta, 1997; Fry, 2007). For example, more than 100 years ago, the Fipa of western Tanzania transformed their society from one based on violence and war to one based on nonviolence and peace. The Fipa are very competitive in their business dealings, but the competition is constructive and peaceful (Willis, 1989). Another peaceful society is the Jains of India. The Jains believe in *ahimsa* (nonviolence), and they take vows to avoid any socially harmful acts, including stealing and telling lies.

But even in these largely peaceful societies, GAM can explain both the predominance of nonviolence and the rare cases in which people engage in violent and aggressive behavior. Because their lives are filled with largely cooperative and prosocial experiences, people embedded in highly peaceful societies do not develop enriched aggressive knowledge structures. As a result, violence and aggression in peaceful societies should occur primarily as a result of situational factors that give rise to internal states and appraisal and decision processes associated with impulsive actions.

GAM can also explain why peaceful societies remain peaceful—and how societies marked by frequent war and violence can become more peaceful. Unpleasant stimuli and interpersonal conflict are inevitable, which can increase aggressive affect, cognition, and arousal. But members of peaceful societies likely appraise the outcome of an aggressive action as a significant and unsatisfying break from norms that encourage cooperation and peaceful conflict resolution, leading them to engage in a thoughtful nonviolent action. In a similar fashion, societies marked by frequent violent conflicts can become less violent when norms that formerly advocated violence now encourage citizens to exercise self-control to override their violent impulses. The eminent sociologist Norbert Elias (1969, 1982) argued that European societal norms changed from the 9th century to the 19th century to encourage people to exercise restraint over their violent impulses and to shame

people who failed to do so, which Elias referred to as a “civilizing process.” Other work has shown that modern civilizations are the most peaceful in the history of the world in terms of deaths by war (Keeley, 1996) and murder (Eisner, 2003), presumably as a result of changes in the situational context that encourage people to override their violent impulses. Thus, although unpleasant stimuli and interpersonal conflict pervade human life, GAM argues that appraising the outcome of an aggressive action as important and unfulfilling can reduce the likelihood of violence and aggression even in peaceful societies.

Conclusion

This article has highlighted the strengths of a general theory of aggression. Specifically, GAM provides the only theoretical framework of aggression and violence that explicitly incorporates biological, personality development, social processes, basic cognitive processes, short-term and long-term processes, and decision processes. We not only have discussed the basic components of GAM, but we also have made several novel contributions to the development of GAM as a theoretical model. First, whereas GAM has been used primarily to explain aggression, we have demonstrated that GAM can also be used to explain violence. Second, GAM was developed to account for aggression between strangers, but we have shown that it can also be applied to understand IPV. Third, we have shown how GAM can help explain how changes in one's physical environment, such as climate change, can have direct implications for the safety and sustainability of that environment by increasing violence. Fourth, we have suggested that GAM may be applied to understand violence between groups of people and suicide. Fifth, we have explained how GAM can be used to inform interventions aimed at reducing IPV, violence between groups, violence that occurs as a result of global climate change, and suicide. Sixth, this article illustrates the utility of GAM for explaining nonviolent behavior, such as that found in societies in which war and violence are extremely rare.

There are some drawbacks, however, to GAM. Hints about the potential weakness of a general theory of aggression come from the attitude literature. In the attitudes domain, general attitudes can be poor predictors of specific behaviors (Ajzen & Fishbein, 1977). For example, a student's attitude toward college is a poor predictor of whether he or she will like a particular class. Similarly, GAM was proposed to offer a comprehensive, general view of human aggression. Domain-specific theories may do a better job predicting more specific behaviors.

The disadvantage of domain-specific aggression theories, however, is that they cannot capture the complexity of human aggression and violence. Human behavior, including aggressive and violent behavior, is complex and is multiply determined. GAM includes most if not all of the factors that can influence aggression and violence. When grappling to understand the causes of aggression, researchers and laypersons can use GAM to provide a glimpse into why a person or group behaved aggressively—and how that aggression can be reduced. Such global insights can prove very helpful to researchers working on more domain-specific models as well as practitioners involved in individual or intergroup violence. Ultimately, as we begin to understand the causes of aggression and violence, people may stop “harming all other living beings,” which is what Thomas Edison hoped would happen one day.

References

Ajzen, I., & Fishbein, M. (1977). Attitude–behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84, 888–918.

Anderson, C. A. (2001). Heat and violence. *Current Directions in Psychological Science*, 10, 33–38.

- Anderson, C. A., & Anderson, K. B. (2008). Men who target women: Specificity of target, generality of aggressive behavior. *Aggressive Behavior*, 34, 605–622.
- Anderson, C. A., Buckley, K. E., & Carnagey, N. L. (2008). Creating your own hostile environment: A laboratory examination of trait aggression and the violence escalation cycle. *Personality and Social Psychology Bulletin*, 34, 462–473.
- Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology*, 53, 27–51.
- Anderson, C. A., Bushman, B. J., & Groom, R. W. (1997). Hot years and serious and deadly assault: Empirical tests of the heat hypothesis. *Journal of Personality and Social Psychology*, 73, 1213–1223.
- Anderson, C. A., & Carnagey, N. L. (2004). Violent evil and the general aggression model. In A. Miller (Ed.), *The Social Psychology of Good and Evil*. pp. 168–192. New York: Guilford Publications.
- Anderson, C. A., & DeLisi, M. (in press). Implications of global climate change for violence in developed and developing countries. In J. Forgas, A. Kruglanski, & K. Williams (Eds.), *Social conflict and aggression*. New York: Psychology Press.
- Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., . . . Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries. *Psychological Bulletin*, 136, 151–173.
- Anisman, H., Du, L., Palkovits, M., Faludi, G., Kovacs, G. G., Szontagh-Kishazi, P., . . . Poulter, M. O. (2008). Serotonin receptor subtype and p11 mRNA expression in stress-relevant brain regions of suicide and control subjects. *Journal of Psychiatry and Neuroscience*, 33, 131–141.
- Bandura, A. (1973). *Aggression: A social learning theory analysis*. Englewood Cliffs, NJ: Prentice Hall.
- Bartholow, B. D., Bushman, B. J., & Sestir, M. A. (2006). Chronic violent video game exposure and desensitization: Behavioral and event-related brain potential data. *Journal of Experimental Social Psychology*, 42, 532–539.
- Berkowitz, L. (1989). Frustration–aggression hypothesis: Examination and reformulation. *Psychological Bulletin*, 106, 59–73.
- Berscheid, E., & Regan, P. (2005). *The psychology of interpersonal relationships*. New York: Prentice Hall.
- Bonta, B. D. (1997). Cooperation and competition in peaceful societies. *Psychological Bulletin*, 121, 299–320.
- Borsook, T. K., & MacDonald, G. (2010). Mildly negative social encounters reduce physical pain sensitivity. *Pain*, 151, 372–377.
- Brent, D. A., Johnson, B. A., Perper, J., Connolly, J., Bridge, J., Bartle, S., & Rather, C. (1994). Personality disorder, personality traits, impulsive violence, and completed suicide in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 33, 1080–1086.
- Burke, M. B., Miguel, E., Satyanath, S., Dykema, J. A., & Lobell, D. B. (2009). Warming increases the risk of civil war in Africa. *Proceedings of the National Academy of Sciences, USA*, 106, 20670–20674.

Bushman, B. J., & Anderson, C. A. (2001). Is it time to pull the plug on the hostile versus instrumental aggression dichotomy? *Psychological Review*, 108, 273–279.

Bushman, B. J., & Huesmann, L. R. (2010). Aggression. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., pp. 833–863). New York: John Wiley & Sons.

Central Bureau of Statistics. (2009). *Israel in figures: 2009*. Retrieved from http://www1.cbs.gov.il/publications/isr_in_n09e.pdf

Cote, S., Vaillancourt, T., LeBlanc, J., Nagin, D. W., & Tremblay, R. E. (2006). The development of physical aggression from toddlerhood to pre-adolescence: A nationwide longitudinal study of Canadian children. *Journal of Abnormal Child Psychology*, 34, 71–85.

DeLisi, M. (2005). *Career criminals in society*. Thousand Oaks, CA: Sage.

DeWall, C. N., & Anderson, C. A. (2011). The General Aggression Model. In M. Mikulincer & P. R. Shaver (Eds.), *Understanding and reducing aggression, violence, and their consequences* (pp. 15–33). Washington, DC: American Psychological Association.

DeWall, C. N., & Baumeister, R. F. (2006). Alone but feeling no pain: Effects of social exclusion on physical pain tolerance and pain threshold, affective forecasting, and interpersonal empathy. *Journal of Personality and Social Psychology*, 91, 1–15.

DeWall, C. N., Baumeister, R. F., Stillman, T. F., & Gailliot, M. T. (2007). Violence restrained: Effects of self-regulatory capacity and its depletion on aggressive behavior. *Journal of Experimental Social Psychology*, 43, 62–76.

DeWall, C. N., Baumeister, R. F., & Vohs, K. D. (2008). Satiated with belongingness? Effects of acceptance, rejection, and task framing on self-regulatory performance. *Journal of Personality and Social Psychology*, 95, 1367–1382.

DeWall, C. N., & Bushman, B. J. (2009). Hot under the collar in a lukewarm environment: Hot temperature primes increased aggressive thoughts and hostile perceptions. *Journal of Experimental Social Psychology*, 45, 453–459.

DeWall, C. N., MacDonald, G., Webster, G. D., Masten, C., Baumeister, R. F., Powell, C., . . . Eisenberger, N. I. (2010). Acetaminophen reduces social pain: Behavioral and neural evidence. *Psychological Science*, 21, 931–937.

DeWall, C. N., Twenge, J. M., Bushman, B. J., Im, C., & Williams, K. D. (2010). Acceptance by one differs from acceptance by none: Applying social impact theory to the rejection–aggression link. *Social Psychological and Personality Science*, 1, 168–174.

DeWall, C. N., Twenge, J. M., Gitter, S. A., & Baumeister, R. F. (2009). It's the thought that counts: The role of hostile cognition in shaping aggressive responses to social exclusion. *Journal of Personality and Social Psychology*, 96, 45–59.

