

# 23

## Social Psychology and Social Problems

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We live in a rapidly changing world, and these changes often breed social problems. Our cities are crowded, dirty, and noisy. Minority groups are in a state of seething discontent, and the violence so readily portrayed on television and in movies is becoming pervasive in reality. Are these problems really new? An examination will reveal that some of them, at least at the psychological level, are old, and that they can be characterized by what seem to be relatively consistent behavior patterns. Other problems, such as pollution of our environment, are new, and therefore in need of systematic examination. This chapter will analyze some of these problems in social psychological terms.

### **THE IMPACT OF TELEVISION VIOLENCE**

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P.S. 108 is a school in New York's East Harlem, a school that has established a relatively good reputation for maintaining discipline and a good learning atmosphere. In mid March, 1972, school officials reported an unusual degree of restless behavior. The children were unruly and their games had turned noticeably more violent. The conversation in the school yard dealt with rumbles, and some children were found to be carrying toy guns in their pants.

One child came to class swinging a heavy chain, and another actually pulled a knife during a fight. These types of incidents were not typical of the school. A conversation with several of the students traced the unrest to the film version of *West Side Story*, a portrayal of two warring street gangs, which had been shown a week earlier on network television (O'Connor, 1972).

What is the effect of television violence on the behavior of children and adults? A study supported by Congress and conducted under the supervision of the Surgeon General of the United States reviewed twenty-three studies on the issue and reported that "the present entertainment offerings of the television medium may be contributing, in some measure, to the aggressive behavior of many normal children [Cisin, Coffin, Janis, Klapper, Mendelsohn, Omwake, Pinderhughes, de Sola Pool, Siegel, Wallace, Watson, & Wiebe, 1972]."

### Imitation Learning

Why should watching a violent act on the television screen instigate a person to "real life" violence (Figure 23-1). One possible answer is imitation. We have all learned numerous skills and responses by imitating others. Why, when, and how do we imitate another?

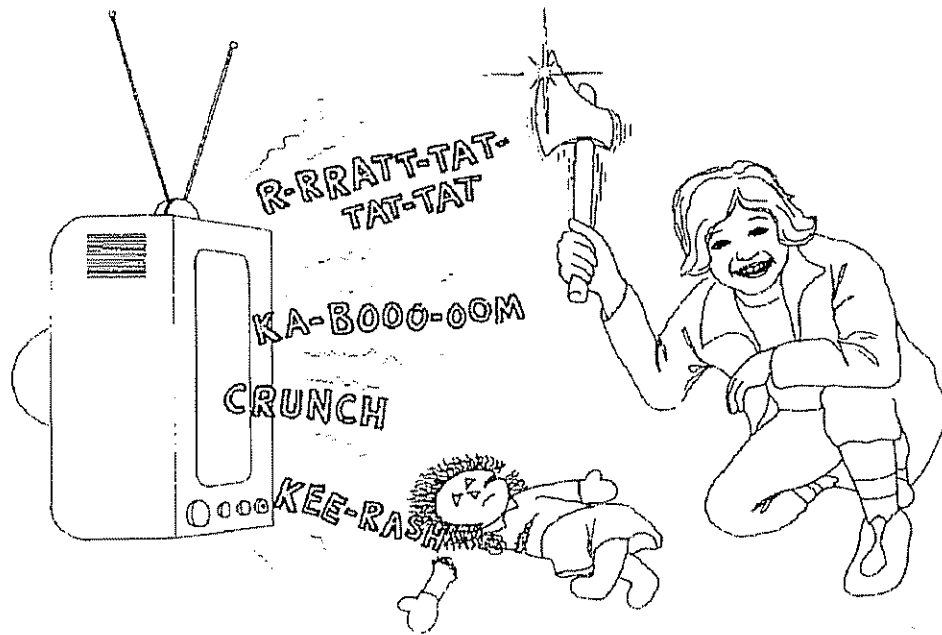


FIGURE 23-1 Does viewing violence on television cause aggressive behavior? Present evidence suggests that it does.

