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Psychological Mechanisms of Aggression[1]

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Analysis of the determinants and mechanisms of aggression requires prior consideration of the phenomena the concept composes. Differing conceptions of what constitutes aggression produce different lines of theorizing and research. Psychological theories of aggression have been largely concerned with individual physically injurious acts that are aversively motivated. In most of these accounts, not only is aggression attributed to a narrow set of instigators but the purposes it presumably serves are limited. Inflicting injury and destruction is considered to be satisfying in its own right and hence the major aim of aggressive behavior. In actuality, aggression is a multifaceted phenomenon that has many determinants and serves diverse purposes. Therefore, theoretical formulations couched in terms of frustrating instigators and injurious aims have limited explanatory power (Bandura, 1973). A complete theory of aggression must be sufficiently broad in scope to encompass a large set of variables governing diverse facets of aggression, whether individual or collective, personally or institutionally sanctioned.

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SOCIAL LABELING PROCESSES

Aggression is generally defined as behavior that results in personal injury and physical destruction. The injury may be physical, or it may involve psychological impairment through disparagement and abusive exercise of coercive power. Not all injurious and destructive acts are judged aggressive, however. Although injury is a major defining property, in fact, aggression refers to complex events that include not only injurious behavior but judgmental factors that lead people to attach aggression labels to some forms of harmful conduct but not to others.

Whether injurious behavior will be perceived as aggressive or otherwise depends heavily on subjective judgments of intentions and causality. The greater the attribution of personal responsibility and injurious intent to the harm doer, the higher the likelihood that the behavior will be judged as aggressive (Bandura, 1973; Rule & Nesdale, 1976b). The same harmful act is perceived differently depending on the sex, age, attractiveness, status, socioeconomic level, and ethnic background of the performer. As a general rule, people judge the harmful acts of favored individuals and groups as unintended and prompted by situational circumstances, but they perceive the harmful acts of the disfavored as intentional and personally initiated. Value orientations of the labelers also influence their judgments of activities that cause harmful effects.

There are few disagreements over the labeling of direct assaultive behavior that is performed with explicit intent to injure or destroy. But people ordinarily do not aggress in conspicuous direct ways that reveal causal responsibility and carry high risk of retaliation. Rather, they tend to harm and destroy in ways that diffuse or obscure responsibility for detrimental actions, to reduce self-reproof and social reprisals. Most of the injurious consequences of major social concern are caused remotely, circuitously, and impersonally through social practices judged aggressive by the victims but not by those who benefit from them. Students of aggression examine direct assaultive behavior in minute detail, whereas remote circuitous acts, which produce widespread harm, receive comparatively little attention.

Disputes over the labeling of aggressive acts assume special significance in the case of collective behavior involving dissident and institutionally sanctioned aggression. Agencies of government are entrusted with considerable rewarding and coercive power. Either of these sources of power can be misused to produce detrimental social effects. Punitive and coercive means of control may be employed to maintain inequitable systems, to suppress legitimate dissent, and to victimize disadvantaged segments of society. People can similarly be harmed both physically and socially by arbitrary denial or discriminative administration of beneficial resources to which they are entitled.

Just as not all individual acts that produce injury are necessarily aggressive, neither are all institutional practices that cause harm expressions of aggression.

Some social practices instituted with well-meaning intent create detrimental consequences that were unforeseen. Others are performed routinely and thoughtlessly through established custom. Judgments of institutional aggression are likely to be made in terms of indicants of injurious intent, deliberate negligence, and unwillingness to rectify detrimental conditions.

Dissident aggression is also judged in large part on the basis of factors external to the behavior. Some of these include the perceived legitimacy of the grievances, the appropriateness of coercive tactics, the professed aims and credibility of the challengers, and the ideological allegiances of the judges (Bandura, 1973). People vary markedly in their perceptions of aggression for social control and for social change (Blumenthal *et al.*, 1972). The more advantaged citizenry tend to view even extreme levels of violence for social control as lawful discharges of duty, whereas disadvantaged members regard such practices as expressions of institutional aggression. Conversely, aggression for social change, and even group protest without injury, is judged as violence by patriots of the system but not by dissidents. Thus, in conflicts of power, one person's violence is another person's benevolence. Whether a particular form of aggression is regarded as adaptive or destructive depends on who bears the consequences. As this brief review suggests, factors influencing the social labeling of different forms of injurious behavior merit more systematic investigation than they have received to date.

A complete theory of aggression must explain how aggressive patterns are developed, what provokes people to behave aggressively, and what sustains such actions after they have been initiated. Figure 1 summarizes the determi-

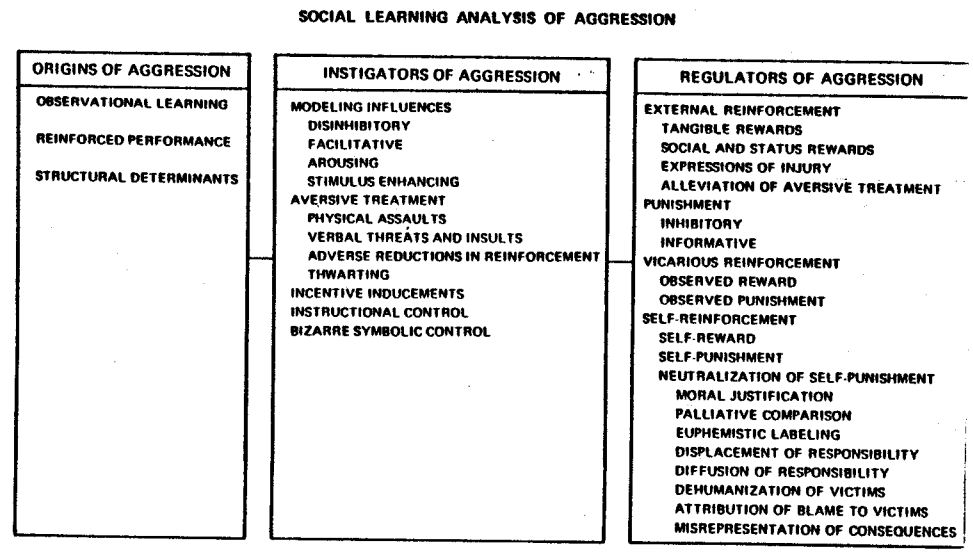

FIGURE 1 Schematic outline of the origins, instigators, and regulators of aggressive behavior in social learning theory.

nants of these three aspects of aggression within the framework of social learning theory.

ACQUISITION MECHANISMS

People are not born with preformed repertoires of aggressive behavior. They must learn them. Some of the elementary forms of aggression can be perfected with minimal guidance, but most aggressive activities—whether they be dueling with switchblade knives, sparring with opponents, military combat, or vengeful ridicule—entail intricate skills that require extensive learning.

Biological Factors

New modes of behavior are not fashioned solely through experience. Biological factors, of course, set limits on the types of aggressive responses that can be developed and influence the rate at which learning progresses. In addition to biological constraints on behavior, evolved biological systems predispose organisms to perceive and to learn critical features of their immediate environment.

The orchestration of aggressive actions, like other forms of visceral and motor responsiveness, depends on neurophysiological mechanisms. Research conducted with animals has identified subcortical structures, principally the hypothalamus and the limbic system, that mediate aggressive behavior (Goldstein, 1974). But these neural systems are selectively activated and controlled by central processing of environmental stimulation. Research by Delgado (1967) illustrates how social learning factors influence the types of responses that are likely to be activated by stimulating the same neural structure. Hypothalamic stimulation of a dominant monkey in a colony prompted him to attack subordinate males but not the females with whom he was on friendly terms. In contrast, hypothalamic stimulation elicited submissiveness in a monkey when she occupied a low hierarchical position, but increased aggressiveness toward subordinates as her social rank was elevated by changing the membership of the colony. Thus, electrical stimulation of the same anatomical site produced markedly different behavior under different social conditions.

It is valuable to know how neurophysiological systems operate internally, but from the standpoint of explaining aggression, it is especially important to understand how they are socially activated for different courses of action. In everyday life, biological systems are roused in humans by provocative external events and by ideational activation. A remark interpreted as an insult will generate activity in the hypothalamus, whereas the same comment viewed innocuously will leave the hypothalamus unperturbed. Given a negative interpretation, social and cognitive factors are likely to determine the nature of the response.

In the social learning view, people are endowed with neurophysiological mechanisms that enable them to behave aggressively, but the activation of these mechanisms depends on appropriate stimulation and is subject to cognitive control. Therefore, the specific forms that aggressive behavior takes, the frequency with which it is expressed, the situations in which it is displayed, and the specific targets selected for attack are largely determined by social learning factors. As we shall see, these factors are varied and complex.

The role played by biological factors in aggression will vary across species, circumstances, and types of aggressive behavior. In infrahuman organisms, genetic and hormonal factors that affect neural organization and structural development figure prominently in aggressive responsiveness. Aggression in animals is largely determined by combat successes that depend on a robust physical build. The more powerfully developed members generally become belligerent fighters through victories; the physically less well endowed become submissive through defeats. Because genetic and hormonal factors affect physical development, they are related to aggressiveness in animals.

People's capacity to devise and use destructive weapons greatly reduces their dependence on biological structure to succeed in aggressive encounters. A puny person with a gun can easily triumph over powerfully built opponents who are unarmed. People's proclivity for social organization similarly reduces the importance of structural characteristics in aggressive attainments. At the social level, aggressive power derives from organized collective action. The chance of victory in aggressive confrontation is enhanced by the force of numbers acting in concert, and the physical stature of individual challengers does not much matter.

