Anderson, C.A., & Carnagey, N.L. (2004). Violent evil and the general aggression model. Chapter in A. Miller (Ed.) *The Social Psychology of Good and Evil* (pp. 168-192). New York: Guilford Publications.

THE SOCIAL PSYCHOLOGY OF

GOOD AND EVIL

Edited by Arthur G. Miller

THE GUILFORD PRESS
New York London

CHAPTER 8

VIOLENT EVIL AND THE GENERAL AGGRESSION MODEL

CRAIG A. ANDERSON
NICHOLAS L. CARNAGEY

CONTEXT

On April 20, 1999, the 110th anniversary of Adolf Hitler's birthday, Eric Harris and Dylan Klebold murdered 13 people and wounded another 23 in their high school in Littleton, Colorado. On September 11, 2001, in a coordinated attack, terrorists hijacked four commercial jets and succeeded in flying two of them into the World Trade Center Towers in New York City, and one into the Pentagon. The fourth, apparently targeted for the U.S. Capitol in Washington, DC, crashed in a Pennsylvania field when passengers attacked the hijackers. The final death toll was over 2,800 (The National Obituary Archive, 2002).

We label the most extreme forms of aggression as "violent evil" in this chapter. Hopes that the horrors of World War II and the Holocaust would produce a worldwide rejection of such inhuman actions and a resulting end of genocidal practices, a cessation of wars among nations, and a reduction in homicide rates have been dashed by the realities of war, homicide, and genocide in the last half of the 20th century. The litany of recent genocidal events is both long and depressing, including major massacres in Uganda, Cambodia, Rwanda, Burundi, Zaire, Bosnia, Serbia, Croatia, Hercegovina, among others. The beginning of the 21st century has not provided much relief either, as dearly illustrated by the September

11, 2001 terrorist attacks, the subsequent "war on terrorism" in Afganistan, the escalating conflict between the Israelis and Palestinians, the ethnic/religious massacres in India, and the recent (and continuing) war in Iraq.

Of course, human violence is not new. Archeological and historical evidence makes it dear that violence was prevalent among our hunter/gatherer ancestors 25,000 years. ago, among the Greek, Egyptian, and Roman societies 2,000-3,000 years ago, among most societies in the last two centuries, and in almost every society today. Although technological advances have made mass violence easier to accomplish, "people" today are not more violence-prone than they were thousands of years ago. Nonetheless, the prevalence of violence in contemporary society, the efficiency of modern weapons, and differences in violence rates between societies have collectively inspired a resurgence of interest in understanding such behavior at individual, group, and societal levels. The hope, of course, is that such understanding will lead to significant reductions in future rates of violence at each level of analysis.

As is apparent throughout the chapters in this book on good and evil, the predominant "evil" is violence, usually defined as an intentional action directed at one or more fellow humans and designed to inflict great harm on those target individuals. There are, of course, many variants and degrees of evil. In this chapter we focus on aggression and violence and demonstrate how the General Aggression Model (GAM) can be used to integrate the many factors that contribute to the evil of violence (Anderson & Bushman, 2002b; Anderson & Huesmann, in press; Lindsay & Anderson, 2000). Also apparent from many chapters in this book is the fact that good and evil are two sides of the same coin. Identifying and understanding factors that lead to violent evil also yield valuable insights into factors that lead to good. Furthermore, many shining examples of the best of human actions are essentially actions taken to thwart or resist violent evil. We focus on violent evil in this chapter for the sake of brevity, but we invite readers to consider how our model can also be used to further understand heroic actions, such as that displayed by passengers who thwarted the terrorists attempting to crash their hijacked jet into the U.S. Capitol, by Gandhi and followers who conducted a successful nonviolent revolution in India, and by Martin Luther King, Jr., and followers who used similar nonviolent means to reduce institutionalized racial injustices.

LEVELS OF ANALYSIS

Violence may be analyzed at several different levels, ranging from the individual human to *homo sapiens* as a species. In our view, the most interesting levels are the individual, the small group, the subculture, and the soci-

ety. This does not mean that evolutionary analyses are unimportant. Indeed, such analyses and cross-species comparisons have contributed much to the scientific study of violence (e.g., Geary, 1998; Malamuth & Heilmann, 1998). However, it is clear that humans have a *built-in* capacity for violence and that the likelihood of that capacity being realized in actual behavior varies widely and systematically. We believe that the study of this variablility is fascinating, has already led to a very good understanding of violence and to societal changes that effectively reduce violence, and will ultimately lead to more successful attempts to reduce unwarranted violence at all levels of analysis.

Many chapters in this book identify key factors at the group, subculture, and societal levels. We find these developments exciting. Our focus on the individual in society is based on the fact that only individuals "behave" in either good or evil ways. To be sure, historical, economic, and social forces greatly influence the individual's behavior, but they must do so by influencing some aspect of the individual. In our explication of GAM, we note how and where such higher-level factors operate on the individual.

THE GENERAL AGGRESSION MODEL

Defmitions and Scope

Aggression is usually defined by social psychologists as *behavior directed toward another individual and carried out with the intent to cause harm.* Furthermore, the perpetrator must believe that the behavior will harm the target, and that the target is motivated to avoid the behavior (Baron & Richardson, 1994; Berkowitz, 1993; Geen, 2001). Violence is usually defined as physical aggression at the extremely high end of the aggression continuum, such as murder and aggravated assault. All violence is aggression, but much that is aggression is not violence. For example, one child pushing another off a tricycle is aggression but not violence. A school shooting involves both aggression and violence. Some criminologists and public health officials use quite different definitions of violence and seem largely uninterested in aggression or the aggression-violence continuum (Surgeon General, 2001). For some, *violence* requires actual serious physical harm to another person through the performance of an act that must be illegal. Such a restricted definition may be useful in some contexts, but the social-psychological definitions are much more valuable for understanding violent evil. For instance, some Holocaust participants maintained that because they were following legitimate orders, they should not be held responsible for their actions, even though they knew that the victims would be killed. That is, they proposed that because their actions were technically legal, they therefore were neither aggressive nor evil. The

social-psychological definition does not include an "illegal" component and so does not falter in this context. Similar arguments can be made for focusing on the *attempt* to cause harm rather than on whether or not that attempt succeeded.