Some theorists (e.g., Miller & Dollard, 1941) have attempted to account for imitation in the traditional stimulus-response reinforcement framework. The process proposed is called "matched-dependent" learning. According to these theorists, the occurrence of behavior (a response) that matches that of a model is initially a chance affair. Appropriately matched responses will be reinforced, while unmatched responses will be ignored or punished. By this method of chance imitation, resulting in subsequent reinforcement, a person learns to imitate another. Further, he learns whom to imitate, since imitating some models leads to rewards, while the imitation of others leads to none.

A series of experiments reported by Miller and Dollard (1941) demonstrated that both rats and children can learn either to imitate or not to imitate a leader. In one experiment, each child observed a leader who obtained gumdrops from a machine by either rotating or depressing a lever. Following the leader, the subject was also given an opportunity at the machine. When the subject imitated the leader's response, he was also rewarded with a gumdrop. This sequence of leader-response and subject-response was repeated several times with the leader following a complex schedule of rotations and depressions. The subjects quickly learned to imitate the leader, but not another leader whose responses were not rewarded.

"The Miller-Dollard theory of social imitation has been severely criticized as, in effect, requiring the person to be able to make a response before he can learn it through imitation [Deutsch & Krauss, 1965]." In order to learn a response the person has to make a response (at random) that just happens to match that of the model. Further criticism (Bandura & Walters, 1963) revolves around the theory's inability to explain other kinds of imitation, like those in which there is an apparent absence of any reinforcement.

A second theory of imitation learning (Bandura & Walters, 1963) argues that novel responses can be acquired through the mere observation of another's behavior. Further, these responses can be acquired without reinforcement and often are precise imitations of the model's behavior. Although Bandura and Walters affirm that reinforcement is central in strengthening and maintaining behavioral tendencies, they do not feel that it plays a dominant role in initial acquisition of the response. Instead, Bandura suggests that "the process of response acquisition is based upon contiguity of sensory events and that instrumental conditioning and reinforcement should perhaps be regarded as response selection rather than response acquisition or response strengthening procedures [Bandura, 1962, p 260]."

Bandura and Walters conducted a series of experiments in which they have exposed nursery school children to either an aggressive or a nonaggressive model. The models included human adults in person, human adults on film, and cartoon characters on film. The results showed that children who view

models kicking, punching, and sitting on a large plastic doll responded to subsequent frustration with considerable aggression, much of which precisely imitates the behavior of the model. Equally frustrated children who have observed inhibited nonaggressive models respond with considerably less aggression to the same frustrating experience. Given the context of this discussion, i.e., television and aggression, it is noteworthy that viewing of the cartoon figures and the adults on film had the same effects as viewing the adult in person.

In further experiments, children were exposed to models who were either punished or rewarded for their aggressive behavior. The results indicated that, although the child may acquire the response by mere observation, his readiness to perform it was partly contingent on whether the model was rewarded or punished as a result of the behavior. It seems that the observation of an aggressive response for which a model is rewarded may lead to similar aggressive behavior, while the observation of a model being punished for aggressive behavior may lead to the inhibition of general aggressive tendencies and the rejection of the model as a basis for emulation.

In reviewing an additional study examining the relationship between viewing television violence and subsequent aggressive behavior, it must be remembered that a correlation between two variables does not mean that one causes the other. For example, there are three possible interpretations of a correlation between viewing television violence and subsequent aggressive behavior: (1) The viewing of the violence caused the aggressive behavior (2) Aggressive people are prone to watch violent television programs. (3) There may be a third factor that is responsible for both aggressive behavior and television violence viewing, for example, socioeconomic status of the parents. These factors should be kept in mind when considering the results of these studies.

Lefkowitz (Lefkowitz, Eron, Walder, & Huesman, 1971) collected data on the violence levels of favorite television programs and aggressive behavior of children in the third grade, with follow-ups in the eighth grade and the thirteenth grade (one year after graduation from high school). The child's favorite programs in the third grade were reported by the mother, while the child himself reported his favorites in the eighth and thirteenth grades. Aggression was measured by peer ratings. The ratings included such questions as, "Who starts fights over nothing?" The results indicate a modest relationship between viewing television violence and aggressive behavior in the third grade (males only), and no such relationship for the same boys at grades eight and thirteen. However, among boys, a relatively high correlation was found between viewing television violence in the third grade and aggression at grade thirteen. This suggests that early viewing of television violence may lead to aggressive behavior years later.