Structural characteristics related to aggressiveness also have different evolutionary and survival consequences for animals and humans. In many animal species, physical strength determines which males do the mating. Combat victors gain possession of females so that the most dominant males have the highest reproduction rates. In humans, mate selection is based more on such qualities as attractiveness, intelligence, parental arrangement, religious affiliation, and financial standing than on fighting prowess. Societal sanctions prohibit the brawny members of a social group from impregnating at will whomever they desire. Differential reproduction rates are primarily determined by religious beliefs, ideological commitments, socioeconomic factors, and birth control practices. For these reasons, one would not expect variations in human aggressiveness to be reflected in differential reproduction rates.

Observational Learning

Psychological theories have traditionally assumed that learning can occur only by performing responses and experiencing their consequences. In fact, virtually all learning phenomena resulting from direct experience can occur on

a vicarious basis by observing the behavior of others and its consequences for them. The capacity to learn by observation enables organisms to acquire large, integrated patterns of behavior without having to form them gradually by tedious trial and error.

The abbreviation of the acquisition process through observational learning is vital for both development and survival. Because errors can produce costly or even fatal outcomes, the prospects of survival would be slim indeed if organisms could learn solely by the consequences of their actions. The more costly and hazardous the possible mistakes, the heavier is the reliance on observational learning from competent models. This is particularly true of aggression, where the dangers of crippling or fatal consequences limit the value of learning through trial and error. By observing the aggressive conduct of others, one forms a conception of how the behavior is performed, and on later occasions, the symbolic representation can serve as a guide for action.

Learning by observation is governed by four interrelated subprocesses (Bandura, 1977a). *Attentional* processes regulate exploration and perception of modeled activities. Organisms cannot be much influenced by observation of modeled behavior if they have no memory of it. Through coding into images, words, or other symbolic modes, transitory modeling influences are transformed for *memory representation* into enduring performance guides. The capacity for observational learning, whether assessed across species or over the course of development, increases with increasing capability to symbolize experience. Symbolic representations must eventually be transformed into appropriate actions. *Motor production* processes, the third component of modeling, govern the integration of constituent acts into new response patterns.

Social learning theory distinguishes between acquisition of behaviors that have destructive and injurious potential and factors that determine whether individuals will perform what they have learned. This distinction is important because not all the things learned are enacted. People can acquire, retain, and possess the capability to act aggressively, but the behavior may rarely be expressed if it has no functional value for them or is negatively sanctioned. Should appropriate inducements arise on later occasions, individuals put into practice what they have learned (Bandura, 1965; Madsen, 1968). *Incentive and motivational* processes regulate the performance of observationally learned responses.

Findings of numerous studies show that children can acquire entire repertoires of novel aggressive behavior from observing aggressive models and can retain such response patterns over extended periods (Bandura 1973; Hicks 1968). Factors that affect the four component processes influence the level of observational learning. In many instances, the behavior being modeled is learned in essentially the same form. But models teach more general lessons as well. From observing the behavior of others, people can extract general tactics and strategies of behavior that enable them to go beyond what they have seen

or heard. By synthesizing features of different modeled patterns into new amalgams, observers can evolve new forms of aggression.

In a modern society, aggressive styles of behavior can be adopted from three principal sources. One prominent origin is the aggression modeled and reinforced by family members. Studies of familial determinants of aggression show that parents who favor aggressive solutions to problems have children who tend to use similar aggressive tactics in dealing with others (Bandura & Walters, 1959; Hoffman, 1960). That familial violence breeds violent styles of conduct is further shown by similarities in child abuse practices across several generations (Silver, Dublin, & Lourie, 1969).

Although familial influences play a major role in setting the direction of social development, the family is embedded in a network of other social systems. The subculture in which people reside, and with which they have repeated contact, provides a second important source of aggression. Not surprisingly, the highest incidence of aggression is found in communities in which aggressive models abound and fighting prowess is regarded as a valued attribute (Short, 1968; Wolfgang & Ferracuti, 1967).

The third source of aggressive conduct is the abundant symbolic modeling provided by the mass media. The advent of television has greatly expanded the range of models available to a growing child. Whereas their predecessors rarely, if ever, observed brutal aggression in their everyday life, both children and adults today have unlimited opportunities to learn the whole gamut of violent conduct from televised modeling within the comfort of their homes.

A considerable amount of research has been conducted in recent years on the effects of televised influences on social behavior. The findings show that exposure to televised violence can have at least four different effects on viewers: (*a*) It teaches aggressive styles of conduct; (*b*) it alters restraints over aggressive behavior; (*c*) it desensitizes and habituates people to violence; and (*d*) it shapes people's images of reality upon which they base many of their actions. Let us review briefly each of these effects.

Television is an effective tutor. Both laboratory and controlled field studies in which young children and adolescents are repeatedly shown either violent or nonviolent fare disclose that exposure to filmed violence shapes the form of aggression and typically increases interpersonal aggressiveness in everyday life (Bandura, 1973; Leyens *et al.*, 1975; Liebert, Neale, & Davidson, 1973; Parke *et al.*, 1977; Friedrich & Stein, 1973; Steuer, Applefield, & Smith, 1971). Adults who pursue a life of crime improve their criminal skills by patterning their behavior after the ingenious styles portrayed in the mass media (Hendrick, 1977). Being an influential tutor, television can foster humanitarian qualities as well as injurious conduct. Programs that portray positive attitudes and social behavior foster cooperativeness, sharing, and reduce interpersonal aggression (Leifer, Gordon, & Graves, 1974).

Another line of research has examined how inhibitions over aggression are

affected by exposure to televised violence. Several characteristics of televised presentations tend to weaken people's restraints over behaving aggressively. Physical aggression is often shown to be the preferred solution to interpersonal conflicts. It is portrayed as acceptable, unsullied, and relatively successful. Superheroes do most of the killing. When good triumphs over evil by violent means, viewers are more strongly influenced than when aggressive conduct is not morally sanctioned by prestigious figures. In experimental tests, adults generally behave more punitively after they have seen others act aggressively than if they have not been exposed to aggressive modeling. This is especially true if the modeled aggressive conduct is legitimized by social justifications (Berkowitz, 1970).

Desensitization and habituation to violence are reflected in decreases in physiological reactions to repeated exposure to displays of violence. Heavy viewers of television respond with less emotion to violence than do light viewers (Cline, Croft, & Courrier, 1973). In addition to emotional desensitization, violence viewing can create behavioral indifference to human aggression. In studies demonstrating the habituation effect, children who have had prior exposure to interpersonal violence are less likely to intervene in escalating aggression between children they are overseeing (Drabman & Thomas, 1974; Thomas & Drabman, 1975; Thomas *et al.*, 1977).

During the course of their daily lives, people have direct contact with only a small sector of the physical and social environment. In their daily routines, they travel the same routes, visit the same places, and see essentially the same group of friends and work associates. Consequently, people form impressions of the social realities with which they have little or no contact partly from televised representations of society. Because the world of television is heavily populated with villainous and unscrupulous people, it can distort knowledge about the real world. Indeed, communications researchers have found that heavy viewers of television are less trustful of others and overestimate their chances of being criminally victimized than do light viewers (Gerbner & Gross, 1976). Heavy viewers see the society at large as more dangerous regardless of their educational level, sex, age, and amount of newspaper reading.

Many of the misconceptions that people develop about certain occupations, nationalities, ethnic groups, sex roles, social roles, and other aspects of life are cultivated through modeling of stereotypes by the media. Too often their actions are based on such misconceptions.

Symbolic modeling plays an especially significant role in the shaping and rapid spread of collective aggression. Social diffusion of new styles and tactics of aggression conforms to the generalized pattern of most other contagious activities: New behavior is introduced by a salient example; it spreads rapidly in a contagious fashion; and it then either stabilizes or is discarded depending on its functional value.

Modeled solutions to problems that achieve some success are not only adopted by people facing similar difficulties but tend also to spread to other

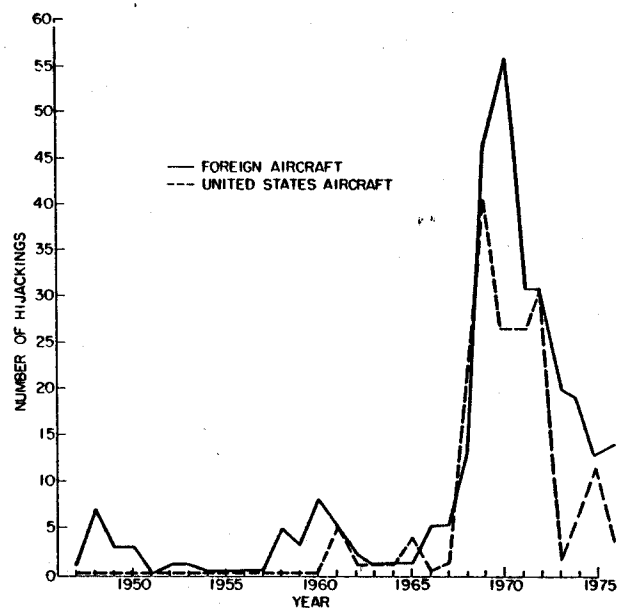

FIGURE 2 Incidence of hijackings over a span of 30 years. The rise in foreign hijackings during 1948–1950 occurred in Slavic countries during the Hungarian uprisings, and the second flare-up, in 1958–1961, comprised almost entirely Cuban hijackings to Miami. A sudden widespread diffusion of hijackings occurred in 1969–1970, involving airliners from 71 different countries. (Data from Federal Aviation Administration.)

troublesome areas. The civil rights struggle, which itself was modeled after Gandhi's crusades of nonviolent resistance, in turn provided the example for other protest campaigns aimed at eliminating injustices and undesired social practices. The model of collective protest is now widely used as a means of forcing change.