Several additional changes in the conceptualization of aggression are necessary to create a truly general model of human aggression. All involve discarding traditional dichotomous categorization schemes. Three such categorization schemes have been discarded in previous work: affective (hostile) versus instrumental aggression, impulsive versus premeditated aggression, and proactive versus reactive aggression (Anderson & Bushman, 2002b; Anderson & Huesmann, 2003; Bushman & Anderson, 2001). Historically, *affective* aggression has been conceived as an impulsive and thoughtless (i.e., unplanned) form of behavior, driven by anger, having the ultimate motive of harming the target, and occurring as a reaction to some perceived provocation. It is sometimes called hostile, impulsive, or reactive aggression. *Instrumental* aggression is conceived as a premeditated, proactive rather than reactive means of obtaining some goal other than harming the victim. *Impulsive* aggression is usually conceived as thoughtless (i.e., automatic, fast, without consideration of consequences), reactive, and affect laden. *Premeditated* aggression, in contrast, is usually conceived as thoughtful (i.e., deliberative, slow, instrumental), proactive, and affectless. Proactive and reactive aggression are frequently used interchangeably with instrumental and affective, respectively, but they have slightly different emphases. *Proactive* aggression is usually conceived as occurring without provocation, is thoughtful, and has little or no affect. *Reactive* aggression is a response to a prior provocation and usually is accompanied by anger (Dodge & Coie, 1987; Pulkkinen, 1996).

The three main problems with these either/or dichotomies are that (1) many common aggressive behaviors contain elements that do not fit the dichotomous schemes; (2) the dichotomous schemes do not fit what is known about the interplay of automatic and controlled cognitive perception and decision processes; and (3) the dichotomous distinctions are themselves confounded with each other in contradictory ways. Apparently instrumental aggression can contain much hostile affect; some angry outbursts appear to be coldly calculated; some proactive aggression has a distinctly emotional aspect; and apparently instrumental considerations of potential consequences can be made both automatically and without awareness. For example, frequent use of aggression to obtain valued goals can become so automated or habitual that it becomes impulsive (Bargh & Pietromonaco, 1982; Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977).

To deal with the affective/instrumental dichotomy, we introduced and illustrated the distinction between proximate and ultimate goals (Anderson & Bushman, 2002b; Bushman & Anderson, 2001). A proximate goal

is one that most immediately guides behavior, whereas the ultimate goal is the broader reason for doing that behavior. In this new conceptual scheme, intention to harm still is a necessary definitional feature of all aggression, but it is necessary only as a *proximate* goal. The *ultimate* goal, however, may be solely to inflict harm (pure affective aggression), solely to gain some other goods or resource (pure instrumental aggression), or a mixture of hostile and instrumental goals. In essence, we can separately evaluate the degree to which an ultimate goal has hostile and instrumental components.

Similarly, a dimensional approach resolves other dichotomous anomalies. Any aggressive act can be characterized along each of the following dimensions:

- Degree of hostile or agitated affect present
- Automaticity
- Degree to which the primary or ultimate goal is to harm the victim versus benefit the perpetrator
- Degree to which consequences were considered

This dimensional framework yields a clearer understanding of mixed motive aggression, quick but consequence-sensitive aggressive acts, and other forms of aggression that have been problematic for traditional dichotomous approaches (Anderson & Bushman, 2002b; Anderson & Huesmann, 2003; Bushman & Anderson, 2001).

The need to address the dichotomy of direct versus indirect aggression emerged while preparing this chapter. Indirect aggression is usually defined as aggressive behavior committed outside the presence of the victim, such as telling stories and lies behind someone's back to get him or her in trouble or taking a person's things when he or she is not present. Direct aggression is committed in the presence of the target. This distinction has been highlighted by several research groups who have found substantial gender differences, with males using relatively more direct and females relatively more indirect forms of aggression (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Crick & Grotpeter, 1995; Lagerspetz, Bjorkqvist, & Peltonen, 1988; Lagerspetz & Bjorkqvist, 1992). The problem with this dichotomy is that it confounds two dimensions: visibility of the act and actor to the victim, and propinquity to the act that actually produces the harm. Consider the case of a Nazi guard who forces Jewish prisoners to board a train for a death camp. The act takes place in the presence of the victims and so would seem to be a case of direct aggression. However, the execution of those prisoners might take place hundreds of miles away, some weeks or months later, and may not occur for all of the prisoners. This makes the act seem more like indirect aggression. We propose that the direct/indirect dichotomy be discarded in favor of the two dimensions of *visibility* and *propinquity*.

The Basic Model

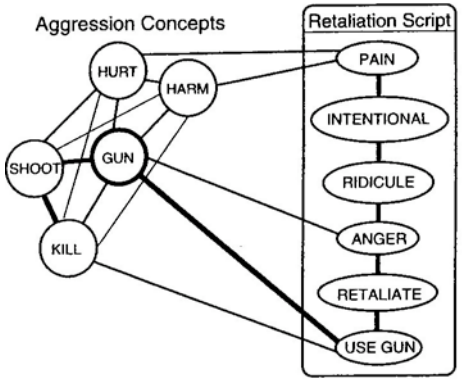
Background

The General Aggression Model is a dynamic, social-cognitive, develop mental model that includes situational, individual (personological), and biological variables and provides an integrative framework for domain specific theories of aggression. GAM is largely based on social learning and social-cognitive theories developed over the past three decades by a large number of scholars from social, developmental, and personality psychology (e.g., Bandura, 1973, 1977, 1983, 1986; Berkowitz, 1989, 1993; Dodge, 1980, 1986; Crick & Dodge, 1994; Huesmann, 1982, 1988, 1998; Mischel, 1973; Mischel & Shoda, 1995). These scholars prepared the stage for GAM's integrative view by delineating how social behavior moves under the control of internal self-regulating processes, and by illustrating the underlying learning and developmental processes. Social behavior depends upon the individual's construal of events in the present environment, including the person's interpretation of these events, beliefs about typical ways of responding to such events, perceived competencies for responding in different ways, and expectations regarding likely out comes. These cognitions provide a basis for some stability of behavior across a variety of situations (because each individual tends to resolve situational ambiguities in characteristic ways), but also allow considerable situational specificity (because of reality constraints upon possible construals).

GAM also draws heavily on research that elucidates the development and use of knowledge structures for perception, interpretation, decision making, and action (e.g., Bargh, 1996; Collins & Loftus, 1975; Fiske & Taylor, 1991; Higgins, 1996; Wegner & Bargh, 1998). Knowledge structures develop from experience; influence all types of perception, from basic visual patterns to complex behavioral sequences; can become automatized with use; are linked to affective states, behavioral programs, and beliefs; and guide interpretations and behavioral responses to the social and physical environments. One particularly important breakthrough was the discovery that even very complex decision and judgment processes can become automatized with practice. That is, decisions that initially require considerable conscious thought can, in fact, become effortless and occur with little or no awareness. For example, a person who repeatedly "learns" through experience or through cultural teachings that a particular type of person (e.g., Palestinian, Israeli) is a "threat" can automatically perceive almost any action by a member of that group as dangerous and remain unaware of the multiple inferences he or she made in coming to that perception. This dynamic can easily lead to a "shoot first, ask questions later" mentality. Indeed, this automaticity of hatred, suspicion, and preemptive aggression aptly characterizes the conditions leading to many of the most heinous massacres and acts of genocide throughout history.