It is evident from this study, as well as the experimental work of Bandura and Walters, that there is reason to suspect a causal relationship between viewing violence and aggression. But science is cautious, and further experimentation will be necessary before such a conclusion should be accepted.

## **INTERGROUP PREJUDICE AND CONFLICT**

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What are the factors that breed prejudice and foment riots? It would seem that these problems of intergroup prejudice and conflict are tailor-made for the social psychologist. Are prejudicial attitudes different from other kinds of attitudes? Do ethnic groups interact differently than other groups?

### **Roots of Prejudice**

There are two essential ingredients in the definition of prejudice: (1) reference to an unfounded judgment and (2) reference to a feeling or tone (Allport, 1958). When we speak of prejudice as a social problem, we are referring to "negative prejudice," an irrational, unfounded, negative evaluation of others.

Prejudice is a complex phenomenon determined by many factors, that is, it has multiple origins (Collins, 1970). There is not one all-inclusive theory of prejudice. In fact, there are many, sometimes overlapping, theories about the roots of prejudicial behavior. In effect, theories are advanced to call attention to an important aspect of the problem. They do not suggest that no other factors are involved.

It is possible to distinguish between two levels of the analysis of prejudice: the societal level and the individual level (Collins, 1970). Societal explanations concern themselves with when and how prejudice develops in a given social system, whereas individual explanations are concerned with the causes of prejudice on the individual personality level. An examination of one theory from each level of analysis will allow us to gain some understanding of the complexity of the problem.

**REALISTIC-GROUP-CONFLICT THEORY.** A prerequisite to the understanding of societal analyses of prejudice is familiarity with the terms "ingroup" and "outgroup." Ingroup refers to those people who identify with a certain group and are regarded from the point of view of the members as belonging to

the group. Any group of people not belonging to an ingroup are considered by that group as members of an outgroup. The basic premise of realistic-group-conflict theory, a theory of the origin of prejudice that is included in what we have called societal analyses, is that "the character of the (existing relations) between ingroup and outgroup generates attitudes toward the outgroup that are consonant with these relationships [Secord & Backman, 1964]." When the goals of two groups are compatible, that is, they do not conflict and possibly even facilitate each other, positive intergroup attitudes will result. When the goals of the group are incompatible, that is, when they are mutually exclusive, negative intergroup attitudes result.

The robbers' cave experiment, a field study conducted by Sherif and his associates (Sherif, Harvey, White, Hood, and Sherif, 1961), tested realistic-group-conflict theory. Twenty-two "normal, healthy, socially well-adjusted boys" with similar middle-class backgrounds were the subjects. Although the boys were all from the same town, none of them had met prior to the experiment. Each of the boys was assigned to one of two groups. The assignment was done in a manner so that the groups would be equal in terms of physical and intellectual attributes. The two groups were then brought separately to a Boy Scout camp that was relatively isolated from outside influences.

The experiment had three stages: (1) the formation of ingroups, (2) the creation of intergroup hostility, and (3) the reduction of intergroup hostility. Stage 1 of the experiment, creating a feeling of groupness, arranged situations that would stimulate group goals with common appeal to the individuals, and which required the members of the group to work together for their attainment. Examples of these activities included arranging church services, building a rope bridge, and preparing a meal. These problems all required the cooperative effort of the group. As stage 1 progressed, the group members became friends and developed a feeling of "groupness."

Stage 2 of the experiment, creating intergroup conflict and hostility, brought the two groups into competitive contact through a series of contests. These included baseball, football, and a tug-of-war (Figure 23-2). As predicted, the researchers found that these situations produced hostile intergroup attitudes. The children name called, derogated the outgroup, and explicitly expressed the desire not to associate with the outgroup.

In the final stage of the experiment, intergroup conflict was reduced. The first attempt to reduce conflict involved bringing the two groups together in a pleasant environment, for example, eating together. It was totally unsuccessful. The next attempt at group hostility reduction was the introduction of superordinate goals, that is goals that had common appeal to the individuals and whose accomplishment require the two groups to work together. An example was a tug of war with a truck. The procedure was successful in eliminating

