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GENERAL AGGRESSION MODEL

Aggression is defined by Craig A. Anderson and Brad J. Bushman as behavior intended to harm another who is motivated to avoid that harm; it is conceived as a continuum ranging from mild (e.g., insult) through moderate (e.g., hitting) to extreme harm (e.g., murder). Various types of aggressive and violent behaviors are commonplace worldwide. Enumerating factors that predict aggression is important and useful at informing interventions. However, the wealth of research on predicting aggressive behavior reveals that no single predictor accounts for much variance in any one aggressive act. Rather, myriad risk factors are likely present in extremely aggressive behaviors.

Understanding aggression requires sound theoretical models that account for underlying psychological processes, personality predictors, and situational factors involved in producing inappropriate (and appropriate) aggression. This encyclopedia entry describes one comprehensive model: the general aggression model.

Overview

The general aggression model (GAM) is a dynamic developmental social-cognitive model of aggression. The GAM was derived from the theoretical underpinnings of several domain-specific theories of

aggressive behavior, including L. Rowell Huesmann's script theory, Albert Bandura's social learning theory, Berkowitz's cognitive neo-associative theory, Crick and Dodge's social information processing theory, and others.

The GAM delineates causal processes that link learned and situational variables to subsequent aggressive behavior. The overall model can be partitioned into two highly related sets of processes: proximate processes and distal processes. Proximate processes detail how variables in the immediate situation influence aggressive behavior through changes in state-based thoughts, emotions, arousal, and decision processes. Distal processes detail how repeated learning episodes develop into long-term aggressive tendencies that shape personality.

Proximate Processes

Input Factors

Proximate processes in the GAM begin with two types of inputs: situational and person factors. Situational factors are variables in the immediate social environment that likely foster (or inhibit) aggressive behavior. Many such factors have been identified, such as provocation, alcohol consumption, heat, and media violence, among others. Person factors are variables that people bring with them to the situation, such as dispositional characteristics related to aggression (e.g., disagreeableness, trait aggression), beliefs, attitudes, and mood.

Present Internal State

The input factors influence aggression by influencing at least one of the three types of present internal-state variables: aggressive cognition, aggressive affect, and physiological arousal. Internal-state variables are intercorrelated, each influencing the others. For example, hot temperatures increase aggressive behavior primarily by increasing aggressive affect and arousal, whereas media violence seems to increase aggression primarily by increasing aggressive cognitions. Additionally, person and situational input factors may influence internal-state variables (and therefore aggression) either additively or interactively. For example, Bruce D. Bartholow and colleagues

found that the presence of hunting guns increases aggression for one type of person (e.g., nonhunters) while having little impact on another (e.g., hunters).

Outcomes

Input factors affect the next GAM stage, appraisal and decision processes, through changes in internal state. This stage of the GAM includes several complex appraisal and decision processes that range from automatic to more controlled. The process begins with an immediate appraisal (or attribution) regarding an event. This immediate appraisal is largely automatic—relatively effortless, spontaneous, and without awareness. Such immediate appraisals have implications for behavior.

For example, if the event is some type of harm (e.g., getting bumped) and the immediate appraisal implies that it was intentional, the implication is that some type of retaliation or escape behavior is needed. If no further processing of the event occurs, the ensuing behavior will be impulsive. However, if three conditions are met, then efforts are made toward further processing: There must be sufficient time, cognitive capacity, and motivation to accurately appraise the event to trigger reappraisal processes. In other words, if an individual is satisfied with the immediate appraisal or the immediate appraisal is deemed unimportant or there is insufficient time or cognitive capacity, then the immediate appraisal stands as a guide to behavior.

Reappraisal is defined as actively seeking out additional information to clarify one's current feelings, the environment, or both and is a highly controlled cognitive process. One or several reappraisal searches may occur. At some point, the reappraisal process concludes and the ensuing behavior is termed thoughtful.

Note that reappraisal does not guarantee a nonaggressive outcome. Indeed, the reappraisal process may confirm an immediate hostile appraisal or even foster a more hostile interpretation and rumination processes that can yield more seriously aggressive behavior. However, if an alternative view of the situation is generated, one that is not hostile, the result will be thoughtful nonaggressive behavior.

In sum, the proximate processes delineated by the GAM flow as follows: event → input factors → immediate appraisal → reappraisal (if necessary) → thoughtful or impulsive behavior, either of which can be aggressive or nonaggressive. Furthermore, whatever behavior is enacted feeds back into the situational input of the next episodic cycle. Also, the consequences of the behavior (i.e., how others respond, success, failure) feed into long-term distal processes.

Distal Processes

A single episodic cycle of the proximate processes acts as a learning trial. Using a developmental lens, the GAM delineates how multiple learning trials influence the development of aggression-related knowledge structures and subsequent aggressive personality. The GAM postulates that repeated learning, rehearsal, and positive reinforcement of aggression-related events influence the accessibility, ease of activation, and automatization of several aggression-related knowledge structures. Although not an exhaustive list, the GAM explicitly includes (a) aggressive attitudes and beliefs, (b) aggressive behavioral scripts, (c) aggressive perceptual schemata, (d) aggressive expectation biases, and (e) desensitization processes.

One distal learned knowledge structure is the formation of aggressive attitudes and beliefs. The GAM predicts that continued positively reinforced aggressive behaviors will lead to the development of aggressive attitudes and beliefs. If one learns that aggression is acceptable, that such behavior is not punished, and that it sometimes is rewarded, the result can be more positive beliefs about and feelings toward using aggression in the future.

A second learned aggression-related knowledge structure is the formation and automatization of aggressive behavioral scripts. Scripts are mental representations of the usual progression of events in typical social situations. Such behavioral scripts provide people with a mental "road map" for how a social event or interaction is likely to unfold. When activated, scripts guide interpretations of observed events as well as one's own subsequent behavior.