Three particularly important types of knowledge structures are (1) *perceptual schemata,* which are used to identify phenomena as simple as everyday physical objects (e.g., chair, person) or as complex as social events (e.g., personal insult); (2) *person schemata,* which include beliefs about a particular person (e.g., George W. Bush) or groups of people (e.g., Hutus, Tutsis); and (3) *behavioral scripts,* which contain information about how people behave under varying circumstances (e.g., a restaurant script).

Knowledge structures include affect in three different way. First, knowledge structures contain links to experiential affect "nodes" or con cepts. When a knowledge structure containing anger is activated, anger is experienced. Second, they include knowledge about affect, such as when a particular emotion should be experienced, how emotions influence people's judgments and behavior, and so on. Third, a script may include affect as an action rule (Abelson, 1981). For example, a "personal insult" script may prescribe aggressive retaliation but only if anger is at a high level or fear is at a low level. Figure 8.1 displays two types of knowledge structures: a general schema about guns and a behavioral script for retaliation. Concepts with similar meanings (e.g., hurt, harm) and concepts that are frequently activated simultaneously (e.g., gun, shoot) become strongly linked. In Figure 8.1, line thickness represents association strength, and distance represents dissimilarity of meaning. The figure also illustrates how network associations can activate specific behavioral scripts. If the nodes *gun, kill, hurt,* and *harm* are activated, the retaliation script will be strongly primed; once primed, the script becomes a more likely tool for



FGURE 8.1. Simplified associative network of aggression concepts and a retaliation script. From Anderson, Benjamin, and Bartholow (1998). Copyright 1998 by the American Psychological Society. Reprinted by permission.

interpreting an ambiguous situation involving ridicule, thereby increasing the likelihood of retaliation.

Single Episode Cycle

GAM focuses on the "person in the situation," called an *episode,* consisting of one cycle of an ongoing social interaction. Figure 8.2 presents a simplified version of .the main foci of the model. The three main foci concern (1) person and situation inputs; (2) present internal state, consisting of the cognitive, affective, and arousal routes though which input variables have their impact; and (3) outcomes of the underlying appraisal and decision processes.

Inputs. The input level consists of two types of *proximate* causes. Situational causes are features of the present situation that increase (or inhibit) aggression-for example, factors such as an insult, an uncomfortable temperature, presence of a weapon, presence of one's religious leader. Personological causes include whatever the person brings to the current situation-for example, factors such as attitudes, beliefs, and behavioral tendencies. Biological effects (e.g., hormones, genetics) operate via bio social interaction effects (e.g., the interaction of a biological vulnerability with an abusive environment) on personological causes (e.g., Anderson & Huesmann, 2003; Raine, Brennen, Farrington, & Mednick, 1997).

Present Internal State. Input variables influence behavior through the *present internal state* that they create. The internal states of most interest concern cognition, affect, and arousal. A given input variable may influ-

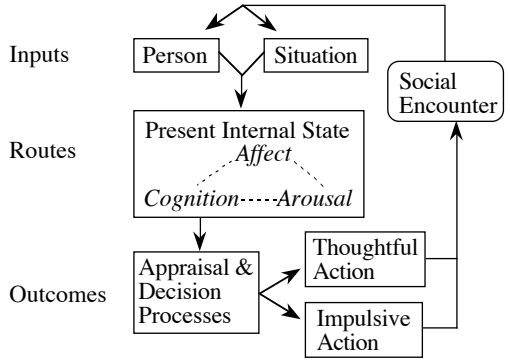


FIGURE 8.2. The general aggression model: Episodic processes. From Anderson and Bushman (2002b). Copyright 2002 by Annual Reviews. Reprinted by permis sion.

ence aggression by influencing one, two, or all three aspects of the present internal state. Furthermore, the dashed line connecting the three aspects in Figure 8.2 illustrate that each may influence the others. This means that a given input variable may have direct or indirect effects on each aspect of the present internal state. For example, research on temperature effects has found that hot temperatures appear to directly increase hostile affect and physiological arousal and to indirectly increase hostile cognition (e.g., Anderson, Anderson, & Deuser, 1996; Anderson, Anderson, Dorr, DeNeve, & Flanagan, 2000).

Sometimes person and situation variables combine interactively in their effects on present internal state, as in Anderson, Anderson, Dill, and Deuser's (1998) finding that pain and trait hostility interactively affect aggressive cognitions. At other times they combine additively, as in Anderson's (1997) finding that exposure to media violence and trait hostility both increased feelings of state hostility but that the two variables did not interact.

Outcomes. The third stage includes several complex appraisal and decision processes, ranging from the relatively automatic to the heavily controlled (d. Robinson, 1998; Smith & Lazarus, 1993). Results from the inputs enter into the appraisal and decision processes through their effects on present internal state. In Figure 8.3 relatively automatic processes are labeled "immediate appraisal," whereas more controlled processes are labeled "reappraisal." The outcomes of these decision processes determine the final action of the episode. The final action then cycles through the social encounter to become part of the input for the next episode, as depicted in Figure 8.2.

The appraisal and decision processes depicted in Figure 8.3 derive

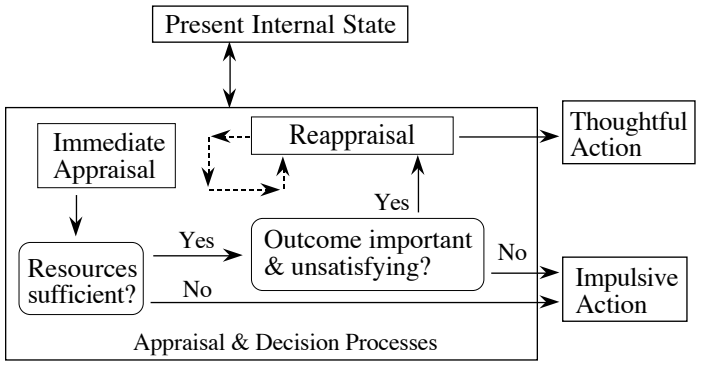


FIGURE 8.3. Appraisal and decision processes: Expanded view. From Anderson and Bushman (2002b). Copyright 2002 by Annual Reviews. Reprinted by permission.

from research in many areas but most specifically from work on spontaneous inference processes (Krull, 1993; Krull & Dill, 1996; Uleman, 1987) and explanation/attribution processes (Anderson, Krull, & Weiner, 1996). Immediate appraisal is automatic: It is relatively effortless, spontaneous, and occurs without awareness. Present internal state determines the content of the immediate appraisal. And as noted earlier, both person and situation factors determine the present internal state.

Immediate appraisals include affective, goal, and intention information. A threat appraisal may include fear and anger-related affect, an aggression goal, and a specific intention to carry out that goal. Responses to the same objective situation differ considerably from person to person, depending on each person's social learning history (i.e., personality) and present state of mind (i.e., which knowledge structures are currently most accessible).