Airline hijacking provides another example of the rapid diffusion and decline of aggressive tactics. Air piracy was unheard of in the United States until an airliner was hijacked to Havana in 1961. Prior to that incident, Cubans were hijacking planes to Miami. These incidents were followed by a wave of hijackings both in the United States and abroad, eventually involving 71 different countries (see Figure 2). Just as aggressive strategies are widely modeled, so are the countermeasures that prove effective in controlling modeled aggression.

Learning by Direct Experience

People rarely teach social behaviors that are never exemplified by anyone in their environment. Therefore, in behavior acquired under natural conditions, it is often difficult to determine whether reinforcing experiences create the new responses or activate what was already partly learned by observation. Although

modeling influences are universally present, patterns of behavior can be shaped through a more rudimentary form of learning relying on the consequences of trial-and-error performance.

Until recently, learning by reinforcement was portrayed as a mechanistic process in which responses are shaped automatically by their immediate consequences. In more recent theoretical analyses, learning from response consequences is conceived of largely as a cognitive process, especially in humans. Consequences serve as an unarticulated way of informing performers what they must do to gain beneficial outcomes and to avoid punishing ones. By observing the differential effects of their actions, individuals discern which responses are appropriate in which settings and behave accordingly. Although the empirical issue is not yet fully resolved, evidence that human behavior is not much affected by consequences until the point at which the contingencies are discerned raises serious questions concerning the automaticity of reinforcement.

Viewed from the cognitive framework (Bandura, 1977a), learning from differential outcomes becomes a special case of observational learning. In this mode of conveying response information, the conception of the appropriate behavior is gradually constructed from observing the effects of one's actions rather than from the synthesized examples provided by others. A vast amount of evidence lends validity to the view that reinforcement serves principally as an informative and motivational operation rather than as a mechanical response shaper.

There have been few experimental attempts to fashion novel forms of aggression by differential reinforcement alone. It would be foolhardy to instruct novices how to use lethal weapons or to fight dangerous opponents by selectively reinforcing trial-and-error efforts. Where the consequences of mistakes can be dangerous or fatal, demonstration rather than unguided experience is the best tutor.

Learning through combat experience has been explored to a limited extent in experiments with lower species designed to train docile animals into ferocious fighters (Ginsburg & Allee, 1942; Scott & Marston, 1953). This is achieved by arranging a series of bouts with progressively more experienced fighters under conditions where trainees can win fights without being hurt. As fighting skills are developed and reinforced through repeated victories, formerly noncombative animals become more and more vicious in their aggressive behavior. Whereas successful fighting produces brutal aggressors, severe defeats create enduring submissiveness (Kahn, 1951).

Patterson, Littman, and Bricker (1967) report a field study illustrating how passive children can be shaped into aggressors through a process of victimization and successful counteraggression. Passive children who were repeatedly victimized but occasionally succeeded in halting attacks by counteraggression, not only increased defensive fighting over time, but began to initiate attacks of their own. Passive children who were seldom maltreated because they avoided

others, and those whose counteraggression proved unsuccessful, remained submissive.

Modeling and reinforcement influences operate jointly in the social learning of aggression in everyday life. Styles of aggression are largely learned through observation and refined through reinforced practice. The effects of these two determinants on the form and incidence of aggression are graphically revealed in ethnographic reports of societies that pursue a warlike way of life and those that follow a pacific style. In cultures lacking aggressive models and devaluing injurious conduct, people live peaceably (Alland, 1972; Denton, 1968; Levy, 1969; Mead, 1935; Turnbull, 1961). In other societies that provide extensive training in aggression, attach prestige to it, and make its use functional, people spend a great deal of time threatening, fighting, maiming, and killing each other (Bateson, 1936; Chagnon, 1968; Gardner & Heider, 1969; Whiting, 1941).

INSTIGATION MECHANISMS

A theory must explain not only how aggressive patterns are acquired but also how they are activated and channeled. Social learning theory distinguishes between two broad classes of motivators of behavior. First, there are the biologically based motivators. These include internal aversive stimulation arising from tissue deficits and external sources of aversive stimulation that activate behavior through their painful effects. The second major source of response inducement involves cognitively based motivators. The capacity to represent future consequences in thought provides one cognitively based source of motivation. Through cognitive representation of future outcomes, individuals can generate current motivators of behavior. The outcome expectations may be material (e.g., consummatory, physically painful), sensory (e.g., novel, enjoyable, or unpleasant sensory stimulation), or social (e.g., positive and negative evaluative reactions). Another cognitively based source of motivation operates through the intervening influences of goal setting and self-evaluative reactions. Self-motivation involves standards against which performances can be evaluated. By making positive self-evaluation conditional on attaining a certain level of behavior, individuals create self-inducements to persist in their efforts until their performances match self-prescribed standards.

As will be shown shortly, some aggressive acts are motivated by painful stimulation. However, most of the events that lead people to aggress, such as insults, verbal challenges, status threats, and unjust treatment, gain this activating capacity through learning experiences. People learn to dislike and to attack certain types of individuals either through direct unpleasant encounters with them or on the basis of symbolic and vicarious experiences that conjure up hatreds. Because of regularities in environmental events, antecedent cues come to signify future events and the outcomes particular actions are likely to

produce. Such uniformities create expectations about what leads to what. When aggressive behavior produces different results depending on the times, places, or persons toward whom it is directed, people use cues predictive of probable consequences in regulating their behavior. They tend to aggress toward persons and in contexts where it is relatively safe and rewarding to do so, but they are disinclined to act aggressively when it carries a high risk of punishment. The different forms that aggression elicitors take are discussed separately in the sections that follow.

Aversive Instigators

It has been traditionally assumed that aggressive behavior is activated by an aggressive drive. According to the instinct doctrine, organisms are innately endowed with an aggressive drive that automatically builds up and must be discharged periodically through some form of aggressive behavior. Despite intensive study, researchers have been unable to find an inborn autonomous drive of this type.

For years, aggression was viewed as a product of frustration. In this conception, frustration generates an aggressive drive, that in turn motivates aggressive behavior. Frustration replaced instinct as the activating source, but the two theories are much alike in their social implications. Since frustration is ever present, in both approaches people are continuously burdened with aggressive energy that must be drained from time to time.

The frustration–aggression theory was widely accepted until its limited explanatory value became apparent from growing evidence. Frustration has varied effects on behavior; aggression does not require frustration. Frustration subsumes such a diverse set of conditions–physical assault, deprivation, insult, thwarting, harassment, and defeat—that it no longer has any specific meaning. As new instigators of aggression were identified, the definition of frustration was stretched to accommodate them. Not only is there great heterogeneity on the antecedent side of the relationship, but the consequence part of the formula, the aggressive behavior, also embraces a vast array of activities sifted through value judgments. One cannot expect a generalizable relationship to emerge from such a wide assortment of antecedents and behaviors.

The diverse events subsumed under the omnibus term *frustration* do have one feature in common—they are all aversive. In social learning theory, rather than frustration generating an aggressive drive that is reducible only by injurious behavior, aversive stimulation produces a general state of emotional arousal that can facilitate any number of responses (see Figure 3). The type of behavior elicited will depend on how the source of arousal is cognitively appraised, the modes of response learned for coping with stress, and their relative effectiveness. When distressed, some people seek help and support; others increase achievement efforts; others display withdrawal and resignation;

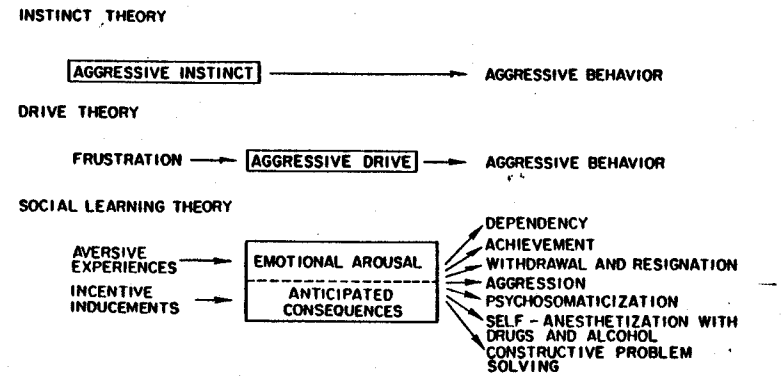

FIGURE 3 Schematization of alternative motivational analyses of aggression.

some aggress; others experience heightened somatic reactivity; still others anesthetize themselves against a miserable existence with drugs or alcohol; and most intensify constructive efforts to overcome the source of distress.

Several lines of evidence, reviewed in detail elsewhere (Bandura, 1973), lend greater validity to the *arousal-prepotent response* formulation than to the *frustration–aggression* view. Different emotions appear to have a similar physiological state (Ax, 1953). The same physiological state can be experienced phenomenologically as different emotions, depending on what people see as the incitements and how they interpret them (Hunt, Cole, & Reis, 1958; Mandler, 1975). In individuals who are prone to behave aggressively, different sources of emotional arousal can heighten their aggression (Rule & Nesdale, 1976a; Tannenbaum & Zillman, 1975).

In drive theories, the aroused aggressive drive presumably remains active until discharged by some form of aggression. Actually, anger arousal dissipates rapidly, but it can be easily regenerated on later occasions through rumination on anger-provoking incidents. By thinking about past insulting treatment, people can work themselves into a rage long after their emotional reactions have subsided. Persistence of elevated anger stems from thought-produced arousal, rather than from an undischarged reservoir of aggressive energy. Consider the example of a person who becomes angered by an apparent exclusion from an important meeting only to receive the notice in the next day's mail. The person will show an immediate drop in anger arousal and aggressiveness without having to assault or denounce someone to drain a roused drive. Anger arousal decreased through cognitive means will reduce aggression as much as, or even more than, will acting aggressively (Mallick & McCandless, 1966). When anticipated consequences are varied, the same aggressive acts can raise or lower physiological arousal (Hokanson, Willers, & Koropsak, 1968).