Dolan, M., Anderson, I. M., & Deakin, J. F. (2001). Relationship between 5-HT function and impulsivity and aggression in male offenders with personality disorders. *British Journal of Psychiatry*, 178, 352–359.

- Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.
- Eckhardt, C. I. (2007). Effects of alcohol intoxication on anger experience and expression among partner assaultive men during anger arousal. *Journal of Consulting and Clinical Psychology, 75*, 61–71.
- Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003, October 10). Does rejection hurt? An fMRI study of social exclusion. *Science, 302*, 290–292.
- Eisner, M. (2003). Long-term historical trends in violent crime. *Crime and Justice; A Review of Research, 30*, 83–142.
- Elias, N. (1969). The civilizing process. *Vol. I: The history of manners*. Oxford, England: Blackwell.
- Elias, N. (1982). The civilizing process. *Vol. II: State formation and civilization*. Oxford, England: Blackwell.
- Fincham, F. D., Bradbury, T. N., Arias, I., Byrne, C. A., & Karney, B. R. (1997). Marital violence, marital distress, and attributions. *Journal of Family Psychology, 11*, 367–372.
- Fincham, F. D., Cui, M., Braithwaite, S. R., & Pasley, K. (2008). Attitudes toward intimate partner violence in dating relationships. *Psychological Assessment, 20*, 260–269.
- Finkel, E. J. (2007). Impelling and inhibiting forces in the perpetration of intimate partner violence. *Review of General Psychology, 11*, 193–207.
- Finkel, E. J., DeWall, C. N., Slotter, E. B., Oaten, M., & Foshee, V. A. (2009). Self-regulatory failure and intimate partner violence perpetration. *Journal of Personality and Social Psychology, 97*, 483–499.
- Fleischmann, A., Bertolote, J. M., Wasserman, D., De Leo, D., Bolhari, J., Botega, N. J., . . . Than, H. T. (2008). Effectiveness of brief intervention and contact for suicide attempters: A randomized controlled trial in five countries. *Bulletin of the World Health Organization, 86*, 703–709.
- Follingstad, D. R., Bradley, R. G., Helff, C. M., & Laughlin, J. E. (2002). A model for predicting dating violence: Anxious attachment, angry temperament and need for relationship control. *Violence and Victims, 17*, 35–47.
- Foran, H. M., & O'Leary, K. D. (2008). Alcohol and intimate partner violence: A meta-analytic review. *Clinical Psychology Review, 28*, 1222–1234.
- Fry, D. P. (2007). *Beyond war*. New York: Oxford University Press.
- Heise, L. (1998). Violence against women: An integrated, ecological framework. *Violence Against Women, 4*, 262–290.
- Holtzworth-Munroe, A., Bates, L., Smutzler, N., & Sandin, E. (1997). A brief review of the research on husband violence. *Aggression and Violent Behavior, 1*, 65–99.
- Hove, M. C. B., Parkhill, M. R., Neighbors, C., McConchie, J. M., & Fossos, N. (2010). Alcohol consumption and intimate partner violence perpetration among college students: The role of self-determination. *Journal of Studies on Alcohol and Drugs, 71*, 78–85.

- Huesmann, L. R. (1986). Psychological processes promoting the relation between exposure to media violence and aggressive behavior by the viewer. *Journal of Social Issues*, 42, 125–139.
- Insko, C. A., Schopler, J., Hoyle, R. H., Dardis, G. J., & Graetz, K. A. (1990). Individual–group discontinuity as a function of fear and greed. *Journal of Personality and Social Psychology*, 58, 68–79.
- Keeley, L. H. (1996). *War before civilization: The myth of the peaceful savage*. Oxford, England: Oxford University Press.
- Ledgerwood, A., & Chaiken, S. (2007). Priming us and them: Automatic assimilation and contrast in group attitudes. *Journal of Personality and Social Psychology*, 93, 940–956.
- Liu, J., Raine, A., Venables, P. H., & Mednick, S. A. (2004). Malnutrition at age 3 years and externalizing behavior problems at ages 8, 11, and 17 years. *The American Journal of Psychiatry*, 161, 2005–2013.
- Marshall, A. D., & Holtzworth-Munroe, A. (2010). Recognition of wives' emotional expressions: A mechanism in the relationship between psychopathology and intimate partner violence perpetration. *Journal of Family Psychology*, 24, 21–30.
- McCloskey, M. S., & Berman, M. E. (2003). Alcohol intoxication and self-aggressive behavior. *Journal of Abnormal Psychology*, 112, 306–311.
- McDermott, R., Tingley, D., Cowden, J., Frazzetto, G., & Johnson, D. D. P. (2009). Monoamine oxidase A gene (MAOA) predicts behavioral aggression following provocation. *Proceedings of the National Academy of Sciences, USA*, 106, 2118–2123.
- Milinski, M., Semmann, D., Krambeck, H.-J., & Marotzke, J. (2006). Stabilizing the Earth's climate is not a losing game: Supporting evidence from public goods experiments. *Proceedings of the National Academy of Sciences, USA*, 103, 3994–3998.
- Mischel, W., & Shoda, Y. (1995). A cognitive–affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review*, 102, 246–268.
- Motto, J. A., & Bostrom, A. G. (2001). A randomized controlled trial of postcrisis suicide prevention. *Psychiatric Services*, 52, 828–833.
- Nademin, E., Jobes, D. A., Pflanz, S. E., Jacoby, A. M., Ghahramanlou-Holloway, M., Campise, R., . . . Johnson, L. (2008). An investigation of interpersonal–psychological variables in Air Force suicides: A controlled-comparison study. *Archives of Suicide Research*, 12, 309–326.
- Newport, F. (2009). *This Christmas, 78% of Americans identify as Christian*. Retrieved from <http://www.gallup.com/poll/124793/this-christmas-78-americans-identify-christian.aspx>
- Ohberg, A., Vuori, E., & Ojanpera, I. (1996). Alcohol and drugs in suicides. *British Journal of Psychiatry*, 169, 75–80.
- Parry, M. L., Canziani, O. F., Palutikof, J. P., van der Linden, P. J., & Hanson, C. E. (Eds.). (2007). *Intergovernmental Panel on Climate Change*. Cambridge, England: Cambridge University Press.

- Renaud, J., Berlim, M. T., McGirr, A., Tousignant, M., & Turecki, G. (2008). Current psychiatric morbidity, aggression/impulsivity, and personality dimensions in child and adolescent suicide: A case-control study. *Journal of Affective Disorders*, 105, 221–228.
- Rojas, Y., & Stenberg, S.-A. (2010). Early life circumstances and male suicide—A 30-year follow-up of a Stockholm cohort born in 1953. *Social Science & Medicine*, 70, 420–427.
- Schafer, J., Caetano, R., & Clark, C. (1998). Rates of intimate partner violence in the United States. *American Journal of Public Health*, 88, 1702–1704.
- Schumacher, J. A., Feldbau-Kohn, S. R., Slep, A. M. S., & Heyman, R. E. (2001). Risk factors for male-to-female partner physical abuse. *Aggression and Violent Behavior*, 6, 281–352.
- Shechtman, Z., & Ifargan, M. (2009). School-based integrated and segregated interventions to reduce aggression. *Aggressive Behavior*, 35, 342–356.
- Slater, M. D., Henry, K. L., Swaim, R. C., & Anderson, L. L. (2003). Violent media content and aggressiveness in adolescents: A downward spiral model. *Communication Research*, 30, 713–736.
- Sluka, J. (1992). The anthropology of conflict. In C. Nordstrom & J. Martin (Eds.), *The paths to domination, resistance, and terror* (pp. 18–36). Berkeley: University of California Press.
- Sonkin, D., & Liebert, D. S. (2003). The assessment of court-mandated perpetrators of domestic violence. *Journal of Aggression, Maltreatment, & Trauma*, 6, 3–36.
- Straus, M. A., & Ramirez, I. L. (2002, July). *Gender symmetry in prevalence, severity, and chronicity of physical aggression against dating partners by university students in Mexico and USA*. Paper presented at the XV World Meeting of the International Society for Research on Aggression, Montreal, Canada.
- Tedeschi, J. T., & Felson, R. B. (1994). *Violence, aggression, and coercive actions*. Washington, DC: American Psychological Association.
- Van Orden, K. A., Merrill, K. A., & Joiner, T. E., Jr. (2005). Interpersonal-psychological precursors to suicidal behavior: A theory of attempted and completed suicide. *Current Psychiatry Reviews*, 1, 187–196.
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. *Psychological Review*, 117, 575–600.
- Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E., Jr. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology*, 76, 72–83.
- Willis, R. (1989). The "peace puzzle" in Ufipa. In S. Howell & R. Willis (Eds.), *Societies at peace: Anthropological perspectives* (pp. 133–145). London: Routledge.
- World Health Organization. (2008). *Suicide statistics: Introduction*. Retrieved from http://www.who.int/mental_health/prevention/suicide/suicideprevent/en/print.html
- Zhang, D. D., Zhang, J., Lee, H. F., & He, Y.-Q. (2007). Climate change and war frequency in Eastern China over the last millennium. *Human Ecology*, 35, 403–414.

Zillmann, D. (1983). Arousal and aggression. In R. G. Geen & E. Donnerstein (Eds.), *Aggression: Theoretical and empirical reviews* (Vol. 1, pp. 75–102). New York: Academic Press.

Submitted: August 6, 2010 *Revised:* March 23, 2011 *Accepted:* March 28, 2011

Copyright Clearance Center, Inc. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without prior written permission from the Copyright Clearance Center, Inc.

This publication is protected by US and international copyright laws and its content may not be copied without the copyright holders express written permission except for the print or download capabilities of the retrieval software used for access. This content is intended solely for the use of the individual user.

Source: Psychology of Violence. Vol. 1. (3), Jul, 2011 pp. 245-258)

Accession Number: 2011-11061-001

Digital Object Identifier: 10.1037/a0023842

Record: 1

Title: Understanding the psychology of bullying: Moving toward a social-ecological diathesis–stress model.