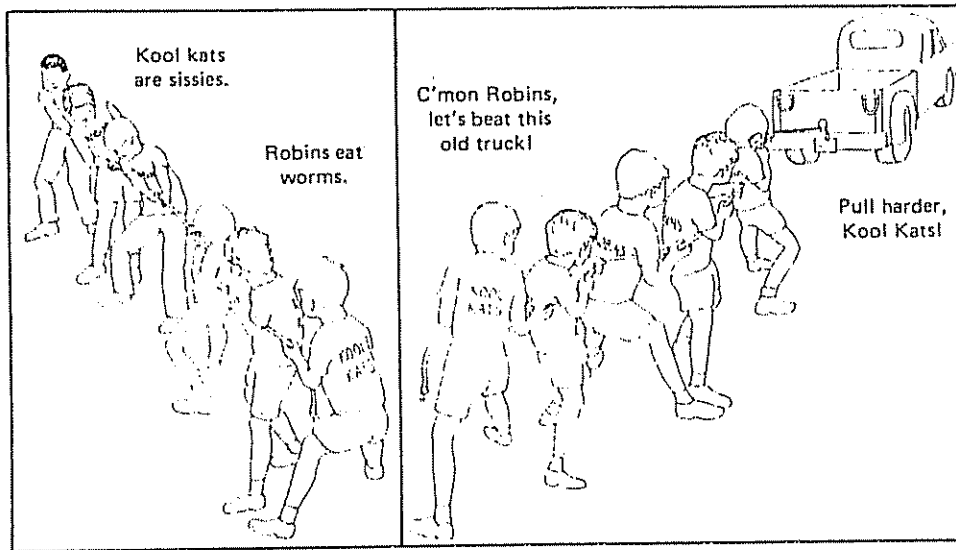


FIGURE 23-2 The effects of a group having a common goal are very beneficial. When put in competition, clear hostilities arise. Here the hostilities are seen in the form of verbal abuse.

the hostility between the groups. In simple terms, the introduction of interdependent goals eliminated the bases of conflict.

**FRUSTRATION-AGGRESSION HYPOTHESIS.** Before considering an example of an individual-level analysis of prejudice, it will be necessary to review one of the classic theories of psychology, the frustration-aggression hypothesis. As originally formulated by Dollard and his associates (Dollard, Doob, Miller, Mowrer, & Sears, 1939), the frustration-aggression hypothesis simply stated that aggression always presupposes frustration, and that frustration is always followed by aggression. More recent research has qualified the nature of the frustration-aggression relationship. It has been demonstrated that there are situations in which aggression can occur without a frustrating stimulus (Bandura & Walters, 1963) and that, although frustration causes an "instigation to aggression," aggression will not always occur (Berkoowitz, 1965). Setting these qualifications aside for the moment, it is not unreasonable to presume that, in many situations, when people are frustrated, they will aggress.

The frustration-aggression hypothesis is the basis for what has been called the scapegoat theory of prejudice. The theory "assumes that (for some people) living in organized society is inevitably a frustrating experience which produces 'free-floating aggression' [Collins, 1970, p. 261]." Dollard has described the source of these aggressive feelings as the "cultural restrictions in childhood