Frustration or anger arousal is a facilitative, rather than a necessary, condition for aggression. Frustration tends to provoke aggression mainly in people who have learned to respond to aversive experiences with aggressive attitudes

and conduct. Thus, after being frustrated, aggressively trained children behave more aggressively, whereas cooperatively trained children behave more cooperatively (Davitz, 1952).

There exists a large body of evidence that painful treatment, deprivation or delay of rewards, personal insults, failure experiences, and obstructions, all of which are aversive, do not have uniform behavioral effects (Bandura, 1969). Some of these aversive antecedents convey injurious intent more clearly than others and therefore have greater aggression-provoking potential.

PHYSICAL ASSAULTS

If one wished to provoke aggression, one way to do so would be simply to hit another person, who is likely to oblige with a counterattack. To the extent that counteraggression discourages further assaults, it is reinforced by pain reduction and thereby assumes high functional value in social interactions. Although naturally occurring contingencies favor the development of a pain–aggression relationship, there is some dispute over whether it is innate or acquired.

Azrin (1967) and Ulrich (1966) were major proponents of the nativistic view that pain-induced aggression is an unlearned reflexive behavior. As the determinants of pain–attack reactions were examined more closely, however, they began to lose their reflexive status. Young animals rarely, if ever, fight when shocked unless they have had some fighting experience, and in some studies, shocks produce little or no fighting in 20–30% of mature animals (Hutchinson, Ulrich, & Azrin, 1965; Powell & Creer, 1969). If aggression is an unlearned dominant response to pain, then initial shocks should produce attack, which is not generally the case (Azrin, Hutchinson, & Hake, 1963). Contrary to the reflexive elicitation hypothesis, when combative responses are shocked the pain reduces and eliminates rather than provokes fighting (Azrin, 1970; Baenninger & Grossman, 1969). The most striking evidence that pain–aggression reactions are determined more by situational factors than by innate organization is the finding that in a small enclosure approximately 90% of the shocks provoke fighting, whereas in a larger chamber animals ignore each other and only 2% of the shocks elicit attack (Ulrich & Azrin, 1962). As environmental constraints to fight are removed, avoidance and flight responses to painful stimulation take priority over attack (Knutson, 1971; Logan & Boice, 1969; Sbordone, Garcia, & Carder, 1977). Physically painful experiences may be facilitative but clearly not sufficient to provoke aggression in animals.

Pain stimulation is even a less consistent elicitor of aggression in humans. Nonsocial sources of pain rarely lead people to attack bystanders. Whether or not they counteraggress in the face of physical assaults depends on their combat skill and the power of their assailant. Those who possess fighting prowess escalate counterattacks to subdue assailants (Edwards, 1968; Peterson, 1971). Given other alternatives, low aggressors are easily dissuaded from counterattacks under retaliative threats.

VERBAL THREATS AND INSULTS

Social interchanges are typically escalated into physical aggression by verbal threats and insults. In analyzing dyadic interchanges of assault-prone individuals, Toch (1969) found that humiliating affronts and threats to reputation and manly status emerged as major precipitants of violence. High sensitivity to devaluation was usually combined with deficient verbal skills for resolving disputes and restoring self-esteem without having to dispose of antagonists physically. The counterattacks evoked by physical assaults are probably instigated more by humiliation than by physical pain. Indeed, it is not uncommon for individuals, groups, and even nations to pay heavy injury costs in efforts to save face by combat victory.

Insult alone is less effective in provoking attack in those who eschew aggression, but it does heighten their aggressiveness given hostile modeling and other disinhibitory influences (Hartmann, 1969; Wheeler & Caggiula, 1966). In subcultures in which social ranking is determined by fighting prowess, status threats from challengers within the group or rival outsiders are quick to provoke defensive aggression (Short, 1968).

The most plausible explanation of how insults acquire aggression-eliciting potential is in terms of foreseen consequences. Affronts that are not counteracted can have far-reaching effects for victims. Not only do they become easy targets for further victimization, but they are apt to forfeit the rewards and privileges that go with social standing. To the extent that punishment of insults reduces the likelihood of future maltreatment, the insult–aggression reaction becomes well established.

ADVERSE REDUCTIONS IN CONDITIONS OF LIFE

Aversive changes in the conditions of life can also provoke people to aggressive action. Explanations of collective aggression usually invoke impoverishment and discontent arising from privations as principal causal factors. However, since most impoverished people do not aggress, the view that discontent breeds violence requires qualification. This issue is well illustrated in interpretations of urban riots in ghetto areas. Despite condemnation of their degrading and exploitive conditions of life, comparatively few of the disadvantaged took active measures to force warranted changes. Even in cities that experienced civil disturbances, only a small percentage of ghetto residents actively participated in the aggressive activities (Lieberson & Silverman, 1965; McCord & Howard, 1968; Sears & McConahay, 1969).

The critical question for social scientists to answer is not why some people who are subjected to aversive conditions aggress, but rather why a sizable majority of them acquiesce to dismal living conditions in the midst of affluent styles of life. To invoke the frustration–aggression hypothesis, as is commonly done, is to disregard the more striking evidence that severe privation generally

produces feelings of hopelessness and massive apathy. People give up trying when they lack a sense of personal efficacy and no longer expect their efforts to produce any beneficial results in an environment that is unresponsive or is consistently punishing (Bandura, 1977b, 1982; Maier & Seligman, 1976).

In accord with self-efficacy theory, comparative studies indicate that discontent produces aggression, not in those who have lost hope, but in the more successful members whose assertive efforts at social and economic betterment have been periodically reinforced. Consequently, they have some reason to expect that they can effect change by coercive action (Caplan, 1970; Crawford & Naditch, 1970).

More recent explanations of violent protest emphasize relative deprivation rather than the actual level of aversive conditions as the instigator of collective aggression. In an analysis of conditions preceding major revolutions, Davies (1969) reports that revolutions are most likely to occur when a period of social and economic advances that instills rising expectations is followed by a sharp reversal. People judge their present gains not only in relation to those they secured in the past; they also compare their lot in life with the benefits accruing to others (Bandura, 1977a). Inequities between observed and experienced outcomes tend to create discontent, whereas individuals may be satisfied with limited rewards as long as they are as good as what others are receiving.

Since most people who feel relatively deprived do not resort to violent action, aversive privation, like other forms of aversive treatment, is not in itself a sufficient cause of collective aggression. Additional social learning factors must be considered that determine whether discontent will take an aggressive form or some other behavioral expression. Using such a multideterminant approach, Gurr (1970) examined the magnitude of civil disorder in Western nations as a function of three sets of factors. The first is the level of social discontent arising from economic decline, oppressive restrictions, and social inequities. The second factor is the traditional acceptance of force to achieve social change. Some societies disavow aggressive tactics, whereas others regard mass protests and coups d'etat as acceptable means of change. The third factor is the balance of coercive power between the system and the challengers as measured by the amount of military, police, industrial, labor, and foreign support the protagonists can marshal on their side. The analysis reveals that when aggressive tactics are considered acceptable and challengers possess coercive power, they will use less extreme forms of collective aggression without requiring much discontent. Revolutionary violence, however, requires widespread discontent and strong coercive power by challengers, while tactical traditions are of less importance.

Although aggression is more likely to be provoked by relative than by absolute privation, clarification of the role of relative deprivation requires greater consideration of the multifaceted bases of comparative evaluation. People judge their life circumstances in relation to their aspirations, to their past conditions, and to the life situations of others whom they select for social

comparison. Discontent created by raised aspirations, by reduction or rewards and privileges from accustomed levels, and by deceleration in the rate of one's own improvement compared to that of others undoubtedly has variant effects. Different sources of inequity (social, economic, policital) may have differential aggression-activating potential. Response to inequitable deprivation is further influenced by mollifying social justifications and promise of social reforms. Considering the complex interplay of influences, it is hardly surprising that level of deprivation alone, whether defined in absolute or in relative terms, is a weak predictor of collective aggression (McPhail, 1971).

THWARTING OF GOAL-DIRECTED BEHAVIOR

Proponents of the frustration–aggression theory define frustration in terms of interference or blocking of goal-seeking activities. In this view, people are provoked to aggression when obstructed, delayed, or otherwise thwarted from getting what they want. Research bearing on this issue shows that thwarting can lead people to intensify their efforts, which, if sufficiently vigorous, may be construed as aggressive. However, thwarting fails to provoke forceful action in people who have not experienced sufficient success to develop reward expectations and in those who are blocked far enough from the goal that it appears unattainable (Bandura & Walters, 1963; Longstreth, 1966).

When thwarting provokes aggression, it is probably attributable more to personal affront than to blocking of behavior. Consistent with this interpretation, people report more aggression to thwartings that appear unwarranted or suggest hostile intent than to those for which excusable reasons exist, even though both involve identical blocking of goal-directed behavior (Cohen, 1955; Pastore, 1952).

The overall evidence regarding the different forms of aversive instigators supports the conclusion that aversive antecedents, though they vary in their activating potential, are facilitative rather than necessary or sufficient conditions for aggression.

Incentive Instigators

The preceding discussion was concerned solely with aversive instigators of aggression, which traditionally occupied a central role in psychological theorizing, often to the neglect of more important determinants. The cognitive capacity of humans to represent future consequences enables them to guide their behavior by outcomes extended forward in time. A great deal of human aggression, in fact, is prompted by anticipated positive consequences. Here, the instigator is the pull of expected benefits, rather than the push of painful treatment. This positive source of motivation for aggression represents the

second component of social learning theory in the motivational analyses depicted schematically in Figure 3.