Authors: Swearer, Susan M.. Department of Educational Psychology, University of Nebraska–Lincoln, Lincoln, NE, US, sswearer@unl.edu
Hymel, Shelley. Faculty of Education, Department of Educational and Counselling Psychology and Special Education, University of British Columbia, Canada, shelley.hymel@ubc.ca

Address: Swearer, Susan M., Department of Educational Psychology, University of Nebraska–Lincoln, 40 Teachers College Hall, Lincoln, NE, US, 68588-0345, sswearer@unl.edu

Source: American Psychologist, Vol 70(4), May-Jun, 2015. Special Issue: School Bullying and Victimization. pp. 344-353.

Publisher: US : American Psychological Association

ISSN: 0003-066X (Print)
1935-990X (Electronic)

ISBN: 1-4338-2101-X
978-1-4338-2101-1

Language: English

Keywords: bullying, victimization, diathesis–stress, social-ecological

Document Type: Journal Article

Subjects: *Diathesis Stress Model; *Social Environments; *Victimization; *Behavioral Ecology; *Bullying

PsycINFO Classification: Behavior Disorders & Antisocial Behavior (3230)

Population: Human

Age Group: Childhood (birth-12 yrs)
School Age (6-12 yrs)
Adolescence (13-17 yrs)

Grant Sponsorship: Sponsor: Andrew Gomez Dream Foundation
Recipients: Swearer, Susan M.

Sponsor: Woods Charitable Fund
Recipients: Swearer, Susan M.

Sponsor: University of Nebraska at Lincoln, College of Education and Human Sciences
Recipients: Swearer, Susan M.

Sponsor: Edith Lando Charitable Foundation
Recipients: Hymel, Shelley

Sponsor: University of British Columbia

Other Details: Faculty of Education Infrastructure Grant
Recipients: Hymel, Shelley

Sponsor: Canadian Prevention Science Cluster
Other Details: funded through the Social Sciences and Humanities
Research Council of Canada
Recipients: Hymel, Shelley

Format Covered: Electronic

Publication Type: Journal; Peer Reviewed Journal

Release Date: 20150511

Copyright: American Psychological Association. 2015

Digital Object Identifier: <http://dx.doi.org.proxy-library.ashford.edu/10.1037/a0038929>

PsycARTICLES Identifier: amp-70-4-344

Accession Number: 2015-20405-006

Number of Citations in Source: 142

Database: PsycARTICLES

Understanding the Psychology of Bullying : Moving Toward a Social-Ecological Diathesis–Stress Model

By: Susan M. Swearer

Department of Educational Psychology, University of Nebraska–Lincoln and Born This Way Foundation, Los Angeles, California;;

Shelley Hymel

Faculty of Education, Department of Educational and Counselling Psychology and Special Education, University of British Columbia;;

Acknowledgement: Susan M. Swearer and Shelley Hymel are Co-Directors of the Bullying Research Network (<http://brnet.unl.edu>)

The authors wish to acknowledge the support received for this work, including support to the first author from the Andrew Gomez Dream Foundation, the Woods Charitable Fund, and the College of Education and Human Sciences at the University of Nebraska at Lincoln, and support to the second author from the Edith Lando Charitable Foundation, the University of British Columbia Faculty of Education Infrastructure Grant, and the Canadian Prevention Science Cluster, funded through the Social Sciences and Humanities Research Council of Canada.

Note: This article is one of six in the "School Bullying and Victimization" special issue of the *American Psychologist* (May–June 2015). Susan M. Swearer and Shelley Hymel provided the scholarly lead for the special issue.

Bullying is a unique but complex form of interpersonal aggression, which takes many forms, serves different functions, and is manifested in different patterns of relationships. Bullying is not simply a dyadic problem between a bully and a victim, but is recognized as a group phenomenon, occurring in a social context in which various factors serve to promote, maintain, or suppress such behavior (e.g., Olweus, 2001; Rodkin & Hodges, 2003; Salmivalli, 2001). Accordingly, researchers have argued for the utility of a social-ecological framework in understanding school bullying (Espelage, Rao, & de la Rue, 2013; Espelage & Swearer, 2010; Hong &

Garbarino, 2012; Swearer & Espelage, 2004; Swearer et al., 2012). Social ecological theory (Bronfenbrenner, 1979) conceptualizes human development as a bidirectional interaction between individuals and the multiple systems in which they operate—home, neighborhood, school, community, and society. Thus, bullying behavior is not just the result of individual characteristics, but is influenced by multiple relationships with peers, families, teachers, neighbors, and interactions with societal influences (e.g., media, technology). Peer witnesses to bullying are also at risk for negative outcomes (Rivers, Poteat, Noret, & Ashurst, 2009), even after controlling for involvement as bullies or victim (Bonanno & Hymel, 2006).



Susan M. Swearer



Shelley Hymel

Complicating our understanding of the consequences of bullying and victimization is recent research documenting the dynamic and fluid nature of children's involvement in bullying across roles and over time. Among youth who are involved in bullying, Ryoo, Wang, and Swearer (2014) found that frequent victims and frequent perpetrators were the least stable subgroups, and that students assumed different roles in bullying across school years. Indeed, youth can observe bullying (i.e., bystanders), experience bullying (i.e., victims), and perpetrate bullying (i.e., bullies) across different situations and/or over time. Across contexts, for instance, a student may be victimized by classmates at school but bully his or her siblings at home. Longitudinal studies by Haltigan and Vaillancourt (2014) and Barker, Arseneault, Brendgen, Fontaine, and Maughan (2008) explored the joint trajectories of involvement in bullying and victimization over time among 9- to 12-year-old and 11- to 16-year-olds, respectively, with similar results. Most students (73% and 75%, respectively) showed

low levels of bullying and victimization over time (low/uninvolved students), and 11% (both studies) showed trajectories that would identify them as bullies. Another 10% and 3% of students, respectively, would be classified as victims and 2% (Barker et al. only) as bully-victims. However, 6% and 3% of students, respectively, showed a pattern of declining victimization and increased bullying over time (victim to bully subgroup), a trajectory that was more likely than one in which bullies are increasingly victimized. Importantly, these distinct patterns of involvement are associated with different mental health outcomes.

Researchers have long demonstrated that being involved as both a perpetrator and victim seems to compound the impact of bullying, with bully-victims experiencing worse outcomes than either bullies or victims, being at greater risk for anxiety, depression, low self-esteem, self-harm, suicidal ideation and suicidality, physical injury, substance abuse, negative attitudes toward school, absenteeism, poor perceptions of school safety, aggression, and delinquency (e.g., Berkowitz & Benbenishty, 2012; Copeland, Wolke, Angold, & Costello, 2013; Kumpulainen, Räsänen, & Puura, 2001; Srabstein & Piazza, 2008). In their trajectory analysis, Haltigan and Vaillancourt (2014) further demonstrated that, relative to low-involvement students and after controlling for initial psychopathology, stable victims showed elevated levels of depression, attention-deficit hyperactivity disorder, and anxiety, whereas stable bullies reported higher levels of anxiety, and those who shifted from victimization to bullying reported more anxiety, depression, and somatization. Such findings underscore the importance of considering a child's history of involvement in bullying over time, and to move beyond the "dyadic bias" (Espelage & Swearer, 2003) and view bullying as a dynamic experience, influenced by the social ecology. In this article, we summarize some of these complexities in support of a social-ecological perspective on bullying, and then expand our lens to propose the application of a diathesis–stress model that can further our understanding of the dynamics of bullying among children and youth.

Correlates and Contributing Factors in the Bullying/Victimization Dynamic

Individual Influences

In terms of individual factors, bullying perpetration has been associated with callous-unemotional traits (Muñoz, Quatter, & Padgett, 2011; Viding, Simmonds, Petrides, & Frederickson, 2009), psychopathic tendencies (Fanti & Kimonis, 2012), endorsement of masculine traits (Gini & Pozzoli, 2006; Navarro, Larrañaga, & Yubero, 2011), conduct problems (Cook, Williams, Guerra, Kim, & Sadek, 2010), antisocial personality traits (Ferguson, San Miguel, & Hartley, 2009; Vaughn et al., 2010), susceptibility to peer pressure (Monks & Smith, 2006; Pepler, Craig, & O'Connell, 2010), anxiety (e.g., Craig, 1998; Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000), and depression (e.g., Ferguson et al., 2009). At least some students who bully their peers have been found to be higher in social intelligence (Björkqvist, Österman, & Kaukiainen, 2000; Sutton, Smith, & Swettenham, 1999a, 1999b) and social status (Vaillancourt, Hymel, & McDougall, 2003), with researchers distinguishing between socially integrated and socially marginalized bullies (e.g., Farmer et al., 2010; see Rodkin, Espelage, & Hanish, 2015).

Being bullied by peers (victimization) has been linked with poor physical health (e.g., Gini & Pozzoli, 2013; Knack, Jensen-Campbell, & Baum, 2011) and poor school adjustment, including being unhappy, feeling unsafe, being truant, performing poorly and, in some cases, dropping out of school (e.g., Card, Isaacs, & Hodges, 2007; Graham, Bellmore, & Juvonen, 2007; Juvonen, Nishina, & Graham, 2000; Konishi, Hymel, Zumbo, & Li, 2010; Slee & Rigby, 1993; Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004). Victimization has also been associated with a host of internalizing and externalizing difficulties (see Card et al., 2007, and Espelage & Holt, 2001, for reviews), including loneliness and withdrawal (e.g., Graham & Juvonen, 1998a; Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999), anxiety and social avoidance (Craig, 1998; Espelage & Holt, 2001; Graham, & Juvonen, 1998b), depression (e.g., Craig, 1998; Kaltiala-Heino et al.,

1999), and suicidal ideation (Bonanno & Hymel, 2010; Kaltiala-Heino et al., 1999), as well as hyperactivity (Kumpulainen et al., 2001), delinquency, and aggression (e.g., Hanish & Guerra, 2000). Victims are also less well liked (e.g., Spriggs, Iannotti, Nansel, & Haynie, 2007), less accepted, and more rejected by peers (Cullerton-Sen & Crick, 2005; Graham et al., 2007; Veenstra et al., 2007).