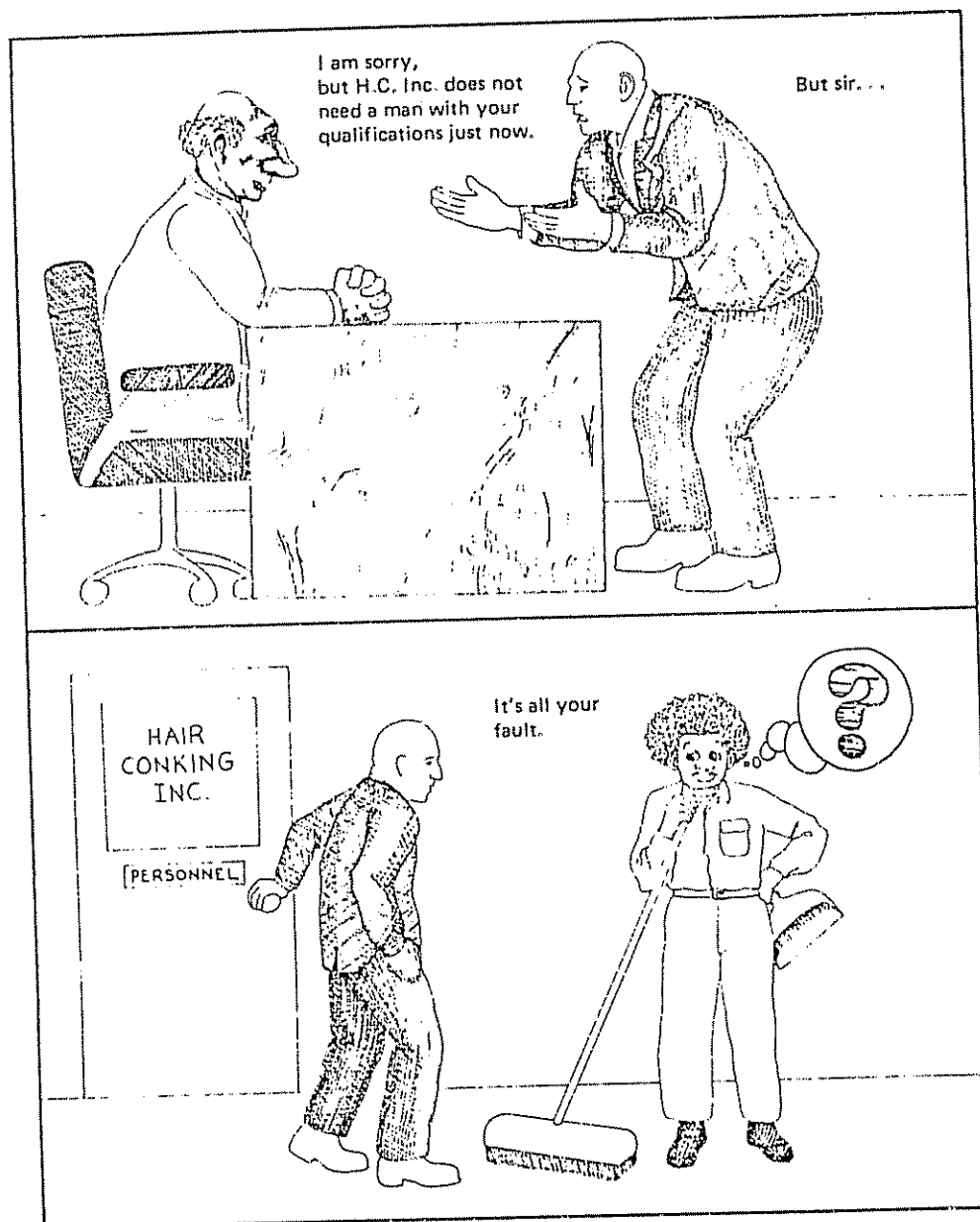


FIGURE 23-3 The scapegoat theory of prejudice. Instead of the aggressor expressing his frustration to the employer, he takes it out on an innocent bystander. This in turn, leads to the formation of a prejudice.

and the limitation of daily life in adulthood [that] provide frustrations for every individual; hostility is aroused in response to these frustrations [Dollard *et al.*, 1939, p. 433].” Since fear of retaliation often prevents an individual from directing his aggression toward the source of frustration, e.g., parents and employers, he often displaces it onto some outgroup in the form of prejudice (Figure 23-3).

Miller and Bugelski (1970) conducted a field experiment that tested the two premises of the scapegoat theory: (1) that frustration arouses aggression and (2) that this aggression might be displaced onto members of an outgroup. The subjects were thirty-one young men working at a summer camp. As part of the educational program of the camp, the men were to be required to take several long and uninteresting exams that were so difficult that everyone would be bound to fail miserably. “Furthermore, the tests would be certain to run far overtime so that the young men would miss what they looked forward to as the most interesting event of the otherwise dull week: Bank night at the local theater . . . [Miller & Bugelski, 1970].” The attitudes of the young men toward both Mexicans and Japanese were measured just before they learned about the difficult test and again just after they had completed the test and missed the evening’s entertainment. The results clearly indicated that outgroup members were evaluated lower after the frustrating experience than they had been beforehand. A control group given the same attitude questionnaires at equal time intervals showed no such change in evaluations. The experiment seems to lend support to the scapegoat theory.

Last, it is important to point out a major limitation of the theory. We are all frustrated at one time or another, but this does not necessarily make us all potential bigots. People obviously handle their frustrations in different ways and some have more tolerance for frustration than others. It is evident that other personality variables, such as the ability to cope with frustration, should be taken into account in any scapegoat theory analysis.