The consequences that people anticipate for their actions are derived from, and therefore usually correspond to, prevailing conditions of reinforcement. The anticipatory activation and incentive regulation of aggression receive detailed consideration later. Expectation and actuality do not always coincide because anticipated consequences are also partly inferred from the observed outcomes of others, from what one reads or is told, and from other indicators of likely consequences. Because judgments are fallible, aggressive actions are sometimes prompted and temporarily sustained by erroneous anticipated consequences. Habitual offenders, for example, often err by overestimating the chances of success for transgressive behavior (Claster, 1967). In social interchanges and collective protest, coercive actions are partly sustained, even in the face of punishing consequences by expectations that continued pressure may eventually produce desired results.

Modeling Instigators

Of the numerous antecedent cues that influence human behavior at any given moment, none is more common than the actions of others. Therefore, a reliable way to prompt people to aggress is to have others do it. Indeed, both children and adults are more likely to behave aggressively and with greater intensity if they have seen others act aggressively than if they have not been exposed to aggressive models (Bandura, 1973; Liebert, Neale, & Davidson, 1973). The activation potential of modeling influences is enhanced if observers are angered (Berkowitz, 1965; Hartmann, 1969; Wheeler, 1966), if the modeled aggression is socially justified (Berkowitz, 1965; Meyer, 1972) or shown to be successful in securing rewards (Bandura, Ross, & Ross, 1963), and if the victim invites attack through prior association with aggression (Berkowitz, 1970).

Social learning theory distinguishes four processes by which modeling influences can activate aggressive behavior. One mode of operation is in terms of the *directive function* of modeled actions. In many instances, behaving like others is advantageous because the prevalent modes have proven functional, whereas divergent courses of action may be less effective. After modeling cues acquire predictive value through correlated consequences, they come to serve as informative prompts for others to behave in a similar fashion.

Aggressive behavior, especially when harsh and lacking justification, is socially censured if not self-condemned. Anticipated punishment exerts a restraining influence on injurious conduct. Seeing people respond approvingly or even indifferently toward aggressors conveys the impression that such behavior is an acceptable or normative mode of response. The same modeled aggression is much more effective in reducing restraints if it is socially legitimated than if it is portrayed as unjustified (Goranson, 1970). In aggressive conduct that is unencumbered by restraints because it is regarded as emulative, aggressive modeling is primarily instigational, whereas it serves a *disinhibitory function* in injurious behavior that is fear or guilt provoking. Since physical aggression usually incurs some negative effects, both instigational and disinhibitory processes are likely to be involved.

Seeing others aggressive generates *emotional arousal* in observers. For individuals who are prone to behave aggressively, emotional arousal can enhance their aggressive response. Some of the instigative effects of modeling may well reflect the emotional facilitation of aggressive behavior.

Aggressive modeling can additionally increase the likelihood of aggressive behavior through its *stimulus-enhancing effects*. Modeled activities inevitably direct observers' attention to the particular implements being used. This attentional focus may prompt observers to use the same instruments to a greater extent, though not necessarily in an imitative way. In one experiment (Bandura, 1962), for example, children who had observed a model pummel a plastic figure with a mallet spent more time pounding other objects with a mallet than those who did not see it used for assaultive purposes. In sum, the combined evidence reveals that modeling influences, depending on their form and content, can function as teachers, elicitors, disinhibitors, stimulus enhancers, and emotion arousers.

Instructional Instigators

During the process of socialization, people are trained to obey orders. By rewarding compliance and punishing disobedience, directives issued in the form of authoritative commands elicit obedient aggression. After this form of social control is established, legitimate authorities can secure obedient aggression from others, especially if the actions are presented as justified and necessary, and the issuers possess strong coercive power. As Snow (1961) has perceptively observed, "When you think of the long and gloomy history of man, you will find more hideous crimes have been committed in the name of obedience than in the name of rebellion [p. 24]."

In studies of obedient aggression, Milgram (1974) and others (Kilham & Mann, 1974; Mantell & Panzarella, 1976) have shown that well-meaning adults will administer increasingly severe shocks on command despite their victims' desperate pleas. Adults find it difficult to resist peer pressures calling for increasingly harmful actions, just as they are averse to defying legitimized authority. Seeing others carrying out punitive orders calmly likewise increases obedient aggression (Powers & Geen, 1972).

It is less difficult to hurt people on command when their suffering is not visible and when causal actions seem physically or temporally remote from their deleterious effects. Mechanized forms of warfare, where masses of people

can be put to death by destructive forces released remotely, illustrate such depersonalized aggression. When the injurious consequences of one's actions are fully evident, vicariously aroused distress and self-censure serve as restraining influences over aggressive conduct that is otherwise authoritatively sanctioned. Obedience declines as the harmful consequences of destructive acts become increasingly more salient and personalized (Milgram, 1974). As the results of these and other studies to be cited later show, it requires conducive social conditions rather than monstrous people to produce heinous deeds.

Delusional Instigators

In addition to the various external instigators, aggressive behavior can be prompted by bizarre beliefs. Every so often tragic episodes occur in which individuals are led by delusional beliefs to commit acts of violence. Some follow divine inner voices commanding them to murder. There are those who resort to self-protective attacks on paranoid suspicions that others are conspiring to harm them (Reich & Hepps, 1972). Others kill for deranged sacrificial purposes. And still others are prompted by grandiose convictions that it is their heroic responsibility to eliminate evil individuals in positions of influence.

A study of American presidential assassins (Weisz & Taylor, 1970) shows that, almost without exception, the murderous assaults were delusionally instigated. Assassins tend to be loners who are troubled by severe personal failure. They acted either under divine mandate, through alarm that the president was in conspiracy with treacherous foreign agents to overthrow the government, or on the conviction that their own adversities resulted from presidential persecution. Being unusually seclusive, the assassins barred themselves from the type of confiding relationships needed to correct erroneous beliefs and to check autistically generated resentments.

MAINTAINING MECHANISMS

So far, we have discussed how aggressive behavior is learned and activated. The third major feature of the social learning formulation concerns the conditions that sustain aggressive responding. It is amply documented in psychological research that behavior is extensively regulated by its consequences. This principle applies equally to aggression. Injurious modes of response, like other forms of social behavior, can be increased, eliminated, and reinstated by altering the effects they produce.

People aggress for many different reasons. Similar aggressive actions may thus have markedly different functional value for different individuals and for the same individual on different occasions. Traditional behavior theories conceptualize reinforcement influences almost exclusively in terms of the effects of

external outcomes impinging directly upon performers. But external consequences, as influential as they often are, are not the only kind of outcomes that regulate human behavior. People guide their actions partly on the basis of observed consequences and partly by consequences they create for themselves. These three forms of outcomes—external, vicarious, and self-produced—not only serve as separate sources of influence but also interact in ways that weaken or enhance their effects on behavior (Bandura, 1977a).

External Reinforcement

As we have previously noted, consequences exert effects on behavior largely through their informative and incentive functions. For the most part, response consequences influence behavior antecedently by creating expectations of similar outcomes on future occasions. The likelihood of particular actions is increased by anticipated benefits and reduced by anticipated punishment.

Aggression is strongly influenced by its consequences. Extrinsic rewards assume special importance in interpersonal aggression because such behavior, by its very nature, usually produces some costs among its diverse effects. People who get into fights, for example, will suffer pain and injury even though they eventually triumph over their opponents. Under noncoercive conditions, positive incentives are needed to overcome inhibitions arising from the aversive concomitants of aggression. The positive incentives take a variety of forms.

TANGIBLE REWARDS

Aggression is often used by those lacking better alternatives because it is an effective means of securing desired tangible rewards. Ordinarily docile animals will fight when aggressive attacks produce food or drink (Azrin & Hutchinson, 1967; Ulrich *et al.*, 1963). Observation of children's interactions reveals that most of the assaultive actions of aggressors produce rewarding outcomes for them (Patterson, Littman, & Bricker, 1967). Given this high level of positive reinforcement of aggressive behavior, there is no need to invoke an aggressive drive to explain the prevalence of such actions. Aggressive behavior is especially persistent when it is reinforced only intermittently, which is usually the case under the variable conditions of everyday life (Walters & Brown, 1963).

There are other forms of aggression that are sustained by their material consequences, though for obvious reasons, they are not easily subject to systematic analysis. Delinquents and adult transgressors can support themselves on income derived from aggressive pursuits; protesters can secure through forceful collective response social reforms that affect their lives materially; governments that rule by force are rewarded in using punitive control by the personal gains it brings to those in power and to supporters who benefit from

the existing social arrangements; and nations are sometimes able to gain control over prized territories by military force.

SOCIAL AND STATUS REWARDS

Aggressive styles of behavior are often adopted because they win approval and status rewards. When people are commended for behaving punitively, they become progressively more aggressive, whereas they display a relatively low level of aggression when it is not treated as praiseworthy (Geen & Stonner, 1971; Staples & Walters, 1964). Approval not only increases the specific aggressive responses that are socially reinforced but tends to enhance other forms of aggression as well (Geen & Pigg, 1970; Loew, 1967; Slaby, 1974).

Analyses of social reinforcement of aggressive behavior in natural settings are in general agreement with results of laboratory studies. Parents of assaultive children are generally nonpermissive for aggressive behavior in the home, but condone, actively encourage, and reinforce provocative and aggressive actions toward others in the community (Bandura, 1960; Bandura & Walters, 1959).

In aggressive gangs, members not only gain approval but achieve social status through their skills in fighting (Short, 1968). In status rewards, performance of valued behavior gains one a social rank that carries with it multiple benefits as long as the position is occupied. A rank-contingent system of reward is more powerful than one in which specific responses are socially rewarded. If failure to behave aggressively deprives one of a specific reward, the negative consequence is limited and of no great importance. A demotion in rank, however, results in forfeiture of all the social and material benefits that go with it. The pressure for aggressive accomplishments is especially strong when status positions are limited and there are many eager competitors for them.