Unfortunately, the causal nature of these relationships is unclear. Given the multidirectionality of the social-ecological model and the principles of equifinality and multifinality (Cicchetti & Rogosch, 1996), it is likely that context influences the extent to which these individual factors function as antecedents, contributing factors, or consequences of involvement in bullying. An aggressive youth diagnosed with conduct disorder might bully others because of a predisposing trait related to the diagnosis of conduct disorder. Alternatively, youth who are "rewarded" for bullying behaviors (e.g., through enhanced status or popularity, access to goods) may continue bullying, develop further aggressive behaviors, and eventually meet criteria for a diagnosis of conduct disorder. Shy youth might appear more vulnerable, making them appealing targets of victimization. Alternatively, someone who is bullied may develop a shy and withdrawn, perhaps anxious, demeanor as a result of such treatment. Thus, our understanding of the psychology of bullying/victimization is much like the "chicken or egg" conundrum.

Family Influences

A number of family characteristics have been linked to bullying perpetration, including family members' involvement in gangs, poor parental supervision, negative family environment, parental conflict, domestic violence, low parental communication, lack of parent emotional support, authoritarian parenting, inappropriate discipline, and parental abuse (Baldry, 2003; Baldry & Farrington, 1999; Barboza et al., 2009; Bowes et al., 2009; Cook et al., 2010; Espelage, Bosworth, & Simon, 2000; Espelage & Swearer, 2010; Ferguson et al., 2009; Pepler, Jiang, Craig, & Connolly, 2008). Although such findings are consistent with arguments that aggressive modeling and poor parental supervision contribute to bullying, causal direction has not been clearly established and the impact of families after controlling for hereditary influences remains unclear, as genetic factors have been shown to account for 61% of the variation in bullying behavior (Ball et al., 2008). Family influences on victimization have been more elusive, but include links to abuse, neglect, and overprotective parenting (see Duncan, 2011).

Peer Influences

Youth spend much of the day interacting with peers in schools, neighborhoods, communities, and through social media, and bullying behaviors almost always occur within the peer context (Pepler et al., 2010). Bullying and victimization are more likely in classrooms characterized by peer norms that support bullying (e.g., Craig & Pepler, 1997; Salmivalli & Voeten, 2004), and by high peer conflict (Pepler et al., 2010). Affiliation with aggressive peers is also associated with greater bullying perpetration (Espelage, Holt, & Henkel, 2003; Ferguson et al., 2009), as is peer victimization (Barboza et al., 2009), and negative relationships with classmates (Bacchini, Esposito, & Affuso, 2009). Again, however, the correlational nature of these studies makes causal interpretation difficult, and several of these associations may simply reflect *homophily*, the tendency to affiliate with similar peers.

One of the most extensively researched peer influences on school bullying is that of bystanders. Observational studies have shown that, on average, two to four peers are present in the vast majority (85% to 88%) of bullying incidents (O'Connell, Pepler, & Craig, 1999; Pepler et al., 2010). Bystanders, however, often respond in ways that encourage rather than discourage bullying (Doll, Song, & Siemers, 2004; Pellegrini & Long, 2004). For example, Craig and Pepler (1997; and see O'Connell et al., 1999) observed that peer bystanders actively joined in with bullying 21% of the time, only intervened on behalf of victims in 25% of incidents, and were most

often observed to passively watch (54%)—a response that may well be interpreted as condoning such behavior. According to peer perceptions (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996), about 20% of students are viewed as encouraging bullying, and another 7% as actively supporting or participating in the bullying. Only 17% of students, mostly girls, are identified by peers as defenders who intervened on behalf of victims. Given these findings, many focus on bystanders as a critical resource in antibullying efforts (e.g., Hazler, 1996), with peer support emphasized as a key component in school-based antibullying efforts (e.g., Salmivalli, Kärnä, & Poskiparta, 2010). Unfortunately, with age, bystanders become increasingly passive in their responses and less likely to advocate for victims (Marsh et al., 2011; Trach, Hymel, Waterhouse, & Neale, 2010). Those who defend victims have greater empathy (at least boys) and greater social self-efficacy (Gini, Albiero, Benelli, & Altoè, 2007, 2008), are usually higher in social status (popularity) and better liked (e.g., Caravita, DiBlasio, & Salmivalli, 2009; Salmivalli et al., 1996), not only by the victims they defend but also by the broader peer group (Sainio, Veenstra, Huitsing, & Salmivalli, 2011). High social status may lend confidence to one's capacity to intervene and reduce concerns about retaliation. Bystanders are also more likely to defend victims if they feel angry (Rocke Henderson & Hymel, 2011; Sokol, Bussey, & Rapee, 2014), what Vitaglione and Barnett (2003) refer as *empathic anger* in adults.

School Influences

Bullying has been most studied in the school context, and the positive or negative climate of the school impacts the frequency of bullying and victimization (e.g., Gendron, Williams, & Guerra, 2011; Marsh et al., 2012; Richard, Schneider, & Mallet, 2011; Wang, Berry, & Swearer, 2013). Higher levels of bullying and victimization have been linked to inappropriate teacher responses (e.g., Bauman & Del Rio, 2006), poor teacher–student relationships (Bacchini et al., 2009; Doll et al., 2004; Richard et al., 2011), lack of teacher support, and lack of engagement in school activities (Barboza et al., 2009). Students are also less likely to report bullying if they see their school climate as negative (Unnever & Cornell, 2004). The relationship between school climate and bullying/victimization may be bidirectional, however, with poor school climate contributing to bullying and vice versa.

Community/Cultural Influences

Beyond families, peers, and schools, there is the influence of communities and the larger society, with higher levels of bullying linked to negative or unsafe neighborhoods (e.g., Chaux, Molano, & Podlesky, 2009; Espelage et al., 2000), gang affiliation (e.g., White & Mason, 2012), and poverty (Bradshaw, Sawyer, & O'Brennan, 2009). Research has also linked bullying perpetration to exposure to violent TV (Barboza et al., 2009) and video games (Ferguson et al., 2009; Janssen, Boyce, & Pickett, 2012; Olson et al., 2009). Generally, increased bullying and victimization are found in communities in which violence is modeled and/or condoned, although, again, the causal nature of these relationships remains unclear.

Summary

As these findings suggest, bullying and victimization do not occur in isolation. Rather, bullying stems from complex interactions between individuals and the contexts in which they function, both proximal (i.e., family, peers, school climate) and distal (i.e., societal, cultural influences). Accordingly, multiple systems must be targeted in order for bullying prevention and intervention programs to be effective (e.g., O'Donnell, Hawkins, & Abbott, 1995; Rodkin, 2004; Swearer & Espelage, 2004). Although demonstrations of causality remain an important task for future research, these findings begin to set out a road map that guides prevention and intervention efforts, both in schools and communities (see Bradshaw, 2015).

Consequences of Bullying/Victimization

Although it is widely understood that involvement in bullying causes problems for victims (see McDougall & Vaillancourt, 2015), children and youth who bully are also at risk for many of the same problems. Studies addressing issues of causality have found that bullying perpetration often leads to anxiety and depression (Baldry, 2004), social withdrawal and delinquent behavior (Bender & Lösel, 2011), poor academic achievement (Ma, Phelps, Lerner, & Lerner, 2009), and adult diagnosis of antisocial personality disorder (Copeland et al., 2013). Thus, bully perpetrators experience adverse psychosocial consequences, a result that does not garner much empathy, given the public's advocacy for suspension, expulsion, and incarceration for aggressive behavior. To understand how involvement in bullying/victimization can lead to such diverse outcomes, we consider a diathesis–stress model, borrowed from developmental psychopathology, magnifying the social-ecological lens.

Understanding the Relationship Between Psychopathology and Bullying/Victimization

Diathesis–stress models propose that psychopathology occurs as the result of the combination of individual cognitive or biological vulnerabilities (i.e., diatheses) and certain environmental stressors (Cicchetti & Toth, 1998; Lazarus, 1993). Further, these models posit that both negative life events and one's cognitions about those events contribute to the development of internalizing and externalizing psychopathology. In exploring the utility of a diathesis–stress model in understanding school bullying, we consider involvement in bullying, as either a victim or perpetrator, as a negative life event that, when mixed with certain cognitive, biological, and social vulnerabilities (i.e., diatheses), leads to the development of internalizing and externalizing psychopathology and impaired social relationships. Diathesis–stress models have received considerable empirical support (e.g., Garber & Hilsman, 1992; Gibb & Alloy, 2006), and have contributed to our understanding of relational stressors and depressive symptoms (Chango, McElhaney, Allen, Schad, & Marston, 2012), peer exclusion (Gazelle & Ladd, 2003), and compulsive Internet use (van der Aa et al., 2009). We view bullying as a stressful life event that places vulnerable youth at risk for a host of negative outcomes (Ferguson et al., 2009; Kaltiala-Heino et al., 2000), regardless of type of involvement (e.g., bully, bully-victim, victim).

Diathesis–Stress and Internalizing Problems

Stressful life events play a primary role in the development of depression (Garber & Horowitz, 2002; Hammen & Rudolph, 2003), anxiety (Leen-Feldner, Zvolensky, & Feldner, 2006), and posttraumatic stress disorder (Bernstein et al., 2005). For example, major negative life events (e.g., parental loss or divorce, peer problems) are related to the onset and maintenance of depressive symptoms (Hammen, 1991; Hammen & Rudolph, 2003) that, in cyclical fashion, lead to additional negative life events and later depressive symptoms (e.g., Potthoff, Holahan, & Joiner, 1995). Negative life events are also related to the onset and maintenance of anxiety disorders, with anxious individuals seeing the world as a threatening place, and interpreting events through a lens of worry and fear (Beck, Emery, & Greenberg, 1985). Gazelle and Ladd (2003) suggest that children's feelings of anxiety about social situations, when paired with behavioral inhibition, can serve as a cognitive diathesis, with peer victimization functioning as an added stressor. Schmidt, Polak, and Spooner (2001) found that the experience of stressful life events, such as peer rejection, by individuals with a genetic diathesis can lead to different physiological reactions (e.g., changes in heart rate, cortisol, electroencephalogram [EEG] activity), which are too uncomfortable for the individual to maintain engagement in the social situation. Negative peer experiences, in turn, confirm that the world is a threatening place, leading to more worry about peer interactions, which, in turn, are linked to internalizing and externalizing difficulties (Kearney, 2001).