## RIOTS AND THEIR CAUSES

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On Saturday evening, July 22, (1967) the Detroit Police Department raided five “blind pigs.” The blind pigs had their origin in prohibition days, and survived as private social clubs. Often they were after hours drinking and gambling spots.

The fifth blind pig on the raid list (was) the United Community and Civic League at the corner of 12th Street

and Clairmount. Police expected to find two dozen patrons in the blind pig. That night, however, it was the scene of a party for several servicemen, two of whom were back from Vietnam. Instead of two dozen patrons, police found 82. . . . A few minutes after 5:00 A.M., just after the last of those arrested had been hauled away, an empty bottle smashed into the rear window of a store. Rumors circulated of excess force used by the police during the raid. A youth . . . was shouting: "We're going to have a riot!" and exhorting the crowd to vandalism [Kerner, Lindsay, Harris, Brooke, Corman, McCulloch, Abel, Thornton, Wildins, Peden, & Jenkins, 1968, pp. 84-86].

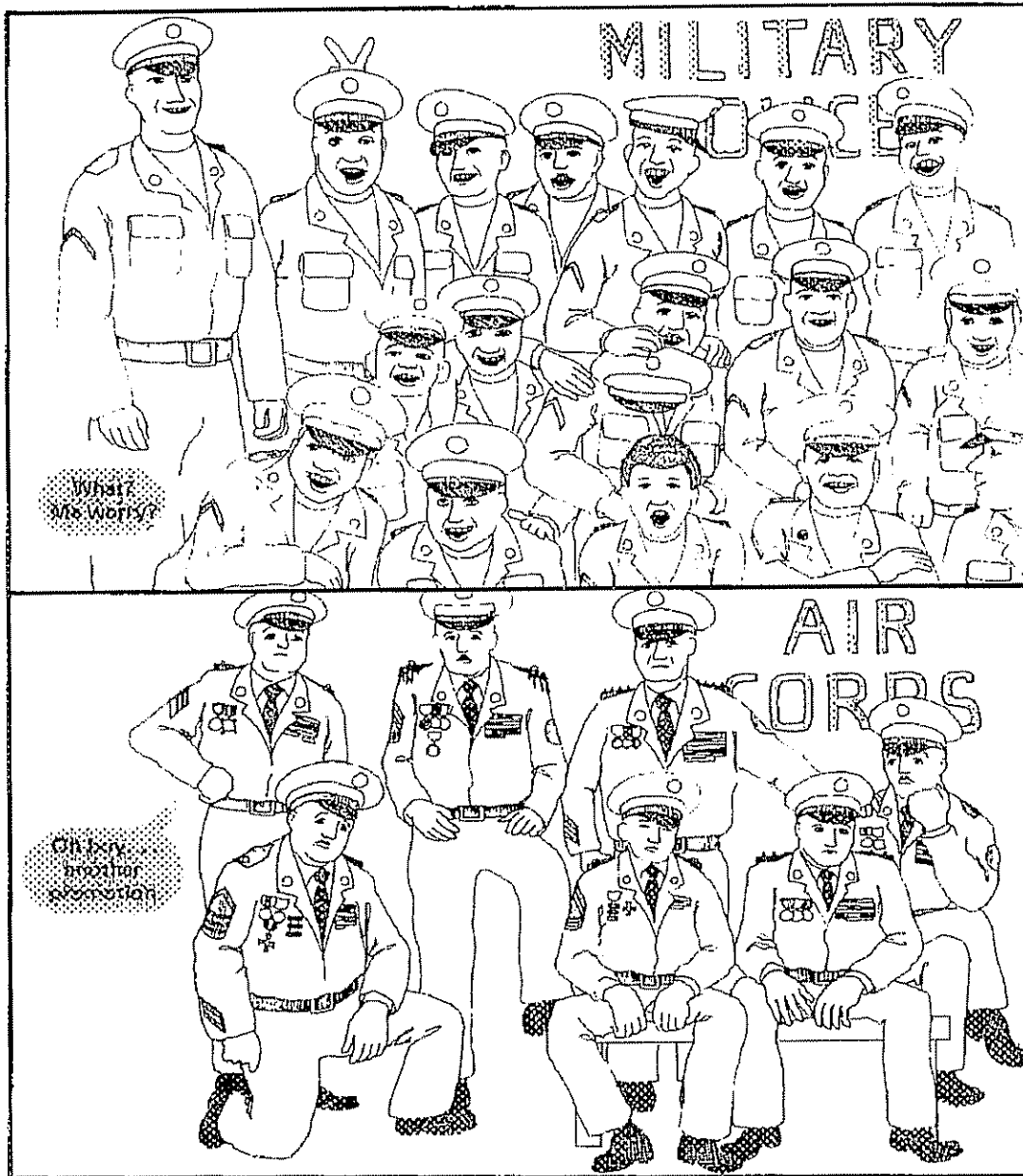
### The Relative Deprivation Hypothesis

Can social psychology help us to understand and remedy the causes of riots? The results of a study (Stouffer, Suchman, DeVinney, Star, & Williams, 1949) that examined the effects of a liberal promotion system on soldiers' satisfaction and morale provides us with our first insight. Common sense would predict that soldiers would be more satisfied when promotions were rapid and widespread than when they were scarce. A liberal promotion system would allow people to move ahead faster in their careers, whereas a more conservative system could frustrate career goals. Contrary to common sense, Stouffer's comparison of Air Corpsmen, who had a liberal system of promotion, with the Military Police, whose system was piecemeal, indicated that Air Corpsmen were considerably more frustrated concerning promotions than the Military Police (Figure 23-4).

What does Stouffer's study have to do with the Detroit riots? A closer examination of both Stouffer's results and the conditions leading up to the riots that ravaged American cities in the late sixties may well reveal that the underlying psychological explanations for both are the same.

**REFERENCE GROUP** Before we examine the similarities between the conditions that led to the riots and those that led to the morale problems of the Air Corpsmen, it will be necessary to understand the social psychological concept of reference group. The term "reference group" was coined by Hyman (1942) who suggested that people use groups as frameworks for their judgments. For example, in order to decide whether you are a good student, you might compare your grades to those of other students in your class. The class to which you belong gives you a frame of reference. It provides a standard that allows you to evaluate your own performance. If you receive a B on an exam and the remainder of your class receives C's, you know that you

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**FIGURE 23-4** Who are happier—the people in a group with a liberal promotion system or those in a group with a more stringent system?