Whether reappraisal occurs depends on two factors: availability of resources (e.g., time, cognitive capacity) and whether the immediate appraisal is judged as both important and unsatisfactory. If resources are insufficient or if the outcome is deemed unimportant or satisfactory, impulsive action occurs-action that may be aggressive or nonaggressive, depending on the content of the immediate appraisal.

If reappraisal occurs, a search is activated for an alternative view of the situation. Different knowledge structures may be recruited and tested, including different scripts and memories of similar events. Numerous reappraisal cycles may occur, but at some point the process ceases and a thoughtful course of action occurs. That action may be nonaggressive, but an important aspect of this model is that thoughtful action may well be highly aggressive-whether of a cold, calculating type or a hot, affective type. Indeed, the reappraisal process can increase the level of anger, as past "wrongs" by the target person are dredged up from memory or as the damage to one's social image becomes more apparent. Also note that present internal state is affected by both types of appraisal, indicated by the double-headed arrow in Figure 8.3.

In sum, all social behavior, including aggression, is the result of the proximate convergence of situational factors (i.e., instigators or inhibitors of aggression) and personological factors (i.e., propensity or preparedness to aggress or to avoid aggression). These input variables influence social behavior by determining the present internal state and subsequent appraisal and decision processes. The emitted social behavior, in turn, moves the social encounter along to its next episodic cycle.

Developmental Cycle

From this social-cognitive perspective, *personality* is the sum of a person's knowledge structures (Anderson & Huesmann, 2003; Mischel & Shoda,

1995; Sedikides & Skowronski, 1990), constructed from countless experiences throughout the life span, influenced by biological factors as well as situational ones; At any given point in time, how a person construes and responds to the social world depends on the situational factors in his or her world and on the knowledge structures he or she has acquired and uses habitually.

The process by which hostile schemas, aggressive scripts, and other types of knowledge structure are activated is a cognitive one that can, with practice, become completely automatic and operate without awareness (Schneider & Shiffrin, 1977; Todorov & Bargh, 2002). By viewing each episodic cycle depicted in Figure 8.2 as a learning trial, we can understand the development of an aggressive personality as the result of a series of learning episodes that prepare the individual to behave aggressively or violently in a number of differing situations. Many of the perceptual, appraisal, and decision processes underlying such behavior can take place with little thought, effort, or awareness. This social-cognitive learning aspect of GAM and similar models, in conjunction with the judgment and decision-making aspects of the model, (1) clarifies how situational and personological variables produce more (vs. less) aggressive individuals in general, (2) accounts for the specificity and generality of a given individual's pattern of aggressive (or nonaggressive) behaviors across time and situation, and (3) provides a sound basis for constructing interventions designed to prevent the development of inappropriately aggressive tendencies or to change such tendencies after they have developed.

Biosocial Interactions. Inherited biological factors clearly influence risk for aggression but do not entirely determine level of aggression expressed (Raine et aI., 1997). Biological predispositions manifest themselves through "interactions" with the social context in which the organism develops. Such interactions allow biological factors to influence social behavior by affecting the developing knowledge structures (such as scripts, beliefs, and schemas) and through their influence on affective components of these knowledge structures. Recent evolutionary theorizing about aggression, specifically the recognition of the importance of "calibration" through learning experiences in the emergence of inherited behavior patterns (e.g., Buss & Shackelford, 1997a, 1997bj Daly & Wilson, 1994; Malamuth & Heilmann, 1998), fits this biosocial interaction perspective quite well. Similar conclusions have been reached by social-developmental researchers (e.g., Huesmann, 1997; Tremblay, 2000). It is also interesting to note the relevance of the old learning concept of "preparedness" (Seligman, 1970), the idea from the animal learning literature that it is easier to link some stimulus-response pairs than others. Preparedness relates to human aggression in at least two ways. First, certain emotional states and behavioral syndromes appear to be easily linked, such as frustration,

pain, anger, and aggression (e.g., Berkowitz, 1993). Second, biological (i.e., genetic, hormonal) effects on aggression may operate by preparing some individuals to more easily learn frustration-anger-aggression linkages, and by preparing others (i.e., those who become nonaggressive people) to more easily learn the negative consequences of aggression (e.g., Soubrie, 1986).

Aggression-Related Variables. Figure 8.4 presents a schematic summary of these developmental and personality processes in relation to five broad categories of aggression-related variables that have been identified by various researchers as key elements in what we call aggressive personality. Although each of the five categories focuses on "aggressive" elements, it is important to remember the flip sides of these five coins. For example, anti-aggression beliefs and attitudes are also relevant, even though there is not a separate" box" for them.[1]

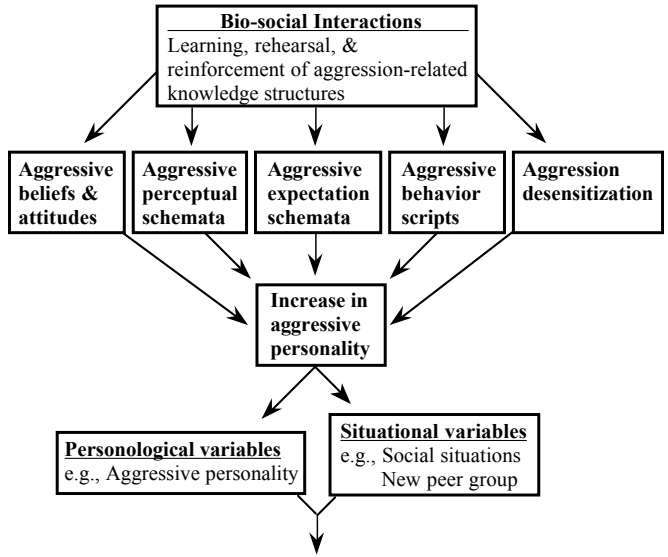


FIGURE 8.4. The General Aggression Model: Developmental/personality processes in relation to five categories of aggressive-related variables.

[1]Note that *aggressive personality* is not conceived as a unitary construct. There are many types of aggressive people, differing in which kinds of aggression they display in response to different types of situations.

The bottom half of Figure 8.4 links this developmental-personality portion of GAM back to the social episode portion, illustrating how both the past and the future influence social behavior in the present situation. Past biosocial interactions of certain types lead to increases in aggressive personality. Expectations about the future are a part of this social-cognitive view of personality. Personality (i.e., personological variables) influences the construal of, and reaction to, new social encounters, thus bringing both the past and the future into the present social episode. In addition, changes in personality can bring about systematic changes in types of situations that the person will encounter most frequently in the future. For example, a child who becomes more aggressive over time will experience a shift in friendship patterns and relationships with teachers and family members. Such a child tends to become a social outcast, associating with other aggressive children and being shunned by more socially adept peers. Interactions with teachers and parents deteriorate as well. In essence, the child's social environment becomes more aggressive and confrontational in many ways.