One rather clear example of the potential applicability of a diathesis–stress model to the outcomes associated with the stress of peer victimization considers the impact of a biological vulnerability. Consistent with a

diathesis–stress model, recent research on the biological factors underlying depression has documented the moderating role played by the serotonin transporter gene, 5-HTTLPR, in the relationship between stress and depression (Karg, Burmeister, Shedden, & Sen, 2011). For example, Caspi and colleagues (2003) found that maltreated children who possess a “short-short” allele for the 5-HTTLPR polymorphism were far more likely to be depressed as adults than those with a short-long or long-long allele, who were found to be no more risk for depression than nonmaltreated children. Extending the diathesis–stress model of depression to our understanding of childhood peer victimization, researchers have shown that victimized children with the short-short allele are more likely to be depressed than those with the long-long allele (Benjet, Thompson, & Gotlib, 2010; Iyer, Dougall, & Jensen-Campbell, 2013). Longitudinally, victimized children with the short-short allele for 5HTTLPR have also been found to be at greater risk for emotional problems (Sugden et al., 2010; see Vaillancourt, Hymel, & McDougall, 2013, for a fuller discussion).

Consistent with our arguments for consideration of both a diathesis–stress model and a social-ecological model of peer victimization, recent twin research by Brendgen and colleagues has shown how the impact of genetic predispositions can vary as a function of school context. Specifically, they found that a genetic disposition for aggression placed students at greater risk for peer victimization in classes in which norms for aggressive behavior were negative, but seemed to operate as a protective factor, reducing the likelihood of peer victimization, when students were in classrooms with norms favoring aggression (Brendgen, Girard, Vitaro, Dionne, & Boivin, 2013a). Brendgen et al. (2011) also found that a positive teacher–student relationship mitigated the link between peer victimization and a genetic predisposition for aggression. Thus, the diathesis–stress model, in combination with a social-ecological framework, holds promise in understanding peer victimization, but what about bully perpetration?

Diathesis–Stress and Externalizing Problems

Ferguson and Dyck (2012) argue for the application of a diathesis–stress model to explain the development of aggression, suggesting that the approach has greater explanatory power for understanding aggressive behavior than social–cognitive and social learning theories, and offers an important heuristic for understanding the complexities of aggression. Some research has begun to examine externalizing behavior from a diathesis–stress perspective. For example, parental psychopathology and maltreatment are diatheses for the development of externalizing problems in youth (Walker, Downey, & Bergman, 1989), and disengaged coping mediates the relationship between peer stress and overt aggression among boys (Sontag & Graber, 2010). Increased aggression has also been associated with greater depression, mediated by peer rejection in school (Panak & Garber, 1992). In a study examining the link between peer victimization and child aggression among 506 6-year-old twins, Brendgen et al. (2008) found support for a diathesis–stress model, with peer victimization as a diathesis for the development of aggression in boys, regardless of genetic vulnerability. Finally, Brendgen, Girard, Vitaro, Dionne, and Boivin (2013b) found that a strong genetic predisposition for physical aggression was more likely to be expressed when peer group norms favored aggressive behavior but not when peer norms disfavored such behavior. Thus, a diathesis–stress model takes into account the interaction of individual vulnerabilities, specific life stressors, and aggression. Of interest here is whether the model can be applied to bullying perpetration, a subcategory of aggression.

At least two lines of research demonstrate the potential utility of applying diathesis–stress models to our understanding of peer bullying—one considering a potential biological vulnerability (the heritable tendency for psychopathy) and the other considering a cognitive vulnerability (the capacity for moral disengagement). With regard to the former, studies have demonstrated links between bullying perpetration among youth and callous-unemotional traits (e.g., Thornton, Frick, Crapanzano, & Terranova, 2013; Viding et al., 2009), indifference to the harm caused to others (Rigby & Slee, 1993), and willingness to manipulate others for one's

own gain (Sutton & Keogh, 2001). More recently, Fanti and Kimonis (2012) followed 1,416 adolescents in Greece-Cyprus from Grades 7 through 9 to investigate the links between bullying and the three traits identified as core characteristics of psychopathy in youth—callous-unemotional traits, narcissism, and impulsivity. Impulsivity and narcissism predicted high levels of bullying in early adolescence, regardless of levels of callousness or conduct problems. However, all three psychopathic traits contributed to greater levels of reported bullying, and the combination of callous-unemotional traits and conduct problems predicted the highest levels of bullying, even as levels of bullying generally declined with age. Thus, for a small subsample of bullies, early psychopathic tendencies may serve as a diathesis for bullying perpetration, a tendency that Cullen (2009) suggests in explaining the 1998 Columbine massacre.

With regard to the latter—cognitive vulnerability—a recent meta-analysis by Gini, Pozzoli, and Hymel (2014) documents the tendency for children and youth who bully others to *morally disengage*, a cognitive mechanism that allows individuals to justify and rationalize cruel behavior in ways that make it seem less harmful (see Bandura, 1999, 2002; Hymel & Bonanno, 2014; Hymel, Schonert-Reichl, Bonanno, Vaillancourt, & Rocke Henderson, 2010). Although the tendency to morally disengage may function as a cognitive vulnerability (diathesis) contributing to the likelihood of bullying, this tendency is also affected by peer experiences with victimization, underscoring the utility of also considering a social-ecological framework. Specifically, in one of the early studies examining bullying involvement and moral disengagement, Hymel, Rocke Henderson, and Bonanno (2005) found that youth who never bullied reported low levels of moral disengagement for bullying, and youth who bullied frequently reported high levels of moral disengagement, but youth who reported that they sometimes bullied others varied in level of moral disengagement as a function of their experiences with victimization. The more often they experienced victimization themselves, the less likely they were to morally disengage regarding bullying. Thus, emerging research suggests that a diathesis–stress model, considered within a social-ecological framework, may serve as a useful heuristic for understanding involvement in bullying and may provide greater explanatory power for research findings on the bully-victim phenomenon.

A Social-Ecological Diathesis–Stress Model of Bullying: Applications and Limitations

According to diathesis–stress models, the development of psychological difficulties occurs through the interaction of an individual's biological and cognitive vulnerabilities and stressful life experiences. Involvement in bullying is conceptualized as a stressful life event, influenced by multiple social stressors. However, the presence of social stressors does not fully explain the development of psychological difficulties like depression, anxiety, and aggression. Rather, stressful life events can be exacerbated by biological vulnerabilities and can activate cognitive vulnerabilities, leading to more significant, negative outcomes. Cognitive diathesis is conceptualized as a distorted lens through which individuals interpret life events (Chango et al., 2012; Hammen & Rudolph, 2003). If negative events are attributed to global, stable, and internal cognitive schemas, and negative beliefs about self, world, and future, individuals are at increased risk for internalizing and externalizing problems. In one study that supports the utility of a social-ecological, diathesis–stress model of peer victimization, Bonanno and Hymel (2010) explored why some victimized youth are more vulnerable to suicidal ideation than others, finding more suicidal ideation among victims who felt more socially hopeless (cognitive diathesis) and who reported less family support (an environmental protective factor).

Beliefs about the self, world, and future are rooted in early experiences, with stable cognitive structures beginning to solidify around the age of 9 (Stark et al., 1996). By adolescence, abstract thinking becomes more advanced, allowing youth to develop more stable concepts about themselves, the world, and the future. Negative self-concept has been shown to be a critical element in predicting involvement in both bullying and victimization (Marsh, Parada, Yeung, & Healey, 2001). Peer victimization can activate negative self-schemas

(e.g., "I'm a loser; everyone hates me"), leading to perceptions of the self as unlovable and/or worthless (characterological self-blame; Graham & Juvonen, 1998b), to experiencing the world as hostile, and to the development of a negative outlook on the future, enhancing one's risk for depression (Stark et al., 1996). Alternatively, bullying perpetration might result from activation of a threat schema (e.g., "Everyone is going to bully me"), which can promote negative self–other beliefs (e.g., "I'd better ruin her reputation before she ruins mine"), leading the individual to become aggressive in social relationships in order to maintain power and control. Individuals who bully others might also operate from hostile schemas about self or others (e.g., "I deserve what I can take from others" or "Losers deserve what they get"), leading to negative beliefs about others and a sense of entitlement, supporting the tendency to morally disengage regarding bullying.

In this article, we have argued for the integration of a social-ecological diathesis–stress model to address bullying and victimization, one which recognizes the complex and dynamic nature of bullying involvement across multiple settings (i.e., home, neighborhood, school, and community) and over time. The social-ecology model takes into account the interconnections in a child's world, and the diathesis–stress model allows for an understanding of the complexity of stressors and risk/protective factors that influence both engagement and intervention in bullying. We recognize, however, that the proposed integrated model is primarily applicable in cases in which bullying and victimization contribute to significant psychological and mental health difficulties. For many children and youth, bullying involvement reflects developing capacities for social engagement and explorations of the exercise of power, and for these youth, bullying may be best addressed through educational efforts to enhance the social skills and awareness needed for effective and positive interpersonal relationships (see www.prevnnet.ca and www.casel.org). When bullying and victimization lead to clinical difficulties, however, we believe that application of a social-ecological diathesis–stress perspective holds considerable promise. Future research is needed to test the applicability of this integrated model, and our hope is that this review helps stimulate such research and enhance our efforts to understand and address the complexity of bullying among children and youth.