have done a good job. On the other hand, if you receive a B and the remainder of the class receives A's, you know that your performance was not up to par. In both cases the performance was the same, but how it was evaluated depended on the standard set by your reference group.

In his study, Hyman found that he could not always accurately predict a person's subjective status, i.e., the status to which a person thinks he belongs, using factors such as income and education. However, he did find that, to a certain extent, one's subjective status depends on what groups one uses as his frame of reference. Frequently, these reference groups were not groups to which the person belonged, but rather groups to which he aspired. This finding led Hyman to distinguish between a "membership group," the group to which someone belongs, and a "reference group," the group which someone employs as a basis of comparison for self-appraisal. In some cases, the reference and membership group are the same; in others not.

Let us now return to Stouffer's morale problem. Air Corpsmen who saw many of their peers being promoted rapidly compared themselves to these peers and saw themselves as failures. This was true even though their own chance for promotion was good. Military Police seldom saw their peers move up and consequently viewed their own performance as adequate, i.e., as equal to the standard set by their reference group. It is clear that it is not the absolute level of attainment that makes for poor morale so much as "relative deprivation," the discrepancy between what one anticipates and what one attains. The relative deprivation occurs when an individual feels deprived in comparison to relevant reference groups.

The last decade has seen both statutory and social changes that have presumably paved the way for racial equality. At least, these changes have helped to form new expectancies for the American black. On television and in movies he sees that blacks can aspire to and acquire all the rewards of an affluent society: a nice house, a nice car, and a good job. These changes have given the lower-class blacks an opportunity to adopt a new reference group, the middle class. Unfortunately these expectations have seldom been met with real changes in the system that would allow their fulfillment. Jobs are still hard to get and the trappings of the middle class are still a dream. According to Pettigrew (1964), blacks in the last decade have been experiencing actual gains, but these gains are translated into psychological losses when compared with whites.