During wartime, societies offer medals, promotions, and social commendations on the basis of skill in killing. When reinforcement practices are instituted that favor inhuman forms of behavior, otherwise socialized people can be led to behave brutally and to take pride in such actions.

REDUCTION OF AVERSIVE TREATMENT

People are often treated aversively by others from which they seek relief. Coercive action that is not unduly hazardous is the most direct and quickest means of alleviating maltreatment, if only temporarily. Defensive forms of aggression are frequently reinforced by their capacity to terminate humiliating and painful treatment. Reinforcement through pain reduction is well documented in studies cited earlier showing that children who are victimized but terminate the abuse by successful counteraggression eventually become highly aggressive in their behavior (Patterson, Littman, & Bricker, 1967).

Patterson's (1978) analysis of familial interactions of hyperaggressive children further documents the role of negative reinforcement in promoting aggressive styles of behavior. In such families, children are inadvertently trained to use coercive behavior as the means of commanding parental attention or terminating social demands. The children's antagonistic behavior rapidly accelerates parental counteraggression in an escalating power struggle. By escalating reciprocal aggression, each member provides aversive instigation for each other, and each member is periodically reinforced for behaving coercively by overpowering the other through more painful counteractions. Mutual coercion is most likely to appear as a prominent factor in families that find their children's control techniques painful and therefore seek relief from clinics. However, intrafamilial coercion is not a significant factor in families of predelinquent children who are forced to consult clinics because of legal threats rather than mutual torment (Reid & Patterson, 1976).

A quite different view of aggression emerges if hyperaggressive children are selected from the population at large rather than from clinics. In one study (Bandura, 1960), the most hyperaggressive children in an entire community were identified in school settings and their social behavior was systematically observed. Despite the fact that these children were highly belligerent, assaultive, and destructive of property, few of these families had ever consulted a clinic. This was because their training in aggression did not produce torment in the home. The parents modeled aggressive attitudes and, while nonpermissive and punitive for aggression toward themselves, they actively encouraged and rewarded aggression directed at others outside the home. As a result of this differential training, the children were reasonably well behaved at home but readily assaultive toward others. If their youngsters misbehaved, the parents believed it was because others were at fault. Not only did the parents of these hyperaggressive children see little reason to consult clinics, but many of them considered aggression to be a valued attribute. In these families the development of aggression is better explained in terms of a positive, rather than a negative, reinforcement model. Samples of hyperaggressive children drawn from different sources may thus yield different theories on the familial determinants of aggression.

In the social learning analysis, defensive aggression is sustained to a greater extent by anticipated consequences than by its instantaneous effects. People will endure the pain of reprisals on expectations that their aggressive efforts will eventually remove deleterious conditions. Aggressive actions may also be partly maintained in the face of painful counterattack by anticipated costs of timidity. In aggression-oriented circles, failure to fight back can arouse fear of future victimization and humiliation. A physical pummeling may, therefore, be far less distressing than repeated social derision or increased likelihood of future abuse. In other words, humans do not behave like unthinking servomechanisms directed solely by immediate response feedback. Under aversive conditions of life, people will persist, at least for a time, in aggressive behavior that produces immediate pain but prospective relief from misery.

EXPRESSIONS OF INJURY

In the view of drive theorists, the purpose of aggression is infliction of injury. Just as eating relieves hunger, hurting others presumably discharges the aggressive drive. It has therefore been widely assumed that aggressive behavior is reinforced by signs of suffering in the victim. According to Sears, Maccoby, and Levin (1957), pain cues become rewarding because the pain produced by aggressive acts is repeatedly associated with tension relief and removal of frustrations. Feshbach (1970) interprets the rewarding value of pain expression in terms of self-esteem processes. Perception of pain in one's tormentors is experienced as satisfying because it signifies successful retaliation and thus restores the aggressor's self-esteem.

A contrasting view is that signs of suffering ordinarily function as inhibitors rather than as positive reinforcers of aggressive behavior. Because of the dangers of intragroup violence, all societies establish strong prohibitions against cruel and destructive acts, except under special circumstances. In the course of socialization, most people adopt for self-evaluation the standard that ruthless aggression is morally reprehensible. Consequently, aggression that produces evident suffering in others elicits both fear of punishment and self-censure, which tend to inhibit injurious attacks.

Studies on how pain expressions affect assaults on suffering victims support the inhibitory effects. Aggressors behave less punitively when their victims express anguished cries than when they do not see or hear them suffer (Baron, 1971a, 1971b; Sanders & Baron, 1977). Contrary to the effect attributed to them in drive theory, pain cues reduce aggression regardless of whether assailants are angered or not (Geen, 1970; Rule & Leger, 1976). People are even less inclined to behave cruelly when they see their suffering victims than when they merely hear the distress they have caused them (Milgram, 1974).

The scope of the experimental treatments and the populations studied are too limited to warrant the strong conclusion that pain expressions never enhance aggressive behavior. A gratuitous insult from a stranger in a laboratory may not create sufficient animosity for the victim to derive satisfaction from injurious retaliation. It is a quite different matter when an antagonist repeatedly tyrannizes others or wields power in ways that make life miserable for them. In such instances, news of the misfortune, serious illness, or death of an oppressor is joyfully received by people who ordinarily respond more compassionately to the adversities befalling others. However, the alleviation of aversive treatment from injured oppressors rather than their suffering may be the primary source of satisfaction. In experimental investigations, pain expressions occur without the other extraneous rewards accompanying victory over antagonists.

From the standpoint of social learning theory, suffering of one's enemy is most apt to augment aggression when hurting them lessens maltreatment or benefits aggressors in other ways. When aggressors suffer reprisals or self-

contempt for harming others, signs of suffering function as negative reinforcers that deter injurious attacks.

Findings of studies with infrahuman subjects are sometimes cited as evidence that fighting is inherently rewarding. Animals will perform responses that produce an attackable target, especially if they have been trained for aggression and are subjected to aversive stimulation. However, because of inadequate controls, this line of experimentation failed to clarify whether the animals were seeking combat, escape, or social contact (Bandura, 1973). Studies including conditions in which animals perform responses to gain contact without opportunity to fight (Kelsey & Cassidy, 1976) demonstrate that social contact rather than combat is the source of reward.

Under certain conditions pain expressions may assume reward value. Examples can be cited of societal practices in which brutal acts are regarded as praiseworthy by those in positions of power. Inhumane reinforcement contingencies can breed people who take pleasure in inflicting pain and humiliation. Additionally, clinical studies of sexual perversion have disclosed cases in which pain cues acquire powerful reward value through repeated association with sexual gratification. As a result, erotic pleasure is derived from inflicting pain on others or on oneself.

There are no conceptual or empirical grounds for regarding aggression maintained by certain effects as more genuine or important than others. A comprehensive theory must account for all aggressive actions, whatever purposes they serve. To restrict analysis of aggression to behavior that is supposedly reinforced by expressions of injury is to exclude from consideration some of the most violent activities where injury is an unavoidable concomitant rather than the major function of the behavior.

One might also question the distinction traditionally drawn between instrumental aggression, which is supposedly aimed at securing extraneous rewards, and hostile aggression, the sole purpose of which is presumably to inflict suffering (Feshbach, 1970). Since, in all instances, the behavior is instrumental in producing certain desired outcomes, be they pain, approval, status, or material gain, it is more meaningful to differentiate aggressive behaviors in terms of their functional value rather than whether or not they are instrumental.

Punishing Consequences

Restraints over injurious behavior arise from two different sources. *Social restraints* are rooted in threats of external punishment. *Personal restraints* operate through anticipatory self-condemning reactions toward one's own conduct. In developmental theories, these two sources of restraint are traditionally characterized as fear control and guilt control, respectively. Punishing consequences that are observed or experienced directly convey information about

the circumstances under which aggressive behavior is safe and those under which it is hazardous. Aggressive actions are therefore regulated partly on the basis of anticipated negative consequences. Being under cognitive and situational control, restraints arising from external threats vary in durability and in how widely they generalize beyond the prohibitive situations.

The effectiveness of punishment in controlling behavior is determined by a number of factors (Bandura, 1969; Campbell & Church, 1969). Of special importance are the benefits derived through aggressive actions and the availability of alternative means of securing desired goals. Other determinants of the suppressive power of punishment include the likelihood that aggression will be punished and the nature, severity, timing, and duration of aversive consequences. In addition, the level of instigation to aggression and the characteristics of the prohibitive agents influence how aggressors will respond under threat of punishment.

When alternative means are available for people to get what they seek, aggressive modes of behavior that carry a high risk of punishment are rapidly discarded. Aggression control through punishment becomes more problematic when aggressive actions are socially or tangibly rewarded and alternative means of securing desired outcomes are either unavailable, less effective in producing results, or not within the capabilities of the aggressor. Here, punishment must be applied with considerable force and consistency to outweigh the benefits of aggression. Even then it achieves, at best, temporary selective control in the threatening situation. Functional aggression is reinstated when threats are removed, and it is readily performed in settings in which the chance of punishment is low (Bandura & Walters, 1959). Not only is punishment precarious as an external inhibitor of intermittently rewarded behavior, but its frequent use can inadvertently promote aggression by modeling punitive modes of control (Hoffman, 1960).

Punishment, whether direct or observed, is informative as well as inhibitory. People can profit from witnessing the failures of others or from their own mistakes. Given strong instigation to aggression and limited options, threats lead people to adopt safer forms of aggression or to refine the prohibited behavior to improve its chances of success. For this reason, antisocial aggression is best prevented by combining deterrents with the cultivation of more functional alternatives. Most law-abiding behavior relies more on deterrence through preferable prosocial options than on threats of legal sanctions.