REFERENCES

- Bacchini, E., Esposito, G., & Affuso, G. (2009). School experience and school bullying. *Journal of Community & Applied Social Psychology*, 19, 17–32. 10.1002/casp.975
- Baldry, A. C. (2003). Bullying in schools and exposure to domestic violence. *Child Abuse & Neglect*, 27, 713–732. 10.1016/S0145-2134(03)00114-5
- Baldry, A. C. (2004). The impact of direct and indirect bullying on the mental and physical health of Italian youngsters. *Aggressive Behavior*, 30, 343–355. 10.1002/ab.20043
- Baldry, A. C., & Farrington, D. P. (1999). Brief report: Types of bullying among Italian school children. *Journal of Adolescence*, 22, 423–426. 10.1006/jado.1999.0234
- Ball, H. A., Arseneault, L., Taylor, A., Maughan, B., Caspi, A., & Moffitt, T. E. (2008). Genetic and environmental influences on victims, bullies and bully-victims in childhood. *Journal of Child Psychology and Psychiatry*, 49, 104–112. 10.1111/j.1469-7610.2007.01821.x
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3, 193–209. 10.1207/s15327957pspr0303_3
- Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education*, 31, 101–119. 10.1080/0305724022014322

- Barboza, G. E., Schiamberg, L. B., Oehmke, J., Korzeniewski, S. J., Post, L. A., & Heraux, C. G. (2009). Individual characteristics and the multiple contexts of adolescent bullying: An ecological perspective. *Journal of Youth and Adolescence*, 38, 101–121. 10.1007/s10964-008-9271-1
- Barker, E. D., Arseneault, L., Brendgen, M., Fontaine, N., & Maughan, B. (2008). Joint development of bullying and victimization in adolescence: Relations to delinquency and self-harm. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47, 1030–1038.
- Bauman, S., & Del Rio, A. (2006). Preservice teachers' responses to bullying scenarios: Comparing physical, verbal, and relational bullying. *Journal of Educational Psychology*, 98, 219–231. 10.1037/0022-0663.98.1.219
- Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York, NY: Basic Books.
- Bender, D., & Lösel, F. (2011). Bullying at school as a predictor of delinquency, violence and other anti-social behaviour in adulthood. *Criminal Behaviour and Mental Health*, 21, 99–106. 10.1002/cbm.799
- Benjet, C., Thompson, R. J., & Gotlib, I. H. (2010). 5-HTTLPR moderates the effect of relational peer victimization on depressive symptoms in adolescent girls. *Journal of Child Psychology and Psychiatry*, 51, 173–179. 10.1111/j.1469-7610.2009.02149.x
- Berkowitz, R., & Benbenishty, R. (2012). Perceptions of teachers' support, safety, and absence from school because of fear among victims, bullies, and bully-victims. *American Journal of Orthopsychiatry*, 82, 67–74. 10.1111/j.1939-0025.2011.01132.x
- Bernstein, A., Zvolensky, M. J., Feldner, M. T., Lewis, S. F., Fauber, A. L., Leen-Feldner, E. W., & Vujanovic, A. A. (2005). Anxiety sensitivity taxon and trauma: Discriminant associations for posttraumatic stress and panic symptomatology among young adults. *Depression and Anxiety*, 22, 138–149. 10.1002/da.20091
- Björkqvist, K., Österman, K., & Kaukiainen, A. (2000). Social intelligence—Empathy = aggression? *Aggression and Violent Behavior*, 5, 191–200. 10.1016/S1359-1789(98)00029-9
- Bonanno, R., & Hymel, S. (2006, July). *Exposure to school violence: The impact of bullying on witnesses*. Paper presented at the biennial meeting of the International Society for the Study of Behavior Development, Melbourne, Australia.
- Bonanno, R., & Hymel, S. (2010). Beyond hurt feelings: Investigating why some victims of bullying are at greater risk for suicidal ideation. *Merrill-Palmer Quarterly*, 56, 420–440. 10.1353/mpq.0.0051
- Bowes, L., Arseneault, L., Maughan, B., Taylor, A., Caspi, A., & Moffitt, T. E. (2009). School, neighborhood, and family factors are associated with children's bullying involvement: A nationally representative longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 48, 545–553. 10.1097/CHI.0b013e31819cb017
- Bradshaw, C. P. (2015). Translating research to practice in bullying prevention. *American Psychologist*, 70, 322–332. 10.1037/a0039114
- Bradshaw, C. P., Sawyer, A. L., & O'Brennan, L. M. (2009). A social disorganization perspective on bullying-related attitudes and behaviors: The influence of school context. *American Journal of Community Psychology*,

43, 204–220. 10.1007/s10464-009-9240-1

Brendgen, M., Boivin, M., Dionne, G., Barker, E. D., Vitaro, F., Girard, A., . . . Pérouse, D. (2011). Gene-environment processes linking aggression, peer victimization, and the teacher-child relationship. *Child Development, 82*, 2021–2036. 10.1111/j.1467-8624.2011.01644.x

Brendgen, M., Boivin, M., Vitaro, F., Girard, A., Dionne, G., & Pérouse, D. (2008). Gene-environment interaction between peer victimization and child aggression. *Development and Psychopathology, 20*, 455–471. 10.1017/S0954579408000229

Brendgen, M., & Girard, A., Vitaro, F., Dionne, G., & Boivin, M. (2013a). Gene-environment correlation linking aggression and peer victimization: Do classroom behavioral norms matter? *Abnormal Child Psychology, 43*, 19–21. 10.1007/s10802-013-9807-z

Brendgen, M., Girard, A., Vitaro, F., Dionne, G., & Boivin, M. (2013b). Do peer group norms moderate the expression of genetic risk for aggression? *Journal of Criminal Justice, 41*, 324–330. 10.1016/j.jcrimjus.2013.06.004

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Caravita, S., DiBlasio, P., & Salmivalli, C. (2009). Unique and interactive effects of empathy and social status on involvement in bullying. *Social Development, 18*, 140–163. 10.1111/j.1467-9507.2008.00465.x

Card, N. A., Isaacs, J., & Hodges, E. V. E. (2007). Correlates of school victimization: Implications for prevention and intervention. In J. E. Zins, M. J. Elias, & C. A. Maher (Eds.), *Bullying, victimization, and peer harassment: A handbook of prevention and intervention* (pp. 339–366). New York, NY: Haworth Press.

Caspi, A., Sugden, K., Moffitt, T. E., Taylor, A., Craig, I. W., Harrington, H., . . . Poulton, R. (2003). Influence of life stress on depression: Moderation by a polymorphism in the 5-HTT gene. *Science, 301*, 386–389. 10.1126/science.1083968

Chango, J. M., McElhaney, K. B., Allen, J. P., Schad, M. M., & Marston, E. (2012). Relational stressors and depressive symptoms in late adolescence: Rejection sensitivity as a vulnerability. *Journal of Abnormal Child Psychology, 40*, 369–379. 10.1007/s10802-011-9570-y

Chaux, E., Molano, A., & Podlesky, P. (2009). Socio-economic, socio-political and socio-emotional variables explaining school bullying: A country-wide multilevel analysis. *Aggressive Behavior, 35*, 520–529. 10.1002/ab.20320

Cicchetti, D., & Rogosch, F. A. (1996). Equifinality and multifinality in developmental psychopathology. *Development and Psychopathology, 8*, 597–600. 10.1017/S0954579400007318

Cicchetti, D., & Toth, S. L. (1998). The development of depression in children and adolescents. *American Psychologist, 53*, 221–241. 10.1037/0003-066X.53.2.221

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly, 25*, 65–83. 10.1037/a0020149

- Copeland, W. E., Wolke, D., Angold, A., & Costello, E. J. (2013). Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA Psychiatry*, 70, 419–426. 10.1001/jamapsychiatry.2013.504
- Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences*, 24, 123–130. 10.1016/S0191-8869(97)00145-1
- Craig, W. M., & Pepler, D. J. (1998). Observations of bullying and victimization in the school yard. *Canadian Journal of School Psychology*, 13, 41–59. 10.1177/082957359801300205
- Cullen, D. (2009). *Columbine*. New York, NY: Hachette Book Group.
- Cullerton-Sen, C., & Crick, N. R. (2005). Understanding the effects of physical and relational victimization: The utility of multiple perspectives in predicting social-emotional adjustment. *School Psychology Review*, 34, 147–160.
- Doll, B., Song, S., & Siemers, E. (2004). Classroom ecologies that support or discourage bullying. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 161–183). Mahwah, NJ: Erlbaum.
- Duncan, R. D. (2011). Family relationships of bullies and victims. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in North American schools* (2nd ed., pp. 191–204). New York, NY: Routledge.
- Espelage, D. L., Bosworth, K., & Simon, T. R. (2000). Examining the social context of bullying behaviors in early adolescence. *Journal of Counseling & Development*, 78, 326–333. 10.1002/j.1556-6676.2000.tb01914.x
- Espelage, D. L., & Holt, M. K. (2001). Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. *Journal of Emotional Abuse*, 2, 123–142. 10.1300/J135v02n02_08
- Espelage, D. L., Holt, M. K., & Henkel, R. R. (2003). Examination of peer-group contextual effects on aggression during early adolescence. *Child Development*, 74, 205–220. 10.1111/1467-8624.00531
- Espelage, D. L., Rao, M. A., & de la Rue, L. (2013). Current research on school-based bullying: A social-ecological perspective. *Journal of Social Distress and the Homeless*, 22, 21–27. 10.1179/1053078913Z.0000000002
- Espelage, D. L., & Swearer, S. M. (2003). Research on bullying and victimization: What have we learned and where do we go from here? *School Psychology Review*, 32, 365–383.
- Espelage, D. L., & Swearer, S. M. (2010). A social-ecological model for bullying prevention and intervention: Understanding the impact of adults in the social ecology of youngsters. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 61–72). New York, NY: Routledge.
- Fanti, K. A., & Kimonis, E. R. (2012). Bullying and victimization: The role of conduct problems and psychopathic traits. *Journal of Research on Adolescence*, 22, 617–631. 10.1111/j.1532-7795.2012.00809.x
- Farmer, T. W., Petrin, R., Robertson, D., Fraser, M., Hall, C., Day, S., & Dadisman, K. (2010). Peer relations of bullies, bully-victims, and victims: The two social worlds of bullying in second-grade classrooms. *The*

Elementary School Journal, 110, 364–392. 10.1086/648983

Ferguson, C. J., & Dyck, D. (2012). Paradigm change in aggression research: The time has come to retire the general aggression model. *Aggression and Violent Behavior*, 17, 220–228. 10.1016/j.avb.2012.02.007

Ferguson, C. J., San Miguel, C., & Hartley, R. D. (2009). A multivariate analysis of youth violence and aggression: The influence of family, peers, depression, and media violence. *The Journal of Pediatrics*, 155, 904–908. e3. 10.1016/j.jpeds.2009.06.021

Garber, J., & Hilsman, R. (1992). Cognitions, stress, and depression in children and adolescents. *Child and Adolescent Psychiatric Clinics of North America*, 1, 129–167.