Rehearsal of scripts that end in aggression increases the likelihood that such scripts will be activated in similar future social interactions.

If those scripts include successful outcomes from behaving aggressively and fail to include other harmful side effects (such as pain and suffering of others or oneself), then such aggressive scripts will likely be used to guide behavior. With repeated practice, aggression-facilitating scripts can become highly accessible and automatized, effectively displacing nonaggressive scripts that would be used to defuse conflict situations out of consideration.

Similarly, aggressive perceptual and expectation schemata can be formed. Perceptual schemas are used to identify everything, from common objects (e.g., chair) to complex social situations (e.g., provocations). Related to aggression, the accessibility of aggressive perceptual schemas is related to the interpretation of ambiguous situations as aggressive rather than benign. Aggressive expectation schemas are knowledge structures that prompt individuals to infer or perceive hostile intent from others' behavior. In other words, we expect others to behave in an aggressive manner toward us (e.g., the hostile attribution bias). This has clear implications for aggression, because if we expect a passerby to physically attack us or if we misattribute hostile intent where there was none, we become more inappropriately aggressive ourselves.

Another developmental aspect of the GAM concerns emotional reactions to scenes or thoughts about violence. Specifically, *desensitization* is defined as a decrease in emotional reactivity to real-life violence, often indexed by emotion-related physiological measures such as heart rate and skin conductance. Media violence has been found to produce such desensitization to real violence, resulting in lowered empathy toward and less desire to help victims of violence as well as increased aggressive behavior. The latter effect likely results from the lack of negative emotional reactions to thinking about and choosing aggressive scripts to enact.

The GAM postulates that the continued development, rehearsal, and automatization of these (and perhaps other) pro-aggressive knowledge structures leads directly to increases in what is generally termed *aggressive personality*. In short, knowledge structure changes become a part of one's constitution, and these changes in personality feed back into the proximate GAM processes as a person input variable.

The Whole Picture

A strength of the GAM is the developmental interplay between the proximate and distal processes. The GAM predicts that each cycle of the proximate processes serves as a learning trial. If aggression is reinforced in many or most such learning trials (including observational learning), then the distal processes lead to increased accessibility and favorability of aggression-related knowledge structures; the person becomes more aggressive at the personality level. Thus, situational variables (e.g., repeated exposure to aggression in the home, community, or school as well as through media) can increase aggressive personality over time; in turn, the increased aggressiveness of one's personality later influences the proximate processes by changing the person input factors.

Similarly, the GAM also notes that the development of an aggressive personality can even influence the *situational* input variables within the proximate aspect of the GAM. Aggressive individuals sometimes seek out antisocial activities and friends in order to reaffirm their aggressive tendencies. They also change the aggressiveness of common, everyday interactions, turning them into conflict situations and forcing others to behave aggressively toward them.

The GAM explicitly notes that distal learning processes are affected by biological and environmental modifiers, variables that likely change the developmental learning trajectory of aggression-related stimuli. For instance, being maltreated as a child (environmental variable) has especially harmful effects on those with certain genetic profiles, dramatically increasing violent criminality.

As noted by Julia Hosie and colleagues, the GAM is useful at predicting the likelihood of a single aggressive episode and the development of an aggressive and violent personality. Its strength lies in its integration of other domain-specific aggression theories, ability to incorporate both short-term and long-term learning processes, level of sophistication regarding mediating processes, and level of understanding regarding complex interactions between myriad situational and personality variables that predict a complex social behavior such as aggression.

Craig A. Anderson and Christopher P. Barlett

See also Altruism and Sociality; Emotions, Universality of; Social Emotions; Social Motives

Further Readings

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worked in the psychology of thinking and reasoning, social psychology, and psychology of art and affected such diverse disciplines as design and psychotherapy. The founder of Gestalt psychology was Max Wertheimer, together with his younger colleagues, Wolfgang Köhler and Kurt Koffka.

Although it does not exist as an active movement anymore, its approach continues to be influential. One of the main features of Gestalt psychology is its stress on the role of wholes in the analysis of psychological phenomena, and the phrase most associated with this school is “the whole is different from the sum of its parts.” In this entry, the historical context in which Gestalt psychology arose is briefly sketched, several examples of so-called Gestalt grouping principles are given, and some unresolved issues are recounted.

The Historical Context of Gestalt Psychology

Gestalt psychology arose in part in opposition to structuralism, a school of thought that dominated academic psychology toward the end of the 19th century and the beginning of 20th century. One of structuralism's claims was that in analogy to other, more established sciences, psychology should search for basic building blocks out of which all psychological contents are composed, similar to atoms in physics, elements in chemistry, or cells in biology. The content of consciousness was to be analyzed into elementary sensations of color, sound, taste, smell, and so on. Thus, given an image on a computer screen composed of a large number of pixels, according to structuralism, the experience of that image would be equivalent to a set or sum of corresponding elementary sensations of color.

In his 1923 paper, Wertheimer pointed out that in spontaneous visual observation, such elementary sensations were not present; rather, people see everyday objects, such as houses, trees, sky, and the like. Aside from the fact that these objects are recognizable and meaningful, one feature that is missing in an account based on pure, atomlike elementary sensations is the organization of visual experience: Whole regions of the visual field (such as those corresponding to objects) are experienced as belonging together and forming separate visual units. The simplest situation involves a patch of one color (the figure) on the background of another color (the ground).

GESTALT PSYCHOLOGY

Gestalt psychology is a psychological school that arose in the first half of the 20th century in Germany. Its main interest was visual perception, but its founding members and their followers also