Under certain conditions aggression is escalated through punishment, at least in the short run. Individuals who recurrently engage in aggressive behavior have experienced some success in controlling others through force. In interpersonal encounters, they respond to counterattacks with progressively more punitive reactions to force acquiescence (Edwards, 1968; Patterson, 1977; Toch, 1969). The use of punishment as a control technique also carries risks of escalating collective aggression when grievances are justifiable and challengers possess substantial coercive power (Bandura, 1973; Gurr, 1970).

Under these circumstances, continued aggressive behavior eventually suc ceeds in changing social practices that lack sufficient justification to withstan concerted protest.

Vicarious Reinforcement

In the course of everyday life, there are numerous opportunities to observ the actions of others and the circumstances under which they are rewarded ignored, or punished. Observed outcomes influence behavior in much th same way as directly experienced consequences. People can profit from th successes and mistakes of others as well as from their own experiences. As general rule, seeing aggression rewarded in others increases, and seeing i punished decreases, the tendency to behave in similar ways (Bandura, 1965 Bandura, Ross & Ross, 1963). The more consistent the observed respons consequences, the greater are the facilitatory and inhibitory effects on viewer (Rosekrans & Hartup, 1967).

Vicarious reinforcement operates primarily through its informative function Since observed outcomes convey different types of information, they can hav diverse behavioral effects. Response consequences accruing to others conve contingency information about the types of actions likely to be rewarded o punished and the situations in which it is appropriate to perform them. number of factors that enter into the process of social comparison can alter th customary effects of observed consequences. Models and observers often diffe in distinguishable ways so that behavior considered approvable for one may b punishable for the other, depending on discrepancies in sex, age, and socia status. When the same behavior produces unlike consequences for differen members, observed reward may not enhance the level of imitative aggressive ness (Thelen & Soltz, 1969).

When observed outcomes are judged personally attainable, they create in centive motivation. Seeing others' successes can function as a motivator b arousing in observers expectations that they can gain similar rewards for analo gous performances. Some of the changes in responsiveness may also reflec vicarious acquisition or extinction of fears through the affective consequence accruing to models. Indeed, the legal system of deterrence rests heavily on th restraining function of exemplary punishment (Packer, 1968; Zimring, 1973) But observed outcomes also reduce the deterrent efficacy of threatened lega consequences. The chance of being caught and punished for criminal conduc is relatively low. In locales in which transgressions are common, people hav personal knowledge of countless crimes being committed without detection Such exposure to unpunished transgressions tends to reduce the force of lega deterrents.

In addition to the aforementioned effects, valuation of people and activitie can be significantly altered on the basis of observed consequences. Ordinarily

observed punishment tends to devalue the models and their behavior, whereas the same models become a source of emulation when their actions are admired. However, aggressors may gain, rather than lose, status in the eyes of their peers when they are punished for a style of behavior valued by the group or when they aggress against institutional practices that violate the professed values of society. It is for this reason that authoritative agencies are usually careful not to discipline challengers in ways that might martyr them.

Observed consequences can change observers' valuation of those who exercise power as well as of the recipients. Restrained and principled use of coercive power elicits respect. When societal agents misuse their power to reward and punish, they undermine the legitimacy of their authority and arouse opposition. Seeing inequitable punishment, rather than securing compliance, may foster aggressive reprisals. Indeed, activists sometimes attempt to rally supporters to their cause by selecting aggressive tactics calculated to provoke authorities to excessive countermeasures.

The manner in which aggressors respond to the consequences of their behavior can also influence how observers later react when they themselves are rewarded for displaying similar responses. In one such study (Ditrichs, Simon, & Greene 1967), children who observed models express progressively more hostility for social approval later increased their own output of hostile responses that brought praise. However, when models appeared oppositional by reducing hostile responses that brought them praise, or reacted in a random fashion as though they were uninfluenced, observers did not increase their expression of hostility even though they were praised whenever they did so. Thus, susceptibility to direct reinforcement was increased by observed willing responsiveness, but reduced by observed resistance.

Observed outcomes introduce comparative processes into the operation of reinforcement influences. The observed consequences accruing to others provide a standard for judging whether the outcomes one customarily receives are equitable, beneficent, or unfair. The same external outcome can function as a reward or as a punishment depending on the observed consequences used for comparison. Relational properties of reinforcement affect not only behavior but the level of personal satisfaction or discontent as well. Equitable treatment tends to promote a sense of well-being, whereas inequitable reinforcement generates resentments and dissatisfactions. The effects of perceived inequity on aggression were reviewed earlier in the discussion of relative deprivation.

Self-Regulatory Mechanisms

The discussion thus far has analyzed how behavior is regulated by external consequences that are either observed or experienced firsthand. People are not simply reactors to external influences. Through self-generated inducements and self-produced consequences, they can exercise some influence over their

own behavior. In this self-regulatory process, people adopt through tuition and modeling certain standards of behavior and respond to their own actions in self-rewarding or self-punishing ways. An act therefore includes among its determinants self-produced influences.

A detailed account of self-regulatory processes, which is presented elsewhere (Bandura, 1976, 1978), falls beyond the scope of this chapter. In social learning theory, a self-system is not a psychic agent that controls behavior. Rather, it refers to cognitive structures that provide the referential standards against which behavior is judged and a set of subfunctions for the perception, evaluation, and regulation of action. Figure 4 presents a diagrammatic representation of three main subfunctions in the self-regulation of behavior by self-produced incentives. The first component concerns the selective observation of one's own behavior in terms of a number of relevant dimensions. Behavior produces self-reactions through a judgmental function relying on several subsidiary processes, that include referential comparisons of perceived conduct to internal standards, valuation of the activities in which one is engaged, and cognitive appraisal of the determinants of one's behavior. Performance appraisals set the occasion for self-produced consequences. Favorable judgments give rise to rewarding self-reactions, whereas unfavorable appraisals activate negative self-reactions.

Self-regulated incentives are conceptualized as motivational devices rather than as automatic strengtheners of preceding responses. By making self-reward and self-punishment contingent on designated performances, people motivate themselves to expend the effort needed to attain performances that give them self-satisfaction and they refrain from behaving in ways that result in self-

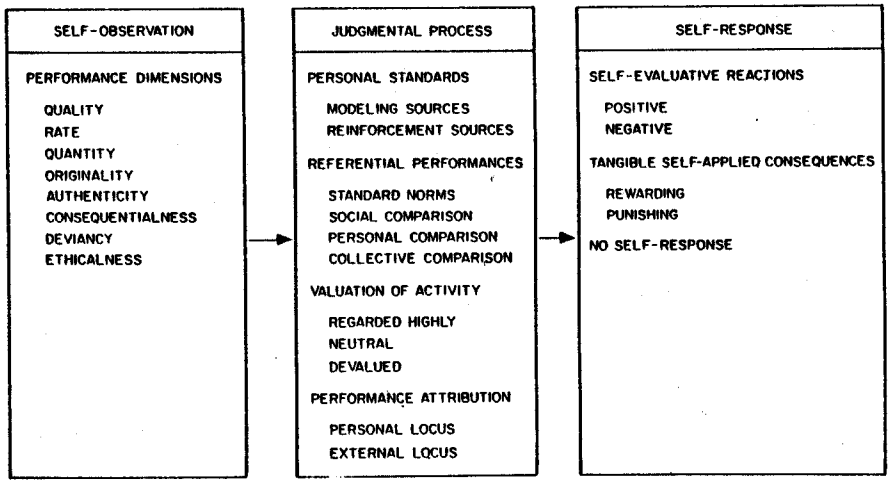

FIGURE 4 Component processes in the self-regulation of behavior by self-produced consequences.

censure. Because of self-reactive tendencies, aggressors must contend with themselves as well as with others when they behave in an injurious manner.

SELF-REWARD FOR AGGRESSION

One can distinguish several ways in which self-generated consequences enter into the self-regulation of aggressive behavior. At one extreme are individuals who have adopted behavioral standards and codes that make aggressive feats a source of personal pride. Such individuals readily engage in aggressive activities and derive enhanced feelings of self-worth from physical conquests (Bandura & Walters, 1959; Toch, 1969; Yablonsky, 1962). Lacking self-reprimands for hurtful conduct, they are deterred from cruel acts mainly by reprisal threats. Idiosyncratic self-systems of morality are not confined to individuals or fighting gangs. In aggressive cultures where prestige is closely tied to fighting prowess, members take considerable pride in aggressive exploits.

SELF-PUNISHMENT FOR AGGRESSION

After ethical and moral standards of conduct are adopted, anticipatory self-condemning reactions for violating personal standards ordinarily serve as self-deterrents against reprehensible acts. Results of the study by Bandura and Walters (1959) reveal how anticipatory self-reproach for repudiated aggression serves as a motivating influence to keep behavior in line with adopted standards. Adolescents who were compassionate in their dealing with others responded with self-disapproval, remorse, and attempts at reparation even when their aggressive activities were minor in nature. In contrast, assaultive boys experienced relatively few negative self-reactions over serious aggressive activities. These differential self-reactive patterns are corroborated by Perry and Bussey (1977) in laboratory tests. Highly aggressive boys reward themselves generously for inflicting suffering on another child, whereas those who display low aggressive tendencies react with self-denial for behaving injuriously. In studies of aggressive modeling, the more reprehensible children judge aggressive actions to be, the less likely they are to adopt them when they are later exemplified by a peer model (Hicks, 1971).

DISENGAGEMENT OF INTERNAL CONTROL

Theories of internalization generally portray incorporated entities in the form of a conscience, superego, and moral codes as continuous internal overseers of conduct. Such theories encounter difficulties in explaining the variable operation of internal control and the perpetration of gross inhumanities by otherwise humane, compassionate people. Such concepts as superego lucunae, islands of superego, and various mental defense mechanisms have been proposed as the explanatory factors.