Violence Escalation Cycle

Figure 8.5 illustrates the violence escalation cycle, which has been described by many aggression scholars, is discussed in several chapters in the present volume, and fits GAM quite well. "A" and "B" can represent two people, two groups, two religions, two nations-basically any dyadic units in which members of the dyad are in conflict with each other. Some initial triggering event sets the cycle in motion. One person's "appropriate and justified" retaliation is the other's next provocation. Very often, the initial events are lost in the distant past, but once started, the cycle tends to persist. There are three key points. First, as most grandparents, most religions, and most aggression scholars have noted, violence begets violence. The cyclical nature of violent acts is so apparent in day-to-day interactions among children as well as nations that further elucidation seems unnecesary. Unfortunately, people and nations involved in such cycles often cannot "see" what seems apparent to others. For example, many U.S. citizens consider the U.S. "War on Terrorism" in Afghanistan and the "preemptive" war on Iraq as appropriate and justified responses to the events of 9/11 and to other threats, but fail to understand how it is that others around the world, including Arab groups in the Gulf region, might perceive one or both wars as unjustified overreactions, outright religious wars, or an imperialistic grab for oil. Many of the U.S. political leaders seem to be truly puzzled by the fact that many recent U.S. military actions can be perceived by others as "evil" works demanding a forceful response. Our point is not that the United States is wrong and that Osama bin Laden and Saddam Hussein are right, but merely to illustrate how difficult it can

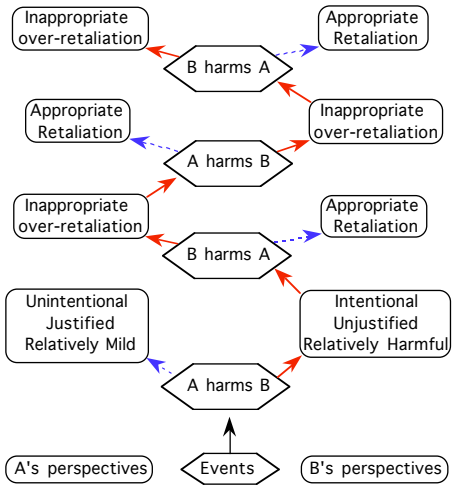


FIGURE 8.5. The violence escalation cycle.

be to perceive our own involvement in an ongoing cycle of violence. If we truly understand the cycle and our place in this particular one, then we cannot be surprised that "terrorist" groups are reappearing in Afghanistan or that guerilla warfare against U.S. troops in Iraq has emerged and is escalating.

Second, retaliation typically occurs at a higher or more extreme level than the most recent provocation. This is the "escalation" aspect of the cycle. When the cycle involves two individuals, the escalation is often absolute. That is, if person A makes cutting remarks to person B, B may escalate to a punch or slap; A may then escalate to a knife, B to a gun. At the level of nations, the escalation is often relative, in the sense that each side may increase the harm it does relative to what it did in an earlier cycle, but the nations may differ dramatically in their ability to inflict harm on the other. The Isreali-Palestinian conflict is of this nature. The Palestinians cannot begin to inflict the number of deaths on Israelis that the Isrealis can inflict on the Palestinians. The same imbalance exists in the U.S. wars on terrorism. Again, we do not wish to promote one political or religious position over another but are merely trying to illustrate key points about cycles of violence.

Third, the upward pressure toward ever-increasing levels of violence stems largely from perspective biases, in which the most recent perpetrators view the harmful act they just committed as appropriate and justified, whereas the most recent victims view the harmful act committed against

them as an inappropriate overreaction. These differential perspective biases are fueled by many of the knowledge structures discussed in the previous section.

Successful intervention requires that (1) the parties in conflict are separated (at least, temporarily) so that the escalation cycle can be stopped; (2) key underlying knowledge structures are changed (e.g., extremely hostile stereotypes or beliefs about the other side, beliefs about the moral superiority of one's own position, expectations about the eventual effectiveness of one's violent course of action); and (3) knowledge structures that facilitate peaceful coexistence be created or made more salient (e.g., establishing common goals and plans to achieve those goals, as well as expectations that they can be achieved). Of course, the specific knowledge structures that need to be changed vary from case to case as well as from level to level (i.e., two individuals vs. two gangs vs. two nations). However, as GAM makes clear, the same basic processes are at work regardless of the level at which the escalation cycle has been engaged.

Risk Factors

Multiple Causes

Research from several perspectives reveals that a wide variety of risk and protective factors influence the incidence of individual and collective violent evil between and within various societies. Examples of these factors include accessibility of guns (O'Donnell, 1995), global warming (Anderson, Bushman, & Groom, 1997), different cultural norms about violence (Nisbett & Cohen, 1996), and the widespread exposure to violent entertainment media (Anderson et al., in press; Anderson & Bushman, 2001, 2002b). However, no one causal factor, by itself, explains more than a small portion of differences in violence. For example, it is now well established that exposure to media violence is a risk factor for development of aggressive and violent individuals. Four broad types of converging evidence provide consistent results on this point: Cross-sectional correlation studies, longitudinal studies, laboratory experiments, and field experiments all point to the same simple conclusion (Anderson & Bushman, 2002c). Compared to the effect sizes of other more well-known medical effects, such as secondhand smoking effects on lung cancer (Bushman & Anderson, 2002a), the media violence effects are sizeable but still account for only 3-4% of the variance in aggression. The effect size on the most extreme forms of violent evil is likely smaller. But the same is true for other violence risk factors. Violent evil is most likely to emerge in environments with multiple risk factors, environments that provide aggressive models, frustrate and victimize people, reinforce aggression, and teach people that aggression is acceptable and successful.

Types of Causes

It is convenient to divide risk factors for violent evil into proximate and distal causes (Anderson & Huesmann, 2003). As discussed earlier, *proximate* causes are those *person* and *situation* variables that are present and active in the current social episode. *Distal* causes are *environmental* and *biological* modifiers that exert their influence over a long period of time. As illustrated in Figure 8.6, distal factors operate by increasing proximate factors that facilitate aggression or by decreasing proximate factors that inhibit aggression. For the most part, distal factors are seen as influencing the individual's personal preparedness to aggress (i.e., aggressive personality). For example, repeated exposure to media violence can create highly accessible retaliation scripts that are easily activated on future occasions. As noted earlier, however, systematic changes in aggressiveness also produce systematic changes in the person's social environment. Thus, distal factors can also systematically change the situational contexts in which a person habitually resides. Finally, it is useful to remember that some biological and some environmental modifiers operate as both proximate and distall causal factors. Exposure to a violent movie both primes aggressionrelated knowledge structures in the immediate situation and constitutes an additional learning trial that teaches the viewer beliefs that will have longer-lasting effects.