Garber, J., & Horowitz, J. L. (2002). Depression in children. In I. H. Gotlib & C. L. Hammen (Eds.), *Handbook of depression* (pp. 510–540). New York, NY.

Gazelle, H., & Ladd, G. W. (2003). Anxious solitude and peer exclusion: A diathesis–stress model of internalizing trajectories in childhood. *Child Development*, 74, 257–278. 10.1111/1467-8624.00534

Gendron, B., Williams, K., & Guerra, N. (2011). An analysis of bullying among students within schools: Estimating the effects of individual normative beliefs, self-esteem, and school climate. *Journal of School Violence*, 10, 150–164. 10.1080/15388220.2010.539166

Gibb, B. E., & Alloy, L. B. (2006). A prospective test of the hopelessness theory of depression in children. *Journal of Clinical Child and Adolescent Psychology*, 35, 264–274. 10.1207/s15374424jccp3502_10

Gini, G., Albiero, P., Benelli, B., & Altoè, G. (2007). Does empathy predict adolescents' bullying and defending behavior? *Aggressive Behavior*, 33, 467–476. 10.1002/ab.20204

Gini, G., Albiero, P., Benelli, B., & Altoè, G. (2008). Determinants of adolescents' active defending and passive bystander behavior in bullying. *Journal of Adolescence*, 31, 93–105. 10.1016/j.adolescence.2007.05.002

Gini, G., & Pozzoli, T. (2006). The role of masculinity in children's bullying. *Sex Roles*, 54, 585–588. 10.1007/s11199-006-9015-1

Gini, G., & Pozzoli, T. (2013). Bullied children and psychosomatic problems: A meta-analysis. *Pediatrics*, 132, 720–729. 10.1542/peds.2013-0614

Gini, G., Pozzoli, T., & Hymel, S. (2014). Moral disengagement among children and youth: A meta-analytic review of links to aggressive behavior. *Aggressive Behavior*, 40, 56–68. 10.1002/ab.21502

Graham, S., Bellmore, A., & Juvonen, J. (2007). Peer victimization in middle school: When self- and peer views diverge. In J. E. Zins, M. J. Elias, & C. A. Maher (Eds.), *Bullying, victimization, and peer harassment: A handbook of prevention and intervention* (pp. 121–141). New York, NY: Haworth Press.

Graham, S., & Juvonen, J. (1998a). A social-cognitive perspective on peer aggression and victimization. In R. Vasta (Ed.), *Annals of child development* (pp. 23–70). London, UK: Jessica Kingsley.

Graham, S., & Juvonen, J. (1998b). Self-blame and peer victimization in middle school: An attributional analysis. *Developmental Psychology*, 34, 587–599. 10.1037/0012-1649.34.3.587

- Haltigan, J. D., & Vaillancourt, T. (2014). Joint trajectories of bullying and peer victimization across elementary and middle school and associations with symptoms of psychopathology. *Developmental Psychology*, 50, 2426–2436. 10.1037/a0038030
- Hammen, C. (1991). Generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology*, 100, 555–561. 10.1037/0021-843X.100.4.555
- Hammen, C., & Rudolph, K. D. (2003). Childhood mood disorders. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (2nd ed., pp. 233–278). New York, NY: Guilford Press.
- Hanish, L. D., & Guerra, N. G. (2000). Predictors of peer victimization among urban youth. *Social Development*, 9, 521–543. 10.1111/1467-9507.00141
- Hazler, R. J. (1996). Bystanders: An overlooked factor in peer on peer abuse. *Journal for the Professional Counselor*, 11, 11–21.
- Hong, J. S., & Garbarino, J. (2012). Risk and protective factors for homophobic bullying in schools: An application of the social-ecological framework. *Educational Psychology Review*, 24, 271–285. 10.1007/s10648-012-9194-y
- Hymel, S., & Bonanno, R. (2014). Moral disengagement processes in bullying. *Theory into Practice*, 53, 278–285. 10.1080/00405841.2014.947219
- Hymel, S., Rocke Henderson, N., & Bonanno, R. A. (2005). Moral disengagement: A framework for understanding bullying among adolescents. *Journal of Social Sciences*, 8, 1–11.
- Hymel, S., Schonert-Reichl, K. A., Bonanno, R. A., Vaillancourt, T., & Rocke Henderson, N. (2010). Bullying and morality: Understanding how good kids can behave badly. In S. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *The handbook of bullying in schools: An international perspective* (pp. 101–118). New York, NY: Routledge.
- Iyer, P. A., Dougall, A. L., & Jensen-Campbell, L. A. (2013). Are some adolescents differentially susceptible to the influence of bullying on depression? *Journal of Research in Personality*, 47, 272–281. 10.1016/j.jrp.2013.02.004
- Janssen, I., Boyce, W. F., & Pickett, W. (2012). Screen time and physical violence in 10- to 16-year-old Canadian youth. *International Journal of Public Health*, 57, 325–331. 10.1007/s00038-010-0221-9
- Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology*, 92, 349–359. 10.1037/0022-0663.92.2.349
- Kaltiala-Heino, R., Rimpelä, M., Marttunen, M., Rimpelä, A., & Rantanen, P. (1999). Bullying, depression, and suicidal ideation in Finnish adolescents: School survey. *British Medical Journal*, 319, 348–351. 10.1136/bmj.319.7206.348
- Kaltiala-Heino, R., Rimpelä, M., Rantanen, P., & Rimpelä, A. (2000). Bullying at school—An indicator of adolescents at risk for mental disorders. *Journal of Adolescence*, 23, 661–674. 10.1006/jado.2000.0351

- Karg, K., Burmeister, M., Shedden, K., & Sen, S. (2011). The serotonin transporter promoter variant (5-HTTLPR), stress, and depression meta-analysis revisited: Evidence of genetic moderation. *Archives of General Psychiatry*, 68, 444–454. 10.1001/archgenpsychiatry.2010.189
- Kearney, C. A. (2001). *School refusal behavior in youth: A functional approach to assessment and treatment*. Washington, DC: American Psychological Association. 10.1037/10426-000
- Knack, J. M., Jensen-Campbell, L. A., & Baum, A. (2011). Worse than sticks and stones? Bullying is associated with altered HPA axis functioning and poorer health. *Brain and Cognition*, 77, 183–190. 10.1016/j.bandc.2011.06.011
- Konishi, C., Hymel, S., Zumbo, B. D., & Li, Z. (2010). Do school bullying and student-teacher relations matter for academic achievement? A multilevel analysis. *Canadian Journal of School Psychology*, 25, 19–39.
- Kumpulainen, K., Räsänen, E., & Puura, K. (2001). Psychiatric disorders and the use of mental health services among children involved in bullying. *Aggressive Behavior*, 27, 102–110. 10.1002/ab.3
- Lazarus, R. S. (1993). From psychological stress to the emotions: A history of changing outlooks. *Annual Review of Psychology*, 44, 1–21. 10.1146/annurev.psych.44.1.1
- Leen-Feldner, E. W., Zvolensky, M. J., & Feldner, M. T. (2006). A test of a cognitive diathesis–stress model of panic vulnerability among adolescents. In A. J. Sanfelippo (Ed.), *Panic disorders: New research* (pp. 41–64). Hauppauge, NY: Nova Biomedical Books.
- Ma, L., Phelps, E., Lerner, J. V., & Lerner, R. M. (2009). Academic competence for adolescents who bully and who are bullied: Findings from the 4-H study of positive youth development. *The Journal of Early Adolescence*, 29, 862–897. 10.1177/0272431609332667
- Marsh, H. W., Lüdtke, O., Nagengast, B., Trautwein, U., Morin, A., Abduljabbar, A., & Köller, O. (2012). Classroom climate and contextual effects: Conceptual and methodological issues in the evaluation of group-level effects. *Educational Psychologist*, 47, 106–124. 10.1080/00461520.2012.670488
- Marsh, H. W., Nagengast, B., Morin, A. J. S., Parada, R. H., Craven, R. G., & Hamilton, L. R. (2011). Construct validity of the multidimensional structure of bullying and victimization: An application of exploratory structural equation modeling. *Journal of Educational Psychology*, 103, 701–732. 10.1037/a0024122
- Marsh, H. W., Parada, R. H., Yeung, A., & Healey, J. (2001). Aggressive school troublemakers and victims: A longitudinal model examining the pivotal role of self-concept. *Journal of Educational Psychology*, 93, 411–419. 10.1037/0022-0663.93.2.411
- McDougall, P., & Vaillancourt, T. (2015). Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment. *American Psychologist*, 70, 300–310. 10.1037/a0039174
- Monks, C. P., & Smith, P. K. (2006). Definitions of bullying: Age differences in understanding of the term, and the role of experience. *British Journal of Developmental Psychology*, 24, 801–821. 10.1348/026151005X82352
- Muñoz, L. C., Qualter, P., & Padgett, G. (2011). Empathy and bullying: Exploring the influence of callous-unemotional traits. *Child Psychiatry and Human Development*, 42, 183–196. 10.1007/s10578-010-0206-1

Navarro, R., Larrañaga, E., & Yubero, S. (2011). Bullying-victimization problems and aggressive tendencies in Spanish secondary school students: The role of gender stereotypical traits. *Social Psychology of Education*, 14, 457–473. 10.1007/s11218-011-9163-1

O'Connell, P., Pepler, D., & Craig, W. (1999). Peer involvement in bullying: Insights and challenges for intervention. *Journal of Adolescence*, 22, 437–452. 10.1006/jado.1999.0238

O'Donnell, J., Hawkins, J. D., & Abbott, R. D. (1995). Predicting serious delinquency and substance use among aggressive boys. *Journal of Consulting and Clinical Psychology*, 63, 529–537. 10.1037/0022-006X.63.4.529

Olson, C. K., Kutner, L. A., Baer, L., Beresin, E. V., Warner, D. E., & Nicholi, A. M., Jr. (2009). M-rated video games and aggressive or problem behavior among young adolescents. *Applied Developmental Science*, 13, 188–198. 10.1080/10888690903288748

Olweus, D. (2001). Peer harassment: A critical analysis and some important questions. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 3–20). New York, NY: Guilford Press.