In the social learning analysis, moral people perform culpable acts through processes that disengage evaluative self-reactions from such conduct, rather than because of defects in the development or the structure of their superegos (Bandura, 1973). Acquisition of self-regulatory capabilities does not create an invariant control mechanism within a person. Self-evaluative influences do not operate unless activated, and many situational dynamics influence their selective activation.

Self-deterring consequences are likely to be activated most strongly when the causal connection between conduct and the detrimental effects it produces is unambiguous. There are various means, however, by which self-evaluative consequences can be dissociated from censurable behavior. Figure 5 shows the several points in the process at which the disengagement can occur.

One set of disengagement practices operates at the level of the behavior. People do not ordinarily engage in reprehensible conduct until they have justified to themselves the morality of their actions. What is culpable can be made honorable through cognitive restructuring. In this process, reprehensible conduct is made personally and socially acceptable by portraying it in the service of moral ends. Over the years, much destructive and reprehensible conduct has been perpetrated by decent, moral people in the name of religious principles and righteous ideologies. Acting on moral or ideological imperative reflects, not an unconscious defense mechanism, but a conscious offense mechanism.

Self-deplored acts can also be made righteous by contrasting them with flagrant inhumanities. The more outrageous the comparison practices, the more likely are one's reprehensible acts to appear trifling or even benevolent. Euphemistic language provides an additional convenient device for disguising

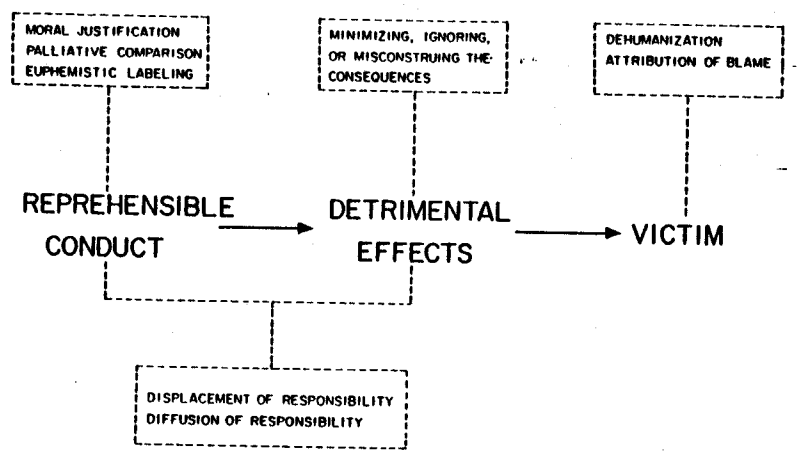

FIGURE 5 Mechanisms through which behavior is disengaged from self-evaluative consequences at different points in the behavioral process.

reprehensible activities and according them a respectable status. Through convoluted verbiage, pernicious conduct is made benign and those who engage in it are relieved of a sense of personal agency (Gambino, 1973). Moral justifications and palliative characterizations are especially effective disinhibitors because they not only eliminate self-generated deterrents but engage self-reward in the service of injurious behavior. What was morally unacceptable becomes a source of self-pride.

Another set of dissociative practices operates by obscuring or distorting the relationship between actions and the effects they cause. People will behave in highly punitive ways they normally repudiate if a legitimate authority acknowledged responsibility for the consequences of the conduct (Diener *et al.*, 1975; Milgram, 1974). By displacing responsibility, people do not see themselves as personally accountable for their actions and are thus spared self-prohibiting reactions. Nor is self-censure activated when the link between conduct and its consequences is obscured by diffusing responsibility. Through division of labor, diffusion of decision making, and collective action, people can behave injuriously without anyone feeling personally responsible for culpable behavior. They therefore act more aggressively when responsibility is obscured by a collective instrumentality (Bandura, Underwood, & Fromson, 1975).

Additional ways of weakening self-deterring reactions operate by disregarding or obscuring the consequences of actions. When people embark on a self-disapproved course of action for personal gain, or because of other inducements, they avoid facing the harm they cause. Self-censuring reactions are unlikely to be activated as long as the detrimental effects of conduct are disregarded, minimized, or misjudged (Brock & Buss, 1962, 1964).

The final set of disengagement practices operate at the level of the recipients of injurious effects. The strength of self-evaluative reactions partly depends on how the people toward whom actions are directed are viewed. Maltreatment of individuals who are regarded as subhuman or debased is less apt to arouse self-reproof than if they are seen as human beings with dignifying qualities (Bandura, Underwood, & Fromson, 1975; Zimbardo, 1969). Analysis of the cognitive concomitants of injurious behavior reveals that dehumanization fosters a variety of self-exonerating maneuvers (Bandura, Underwood, & Fromson, 1975). People strongly disapprove of cruel behavior and rarely excuse its use when they interact with humanized individuals. By contrast, people seldom condemn punitive conduct and generate self-disinhibiting justifications for it when they direct their behavior toward individuals divested of humanness.

Many conditions of contemporary life are conducive to dehumanization. Bureaucratization, automation, urbanization, and high social mobility lead people to relate to each other in anonymous, impersonal ways. In addition, social practices that divide people into in-group and out-group members produce human estrangement that fosters dehumanization. Strangers can be more easily cast as unfeeling beings than can personal acquaintances.

Psychological research tends to focus on the disinhibiting effects of social practices that divest people of human qualities. This emphasis is understandable considering the prevalence and the serious consequences of people's inhumanities toward each other. Of equal theoretical and social significance is the power of humanization to counteract injurious conduct. Studies examining this process reveal that, even under conditions that ordinarily weaken self-deterrents, it is difficult for people to behave cruelly toward others when they are characterized in ways that personalize and humanize them (Bandura, Underwood, & Fromson, 1975).

Attributing blame to one's victims is still another expedient that can serve self-exonerative purposes. Detrimental interactions usually involve a series of reciprocally escalative actions in which the victims are rarely faultless. One can always select from the chain of events an instance of defensive behavior by the adversary and view it as the original instigation. Victims then get blamed for bringing suffering on themselves, or extraordinary circumstances are invoked to vindicate irresponsible conduct. By blaming others, one can excuse one's own actions. People are socially aided in dehumanizing and blaming groups held in disfavor by pejorative stereotyping and indoctrination.

GRADUALISM AND DISINHIBITION

The aforementioned practices will not instantaneously transform a gentle person into a brutal aggressor. Rather, the change is usually achieved through a gradual disinhibition process in which participants may not fully recognize the marked changes they are undergoing. Initially, individuals are prompted to perform aggressive acts they can tolerate without excessive self-censure. After their discomfort and self-reproof are diminished through repeated performance, the level of aggression is progressively increased in this manner until eventually gruesome deeds, originally regarded as abhorrent, can be performed without much distress.

As is evident from the preceding discussion, the development of self-regulatory functions does not create a mechanical servocontrol system wherein behavioral output is accurately monitored, compared against an internal standard and, if judged deviant, is promptly brought in line with the referent standard. Nor do situational influences exercise mechanical control. Personal judgments operating at each subfunction preclude the automaticity of the process. There is leeway in judging whether a given behavioral standard is applicable. Because of the complexity and inherent ambiguity of most events, there is even greater leeway in the judgment of behavior and its effects. To add further to the variability of the self-control process, most activities are performed under collective arrangements that obscure responsibility, thus permitting leeway in judging the degree of personal agency in the effects that are socially produced. In short, considerable latitude exists for personal judgmental factors to affect whether or not self-regulatory influences will be engaged in any given activity.

Differing Perspectives on Disengagement of Internal Restraints

The preceding discussion analyzed reduction of internal control within the framework of social learning theory. Other researchers have addressed this issue from a different conceptual perspective. Zimbardo (1969) explains reduction of restraints over aggression in terms of deindividuation. Deindividuation is an internal state characterized by a loss of self-consciousness and self-evaluation coupled with a diminished concern for negative evaluation from others. According to this view, the altered perception of self and others weakens cognitive control over behavior, thus facilitating intense impulsive actions.

People can be deindividuated by a variety of external conditions, including anonymity, immersion in a group, diffusion of responsibility, high emotional arousal, intense sensory stimulation, and physiological factors that alter states of consciousness. Many of the postulated determinants of deindividuation remain to be investigated. However, the conditions that have been examined empirically, such as group presence, anonymity, and emotional arousal, have variable effects on behavior depending on the presence of other personal and situational factors conducive to aggression (Bandura, 1973; Diener, 1977; Zimbardo, 1969). Verification of the deindividuation link in the causal process is a much more complicated matter because it requires independent assessment of the internal state. The initial attempts to link the indicants of deindividuation either to the situational conditions or to the disinhibited behavior have so far produced inconclusive results (Diener, 1977).

It should be recognized that this line of research presents especially difficult methodological problems. One cannot keep interrupting unrestrained aggressors for their perceptions of themselves and others without aborting the disinhibitory process. To measure the cognitive concomitants of external disinhibitory conditions prior to performance is to alter the very phenomenon being studied. Judgments of the promise of a theory in this field must therefore rest heavily on its success in identifying determinants of behavioral disinhibition and in bringing order among diverse findings. In view of the important role played by self-justification processes in disinhibition, a full explanation of how aggression is freed from internal restraints must consider the self-regulatory mechanisms discussed earlier.

Although deindividuation and social learning theory posit some overlapping determinants and processes of internal disinhibition, they differ in certain important respects. Deindividuation views intense aggression as resulting mainly from loss of cognitive control. Social learning encompasses a broad range of disinhibitory factors designed to provide a unified theory for explaining both impulsive and principled aggressive conduct. As shown earlier, people frequently engage in violent activities not because of reduced self-control but because their cognitive skills and self-control are enlisted all too well through moral justifications and self-exonerative devices in the service of destructive causes. The massive threats to human welfare are generally brought about by deliberate acts of principle rather than by unrestrained acts of impulse. It is the principled resort to aggression that is of greatest social concern but most ignored in psychological theorizing and research.

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