Table 8.1 lists a variety of causes of aggression and violence, including causal factors described in greater detail by a number of authors in this volume. Though not exhaustive, the list is intended to illustrate how vari-

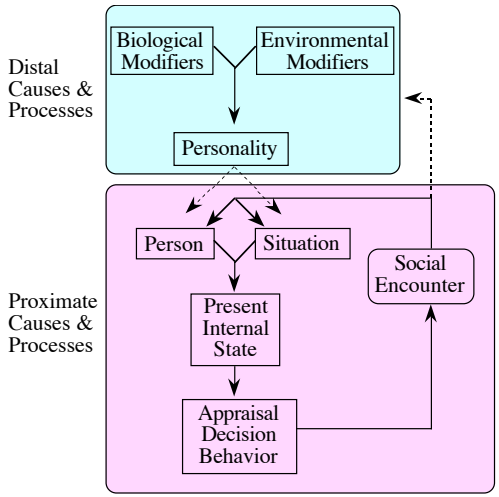


FIGURE 8.6. The General Aggression Model: Overall view.

TABLE 8.1. Proximate and Distal Causal Factors in Violent Evil

Proximate causal factors	Distal causal factors
Person	**Environmental modifiers**
Unstable high self-esteem	Maladaptive families and parenting
Narcissism	Violent neighborhood
Self-image	Cultural norms that support violence
Long-term goals	Victimization experiences
Self-efficacy beliefs for violent and nonviolent behavior	Deprivation
Normative beliefs about aggression, retaliation, etc.	Difficult life conditions
Attitudes toward violence	Group conflict
Hostile attribution, expectation, and perception biases	Fear-inducing events
Aggression scripts	Lack of bystander intervention in violent encounters
Dehumanization of others	Diffusion of responsibility
Cultural stereotypes	Exposure to violent media
Moral justification for violence	Association antisocial peers
Displacement of responsibility	
Situation	**Biological modifiers**
Social stress	Low arousal
Provocation	Low serotonin
Frustration	ADHD
Pain/discomfort	Hormone imbalances
Bad moods	Executive functioning deficits
Weapons	
Violent scenes	
Violent media	
Noise	
Temperature	
Threatening or fearful stimuli	
Exercise	
Alcohol and other drugs	

ous types of factors are well organized by GAM, and how even societal-level factors eventually operate through their influence on the individual in a specific social encounter. [2]

For example, consider a Palestinian youth growing up on the West Bank during the last 15 years. The social, economic, and cultural environment has been filled with deprivation, fear, hate, and violence. The cultural norms and everyday experiences have provided ample opportunity for the youngster to learn to hate and dehumanize his or her Israeli "enemies," to develop violent behavioral scripts, and to become quite prepared to engage in "heroic" (i.e., terrorist) attacks on Israeli citizens. Indeed, it is difficult to imagine an environment better suited to create a generation of people prepared to behave violently toward their neighbors. Though the conditions are considerably different in many ways, Isrealis growing up during this time period also have been exposed to conditions conducive to creating people who are psychologically prepared to behave violently toward their neighbors. Indeed, the recent series of suicide bombings by Palestinians and military attacks by Israelis illustrates the violence escalation cycle all too well, despite truly heroic efforts by many individuals on both sides of the conflict to end the conflict.

[2]For citations of relevant empirical articles on these factors, see Anderson and Huesmann (2003); Berkowitz (1993); Geen (2001); Miller (1999); and various chapters in this volume.

In addition to the heuristic value provided by organizing research findings from several voluminous literatures, GAM also bolsters research on how to intervene in group conflicts at several levels. For instance, key factors outlined by Staub (e.g., 1989, 1998) in numerous writings all fit well with GAM: the initial need to stop the violence, provide economic development, work toward reducing (and eventually eliminating) mutual distrust and fear, promote healing and reconciliation, and promote cultural change in ways that give people on both sides a stake in the success of peace (e.g., promoting democratic reforms). Similarly, the work by Kelman (1998, 2001) fits GAM well. Not only do these approaches to the reduction of the broad types of violent evil fit GAM, but GAM provides a meaningful theoretical context within which we can understand how these approaches work at the level of the individual engaging in social encounters.

CONCLUDING ISSUES AND COMMENTS

An Interactionist Perspective

Like any good theory, the General Aggression Model is a work in progress. Most of our early studies on this model came from the heat/aggression domain, whereas most of our recent empirical work has been focused on media violence. Throughout all of this work, though, the intent has been to create and test hypotheses about human aggression, in general. As it turns out (not entirely by chance), a focus on these two domains naturally led us to create a model that takes a very strong interactionist perspective. It is an interactive model in several ways. First, GAM is largely predicated on the ubiquity of social encounters or interactions of the person with his or her social environment (broadly conceived to include thinking about fictitious characters as well as truly social interactions with real people). Second, GAM illustrates the dynamics underlying interactions between situational and personological variables. Third, GAM ex-

plicitly incorporates biological factors (admittedly, with less precision) as they interact with environmental factors to influence the preparedness of the individual to aggress within specific contexts. Finally, and perhaps most importantly in the context of this chapter, GAM includes a structure that explicates how multiple levels of violence-related factors operate on the individual, from very general societal factors through subcultures, neighborhoods, schools, peers, family, and so on.

Causality and Personal Responsibility

Though it has become fashionable in some scientific quarters to eschew causal language in favor of eviscerated terms such as *linkages* or *associations,* GAM is explicitly a causal model. This does not mean that correlational evidence is ignored or that the difficulties in establishing clear, causal connections from correlational data are overlooked. The causal focus reflects an underlying belief that good theory is intended to be useful for social action, and that we do not take social action on the basis of linkages unless we believe them to be causal. Thus, GAM specifies that violent evil is indeed *caused by* the conjunction of numerous converging risk factors.

This causal language is sometimes misinterpreted as suggesting that the perpetrators of violence are not seen as carrying responsibility for their violence, or that society should not hold them responsible. From a social action perspective, however, perpetrators must be held responsible for their actions. Several key aggression-inhibiting factors rely on the individual's belief that he or she is responsible for his or her own behavior (i.e., self-regulation processes) and will be held responsible by others (i.e., social regulation). GAM (and other social-cognitive models) brings the future into the present by noting the effects of expected future outcomes on present behavioral decisions. When individuals or groups of individuals come to believe either that they are not responsible or that they will not be held accountable by others, the stage is set for the occurrence of violent evil. Indeed, as several writers in this volume have noted, a key ingredient of genocidal attacks is the blurring of personal responsibility. In sum, modern society cannot afford to allow abdication of personal responsibility, even if it sometimes seems unfair to hold individuals (or nations) responsible for violent acts that were "caused," at least partially, by extraneous factors over which they had no control. For example, there are several recent homicide cases in which the defense used a violent video game defense. Although we agree that violent video games (like other violent media) are a cause of increased aggressiveness, we disagree with a position that totally removes responsibility from the person who actually committed the homicide.