Panak, W. F., & Garber, J. (1992). Role of aggression, rejection, and attributions in the prediction of depression in children. *Development and Psychopathology*, 4, 145–165. 10.1017/S0954579400005617

Pellegrini, A. D., & Long, J. D. (2004). Part of the solution and part of the problem: The role of peers in bullying, dominance, and victimization during the transition from primary school through secondary school. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools* (pp. 107–117). Mahwah, NJ: Erlbaum.

Pepler, D., Craig, W., & O'Connell, P. (2010). Peer processes in bullying: Informing prevention and intervention strategies. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 469–479). New York, NY: Routledge.

Pepler, D., Jiang, D., Craig, W., & Connolly, J. (2008). Developmental trajectories of bullying and associated factors. *Child Development*, 79, 325–338. 10.1111/j.1467-8624.2007.01128.x

Potthoff, J. G., Holahan, C. J., & Joiner, T. E., Jr. (1995). Reassurance seeking, stress generation, and depressive symptoms: An integrative model. *Journal of Personality and Social Psychology*, 68, 664–670. 10.1037/0022-3514.68.4.664

Richard, J. F., Schneider, B. H., & Mallet, P. (2011). Revisiting the whole school approach to bullying: Really looking at the whole school. *School Psychology International*, 33, 263–284. 10.1177/0143034311415906

Rigby, K., & Slee, P. T. (1993). Dimensions of interpersonal relation among Australian children and implications for psychological well-being. *The Journal of Social Psychology*, 133, 33–42. 10.1080/00224545.1993.9712116

Rivers, I., Poteat, V. P., Noret, N., & Ashurst, N. (2009). Observing bullying at school: The mental health implications of witness status. *School Psychology Quarterly*, 24, 211–223. 10.1037/a0018164

Rocke Henderson, N., & Hymel, S. (2011). *Peer responses to school bullying: The role of emotions and friendships in early adolescents bystander problem-solving*. Paper presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

- Rodkin, P. C. (2004). Peer ecologies of aggression and bullying. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 87–106). Mahwah, NJ: Erlbaum.
- Rodkin, P. C., Espelage, D. L., & Hanish, L. D. (2015). A relational framework for understanding bullying: Developmental antecedents and outcomes. *American Psychologist*, 70, 311–321. 10.1037/a0038658
- Rodkin, P. C., & Hodges, E. V. E. (2003). Bullies and victims in the peer ecology: Four questions for school service providers and social developmental research. *School Psychology Review*, 32, 384–400.
- Ryoo, J. H., Wang, C., & Swearer, S. M. (2014). Examination of the change in latent statuses in bullying behaviors across time. *School Psychology Quarterly*. Advance online publication. 10.1037/spq0000082
- Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development*, 35, 144–151. 10.1177/0165025410378068
- Salmivalli, C. (2001). Group view on victimization: Empirical findings and their implications. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 398–419). New York, NY: Guilford Press.
- Salmivalli, C., Kärnä, A., & Poskiparta, E. (2010). From peer putdowns to peer support: A theoretical model and how it translated into a national anti-bullying program. In S. Jimerson, S. Swearer, & D. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 441–454). New York, NY: Routledge.
- Salmivalli, C., Lagerspetz, K., Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior*, 22, 1–15. 10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T
- Salmivalli, C., & Voeten, M. (2004). Connections between attitudes, group norms, and behaviour in bullying situations. *International Journal of Behavioral Development*, 28, 246–258. 10.1080/01650250344000488
- Schmidt, L. A., Polak, C. P., & Spooner, A. L. (2001). Biological and environmental contributions to childhood shyness: A diathesis–stress model. In W. Crozier & L. E. Alden (Eds.), *International handbook of social anxiety: Concepts, research and interventions relating to the self and shyness* (pp. 29–51). New York, NY: Wiley.
- Slee, P. T., & Rigby, K. (1993). Australian school children's self appraisal of interpersonal relations: The bullying experience. *Child Psychiatry and Human Development*, 23, 273–282. 10.1007/BF00707680
- Smith, P. K., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non-victims, escaped victims, continuing victims and new victims of school bullying. *British Journal of Educational Psychology*, 74, 565–581. 10.1348/0007099042376427
- Sokol, N., Bussey, K., & Rapee, R. (2014). *The effect of victims' responses to overt bullying on peer bystander reactions*. Manuscript submitted for publication.
- Sontag, L. M., & Graber, J. A. (2010). Coping with perceived peer stress: Gender-specific and common pathways to symptoms of psychopathology. *Developmental Psychology*, 46, 1605–1620. 10.1037/a0020617
- Spriggs, A. L., Iannotti, R. J., Nansel, T. R., & Haynie, D. L. (2007). Adolescent bullying involvement and perceived family, peer and school relations: Commonalities and differences across race/ethnicity. *Journal of*

- Adolescent Health*, 41, 283–293. 10.1016/j.jadohealth.2007.04.009
- Srabstein, J., & Piazza, T. (2008). Public health, safety and educational risks associated with bullying behaviors in American adolescents. *International Journal of Adolescent Medicine and Health*, 20, 223–233. 10.1515/IJAMH.2008.20.2.223
- Stark, K. D., Napolitano, S., Swearer, S., Schmidt, K., Jaramillo, D., & Hoyle, J. (1996). Issues in the treatment of depressed children. *Applied & Preventive Psychology*, 5, 59–83. 10.1016/S0962-1849(96)80001-1
- Sugden, K., Arseneault, L., Harrington, H., Moffitt, T. E., Williams, B., & Caspi, A. (2010). Serotonin transporter gene moderates the development of emotional problems among children following bullying victimization. *Journal of the Academy of Child and Adolescent Psychiatry*, 49, 830–840. 10.1016/j.jaac.2010.01.024
- Sutton, J., & Keogh, E. (2001). Components of Machiavellian beliefs in children Relationships with personality. *Personality and Individual Differences*, 30, 137–148. 10.1016/S0191-8869(00)00017-9
- Sutton, J., Smith, P. K., & Swettenham, J. (1999a). Bullying and “theory of mind”: A critique of the social skills deficit view of anti-social behavior. *Social Development*, 8, 117–127. 10.1111/1467-9507.00083
- Sutton, J., Smith, P. K., & Swettenham, J. (1999b). Social cognition and bullying: Social inadequacy or skilled manipulation? *British Journal of Developmental Psychology*, 17, 435–450. 10.1348/026151099165384
- Swearer, S. M., & Espelage, D. L. (2004). A social-ecological framework of bullying among youth. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 1–12). Mahwah, NJ: Erlbaum.
- Swearer, S. M., Espelage, D. L., Koenig, B., Berry, B., Collins, A., & Lembeck, P. (2012). A social-ecological model of bullying prevention and intervention in early adolescence. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety* (pp. 333–355). New York, NY: Routledge.
- Thornton, L. C., Frick, P. J., Crapanzano, A. M., & Terranova, A. M. (2013). The incremental utility of callous-unemotional traits and conduct problems in predicting aggression and bullying in a community sample of boys and girls. *Psychological Assessment*, 25, 366–378. 10.1037/a0031153
- Trach, J., Hymel, S., Waterhouse, T., & Neale, K. (2010). Bystander responses to school bullying: A cross-sectional investigation of grade and sex differences. *Canadian Journal of School Psychology*, 25, 114–130. 10.1177/0829573509357553
- Unnever, J. D., & Cornell, D. G. (2004). Middle school victims of bullying: Who reports being bullied? *Aggressive Behavior*, 30, 373–388. 10.1002/ab.20030
- Vaillancourt, T., Hymel, S., & McDougall, P. (2003). Bullying is power: Implications for school-based intervention strategies. *Journal of Applied School Psychology*, 19, 157–176. 10.1300/J008v19n02_10
- Vaillancourt, T., Hymel, S., & McDougall, P. (2013). The biological underpinnings of peer victimization: Understanding why and how the effects of bullying can last a lifetime. *Theory Into Practice*, 52, 241–248. 10.1080/00405841.2013.829726

- van der Aa, N., Overbeek, G., Engels, R. C., Scholte, R. H., Meerkkerk, G. J., & Van den Eijnden, R. J. (2009). Daily and compulsive internet use and well-being in adolescence: A diathesis–stress model based on big five personality traits. *Journal of Youth and Adolescence*, 38, 765–776. 10.1007/s10964-008-9298-3
- Vaughn, M. G., Fu, Q., Bender, K., DeLisi, M., Beaver, K. M., Perron, B. E., & Howard, M. O. (2010). Psychiatric correlates of bullying in the United States: Findings from a national sample. *Psychiatric Quarterly*, 81, 183–195. 10.1007/s11126-010-9128-0
- Veenstra, R., Lindenberg, S., Zijlstra, B. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2007). The dyadic nature of bullying and victimization: Testing a dual-perspective theory. *Child Development*, 78, 1843–1854. 10.1111/j.1467-8624.2007.01102.x
- Viding, E., Simmonds, E., Petrides, K. V., & Frederickson, N. (2009). The contribution of callous-unemotional traits and conduct problems to bullying in early adolescence. *Journal of Child Psychology and Psychiatry*, 50, 471–481. 10.1111/j.1469-7610.2008.02012.x
- Vitaglione, G., & Barnett, M. (2003). Assessing a new dimension of empathy: Empathic anger as a predictor of helping and punishing desires. *Motivation and Emotion*, 27, 301–325. 10.1023/A:1026231622102
- Walker, E., Downey, G., & Bergman, A. (1989). The effects of parental psychopathology and maltreatment on child behavior: A test of the diathesis–stress model. *Child Development*, 60, 15–24. 10.2307/1131067
- Wang, C., Berry, B., & Swearer, S. M. (2013). The critical role of school climate in effective bullying prevention. *Theory Into Practice*, 52, 296–302. 10.1080/00405841.2013.829735
- White, R., & Mason, R. (2012). Bullying and gangs. *International Journal of Adolescent Medicine and Health*, 24, 57–62. 10.1515/ijamh.2012.008

This publication is protected by US and international copyright laws and its content may not be copied without the copyright holders express written permission except for the print or download capabilities of the retrieval software used for access. This content is intended solely for the use of the individual user.

Source: American Psychologist. Vol. 70. (4), May-Jun, 2015 pp. 344-353)

Accession Number: 2015-20405-006

Digital Object Identifier: 10.1037/a0038929