Social, Political, and Cultural Implications

Research on human aggression, as organized by the General Aggression Model, has numerous public policy implications at several levels. It tells us how to raise children who will not be prone to using violence to resolve conflicts. It suggests how to construct successful prevention programs and intervention methods and helps us understand why prevention is easier than intervention, why intervention is easier at earlier ages than later ones, and why some programs "work" and others do not (e.g., Anderson, 2000; Anderson & Bushman, 2002b; Anderson & Huesmann, 2003).

GAM and the research it summarizes can also provide a guide for international political action in the face of conflict between nations and between disparate groups within nations. It suggests what sorts of short-term interventions are most likely to provide a useful interruption in some ongoing cycles of violence as well as what types of programs are most likely to yield desirable long-term results. At the most global level, this work suggests that citizens of this planet must not sit quietly on the sidelines when major genocidal events are taking place.

Finally, the model suggests that modern society must beware of creeping cultural shifts toward greater acceptance of violence in everyday life. It makes clear that each generation learns an array of aggression-related knowledge structures both from direct sources, such as family; school, churches, and peers, and from :indirect sources, such as the mass media. When a society allows (or creates) a shift toward greater acceptance of violence in everyday life, it is a shift that comes with an immediate price and a long-term risk. The immediate price is obvious. There will be more assualts, murders, rapes, and the quality of life will decline. The long-term risk may be less obvious. The next generation will internalize the new, more aggression-tolerant norms and hence be prepared to allow even further shifts toward greater acceptance of everyday violence. Furthermore, such tolerance of violence may well increase a nation's willingness to go to war to further its aims. Although still in very early stages of data analysis, we have some evidence indicating that changes in the framing of news reports about 9/11 events and the "war on terrorism" may have led to systematic changes in attitudes toward violence-changes that facilitated acceptance among the U.S. population of the use of war in Afghanistan and Iraq as a legitimate, appropriate, and even desirable foreign policy (Anderson & Carnagey, 2003). Recent discussions throughout the United States about the lack of civility and about the pervasiveness of media violence are touching on this same issue of creeping shifts in violence acceptability. GAM and the knowledge structure approach on which it is based provides insight into how such cultural shifts take place and into potential ways to slow or reverse them.

ACKNOWLEDGMENTS

This chapter borrows heavily from Anderson and Bushman (2002b) and Anderson and Huesmann (2003).

REFERENCES

Abelson, R. P. (1981). Psychological status of the script concept. *American Psychologist,* 36, 715-729.

Anderson, C. A. (1997). Effects of violent movies and trait irritability on hostile feelings and aggressive thoughts. *Aggressive Behavior,* 23, 161-178.

Anderson, C. A. (2000). Violence and aggression. In A. E. Kazdin (Ed.), *Encyclopedia of psychology* (Vol. 8, pp. 162-169). New York & Washington, DC: Oxford University Press and the American Psychological Association.

Anderson, C. A., Anderson, K. B., & Deuser, W. E. (1996). Examining an affective aggression framework: Weapon and temperature effects on aggressive thoughts, affect, and attitudes. *Personality and Social Psychology Bulletin,* 22, 366-376.

Anderson, C. A., Anderson, K. B., Dorr, N., DeNeve, K. M., & Flanagan, M. (2000). Temperature and aggression. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 32, pp. 63-133). New York: Academic Press.

Anderson, C. A., Benjamin, A. J., & Bartholow, B. D. (1998). Does the gun pull the trigger? Automatic priming effects of weapon pictures and weapon names. *Psychological Science,* 9, 308-314.

Anderson, C. A., Berkowitz, 1., Donnerstein, E., Huesmann, 1. R., Johnson, J., Linz, D., Malamuth, N., & Wartella, E. (in press). The influence of media violence on youth. *Psychological Science in the Public Interest.*

Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science,* 12, 353-359.

Anderson, C. A., & Bushman, B. J. (2002a). The effects of media violence on society. *Science,* 295, 2377-2378.

Anderson, C. A., & Bushman, B. J. (2002b). Human aggression. *Annual Review of Psychology,* 53, 27-51.

Anderson, C. A., & Bushman, B. J. (2002c). Media violence and the American public revisited. *American Psychologist,* 57, 448-450.

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,16, 1213-1223.*

Anderson, C. A., & Carnagey, N. 1. (2003, May 29-June 1). *9/11-induced changes in attitudes towards violence.* Invited address presented at the Ameri~ can Psychological Association Convention, Atlanta, GA.

Anderson, C. A., & Huesmann, 1. R. (2003). Human aggression: A social cognitive view. In M. Hogg & J. Cooper (Eds.), *Handbook of social psychology* (pp. 296-323). London: Sage.

Anderson, C. A., Krull, D. S., & Weiner, B. (1996). Explanations: Processes and consequences. In E. Higgins & A. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 271-296). New York: Guilford Press.

Anderson, K. B., Anderson, C. A., Dill, K. E., & Deuser, W. E. (1998). The interactive relations between trait hostility, pain, and aggressive thoughts. *Aggressive Behavior,* 24, 161-171.

Bandura, A. (1973). *Aggression: A social learning theory analysis.* Englewood Cliffs, NJ: Prentice-Hall. Bandura, A. (1977). *Social learning theory. New York: Prentice Hall.*

Bandura, A. (1983). Psychological mechanism of aggression. In R. G. Geen & E. I. Donnerstein (Eds.), *Aggression: Theoretical and empirical reviews* (Vol. 1, pp. 1-40). New York: Academic Press.

Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bargh, J. A. (1996). Automaticity in social psychology. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 169-183). New York: Guilford Press.

Bargh, J. A., & Pietromonaco, P. (1982). Automatic information processing and social perception: The influence of trait information presented outside of conscious awareness on impression formation. *Journal of Personality and Social Psychology,* 43, 437-449.

Baron, R. A., & Richardson, D. R. (1994). *Human aggression* (2nd ed.). New York: Plenum Press.

Berkowitz, 1. (1989). Frustration-aggression hypothesis: Examination and reformulation. *Psychological Bulletin, 106, 59-73.*

Berkowitz, 1. (1993). *Aggression: Its causes, consequences, and control.* New York: McGraw-Hill.

Bjorkqvist, K., Lagerspetz, K., & Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior,* 18, 117-127.

Bushman, B. J. (1998). Priming effects of violent media on the accessibility of aggressive constructs in memory. *Personality and Social Psychology Bulletin,* 24, 537-545.

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

Bushman, B. J., & Anderson, C. A. (2001b). Media violence and the American public: Scientific facts versus media misinformation. *American Psychologist,* 56, 477-489.

Buss, D. M., & Shackelford, T. K. (1997a). From vigilance to violence: Mate retention tactics in married couples. *Journal of Personality and Social Psychology,* 72, 346-361.

Buss, D. M., & Shackelford, T. K. (1997b). Human aggression in evolutionary psychological perspective. *Clinical Psychology Review,* 17, 605-619.

Collins, A. M., & Loftus, E. F. (1975). A spreading activation theory of semantic processing. *Psychological Review,* 82, 407-428.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's adjustment. *Psychological Bulletin,* 115, 74-101.

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social psychological adjustment. *Child Development,* 66, 710-722.
Daly, M., & Wilson, M. (1994). Evolutionary psychology of male violence. In J. Archer (Ed.), *Male violence* (pp. 253-288). London: Routledge.
Dodge, K. A. (1980). Social cognition and children's aggressive behavior. *Child Development,* 51, 620-635.
Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), *The Minnesota Symposium on Child Psychology* (Vol. 18, pp. 77-125). Hillsdale, NJ: Erlbaum.
Dodge, K. A., & Coie, J. D. (1987). Social information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology,* 53, 1146-1158.
Fiske, S. T., & Taylor, S. E. (1991). *Social cognition.* New York: McGraw-Hill. Geary, D. C. (1998). *Male, female: The evolution of human sex differences.* Washington, DC: American Psychological Association.
Geen, R. G. (2001). *Human aggression.* Philadelphia: Open University Press.
Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 133-168). New York: Guilford Press.
Huesmann, 1. R. (1982). Information processing models of behavior. In N. Hirschberg & 1. Humphreys (Eds.), *Multivariate applications in the social sciences* (pp. 261-288). Hillsdale, NJ: Erlbaum.
Huesmann,1. R. (1988). An information processing model for the development of aggression. *Aggressive Behavior,* 14, 13-24.
Huesmann, 1. R. (1997). Observational learning of violent behavior: Social and biosocial processes. In A. Raine, D. P. Farrington, P. O. Brennen, & S. A. Mednick (Eds.), *The biosocial basis of violence* (pp. 69-88). New York: Plenum Press.
Huesmann, 1. R. (1998). The role of social information processing and cognitive schemas in the acquisition and maintenance of habitual aggressive behavior. In R. G. Geen & E. Donnerstein (Eds.), *Human aggression: Theories, research, and implications for policy* (pp. 73-109). New York: Academic Press.
Kelman, H. C. (1998). Social-psychological contributions to peacemaking and peacebuilding in the Middle East. *Applied Psychology: An International Review,* 47, 5-28.
Kelman, H. C. (2001). The role of national identity in conflict resolution: Experiences from Israeli-Palestinian problem-solving workshops. In R. D. Ashmore & L. Jussim (Eds.), *Rutgers Series on Self and Identity: Vol.* 3. *Social identity, intergroup conflict, and conflict resolution* (pp. 187-212). London: Oxford University Press.
Krull, D. S. (1993). Does the grist change the mill?: The effect of perceiver's goal on the process of social inference. *Personality and Social Psychology Bulletin,* 19, 340~348.
Krull, D. S., & Dill, J. C. (1996). On thinking first and responding fast: Flexibility in social inference processes. *Personality and Social Psychology Bulletin, 22,* 949-959.
Lagerspetz, K. M., & Bjorkqvist, K. (1992). Indirect aggression in girls and boys.

In L. R. Huesmann (Ed.), *Aggressive behavior: Current perspectives* (pp. 131-150). New York: Plenum Press.
Lagerspetz, K. M., Bjorkqvist, K., & Peltonen, T. (1988). Is indirect aggression typical of females? Gender differences in aggressiveness in 11- to 12-year-old children. *Aggressive Behavior,* 14, 403-414.
Lindsay, J. J., & Anderson, C. A. (2000). From antecedent conditions to violent actions: A general affective aggression model. *Personality and Social Psycholo*gy *Bulletin,* 26, 533-547.
Malamuth, N. M., & Heilmann, M. F. (1998). Evolutionary psychology and sexual aggression. In C. H. Crawford & D. 1. Krebs (Eds.), *Handbook of evolutionary psychology* (pp. 515-542). Mahwah, NJ: Erlbaum.
Miller, A. G. (Ed.). (1999). Special issue: Perspectives on evil and violence. *Personality and Social Psychology Review,* 3(3), 176-275..
Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review, 80, 252-283.*
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.*
The National Obituary Archive. (2002). Retrieved November 27, 2002, from *http://www.arrangeonline.com/notablePersons/honorroll.asp*
Nisbett, R. E., & Cohen, D. (1996). *Culture of honor: The psychology of violence in the South.* Boulder, CO: Westview Press.
O'Donnell, C. R. (1995). Firearm deaths among children and youth. *American Psychologist, 50, 771-776.*
Pulkkinen, 1. (1996). Proactive and reactive aggression in early adolescence as precursors to anti- and prosocial behavior in young adults. *Aggressive Behavior,* 22, 241-257.
Raine, A., Brennen, P. A., Farrington, D. P., & Mednick S. A. (Eds.). (1997). *Biosocial bases of violence.* London: Plenum Press.
Robinson, J. (1998). Theoretical issues in the role of appraisal in emotion: Cognitive content versus physiological change. In R. Hoffman & M. Sherrick (Eds.), *Viewing psychology as a whole: The integrative science of William* N. *Dember* (pp. 449-469). Washington, DC: American Psychological Association.
Schneider, W., & Shiffrin, R. M. (1977). Controlled and automatic human information processing: I. Detection, search, and attention. *Psychological Review,* 84, 1-66.
Sedikides, c., & Skowronski, J. J. (1990). Towards reconciling personality and social psychology: A construct accessibility approach. *Journal of Social Behavior and Personality,* 5, 531-546.
Seligman, M. E. P. (1970). On the generality of the law of learning. *Psychological Review,* 77,406-418.
Shiffrin, R. M., & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending, and general theory. *Psychological Review,* 84, 127-190.
Smith, C. A., & Lazarus, R. S. (1993). Appraisal components, core relational themes, and the emotions. *Cognition and Emotion,* 7, 233-269.

Soubrie, P. (1986). Reconciling the role of central serotonin neurons in humans and animal behavior. *Behavioral and Brain Sciences,* 9, 319-364.

Staub, E. (1989). *The roots of evil: The origins of genocide and other group violence.* New York: Cambridge University Press.

Staub, E. (1998). Breaking the cycle of genocidal violence: Healing and reconciliation. In J. Harvey (Ed.), *Perspectives on loss: A sourcebook* (pp. 231-238). Philadelphia: Taylor & Francis.

Surgeon General. (2001). *Youth violence: A report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services.

Todorov, A., & Bargh, J. A. (2002). Automatic sources of aggression. *Aggression and Violent Behavior,* 7, 53-68.

Tremblay, R. E. (2000). The development of aggressive behavior during child hood: What have we learned in the past century? *International Journal of Behavioral Development,* 24, 129-141.

Uleman, J. S. (1987). Consciousness and control: The case of spontaneous trait inferences. *Personality and Social Psychology Bulletin,* 13, 337-354.

Wegner, D. M., & Bargh,J. A. (1998). Control and automaticity in social life. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 1, pp. 446-496). New York: McGraw-Hill.