An analysis of the Detroit and Newark riots in terms of relative deprivation was attempted by Caplan and Paige (1968). Both rioters and nonrioters were asked whether things were getting better or worse in the past few years. Although they found no support for the rising expectancies notion, they did find that 39% of the rioters and 27% of the nonrioters thought that other

blacks were earning more than they were and that the discrepancy was increasing. Thus, 39% of rioting blacks interviewed saw themselves as earning less than other blacks, as not meeting up to the standard set by their reference group, and as being relatively deprived. The reported consequence of these feelings were frustration and dissatisfaction that, according to the authors, led to riot behavior. Although this study does not support the previously developed argument that blacks have shifted their reference group in the last few years, it does support the relative deprivation hypothesis.

Describing the lower-class black's condition as one of relative deprivation does not really confront the problem. Although the state of relative deprivation leads to low morale, dissatisfaction, and frustration, it has yet to be demonstrated that such a state could lead to riot-type behavior. A most plausible possibility is that relative deprivation leads to a state of frustration that, under certain conditions, causes an aggressive response (Berkowitz, 1965).

## PERSUASION

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"Bring them back alive!" Many of you will recognize this as the slogan of the American Automobile Association. Organizations like the A.A.A., as well as business and political concerns with less altruistic motives, are constantly bombarding us with slogans and appeals. Buy my product! Attend my functions! Give to my fund! Whatever the cause, the communicator inevitably resorts to a form of psychology, a way of presenting their message so that you will comply. Sometimes the appeal is presented by a famous person; at other times you are warned of the catastrophic consequences of noncompliance. Which of these techniques are effective; and even more important, what do psychologists, not to mention advertising agents, really know about persuasion?

### The Group and the Individual

Because of the shortage of popular food stuffs during World War II, the United States Government was interested in developing a program to convince consumers to eat less desirable, cheaper cuts of meat. Kurt Lewin and his students at the University of Iowa were called upon to develop techniques of changing the ingrained attitudes of American housewives. The results of his investigation have interesting implications for the persuasive process.

In a series of experiments, Lewin (1947) compared the effectiveness of lectures and group discussions followed by group decision in changing house-

wives' food-buying practices. Some groups of housewives attended a lecture where the lecturer advocated the desired food-buying behavior, i.e., buying visceral meats. Other groups attended a discussion group where the discussion leader made the same points as the lecturer, but also encouraged the group to participate in the discussion and asked them to reach a consensus that they would act on a decision to buy. The subjects were interviewed several weeks later in order to determine if they had changed their food-buying practices. In all experiments, the results indicated that women in the group discussion treatment had adopted the advocated behavior to a greater extent than those in the lecture treatments. Why was the group discussion more effective? Was it the discussion itself or the required group consensus?

A subsequent experiment provides a partial answer. In an experiment that attempted to induce college students to volunteer as subjects for psychology experiments, Bennet (1955) found that a greater percentage of subjects who were asked to make a decision complied to the suggestion than those not asked to make a decision. The experiment, although not conclusive, strongly suggests that the power of the group over the individual may have been mobilized by the perception of the individual that the remainder of the group favored the proposed action.

A series of other experiments clearly indicate that in cohesive groups, that is, groups whose members are strongly attracted to the group, the group's attitude strongly affects the attitude of the individual. In one experiment, Back (1951) created high and low cohesive groups. In the high cohesive group, the subjects were told about the benefits of being in a group. The low cohesive groups were given the exact opposite impressions.

Before meeting each other, the subjects were asked to write a story about a set of three pictures. They were then brought together to discuss their respective interpretation of the pictures. After discussion, the subjects were asked to write a final version of the stories. The results indicated that subjects in the high cohesive group showed both a greater tendency to attempt to influence each other during the discussion and a greater tendency to change the final version of their stories in the direction of their partners than subjects in the low cohesive groups. The experiment supports the notion of the importance of the group in the persuasive process.

### Communication and Persuasion

Carl Hovland and his associates at Yale University undertook a research program designed to determine what factors affected an audience's acceptance of a persuasive message. The question that they have proposed in their book,

*Communication and Persuasion* (Hovland, Janis, & Kelley, 1953), is: "Who said what to whom?" In other words, what are the effects of: different communicators (Who), different kinds of communications (What), and different kinds of audiences (Whom) on the acceptance of a persuasive message? A review of several of their findings will give us an idea of the results of this massive research effort.

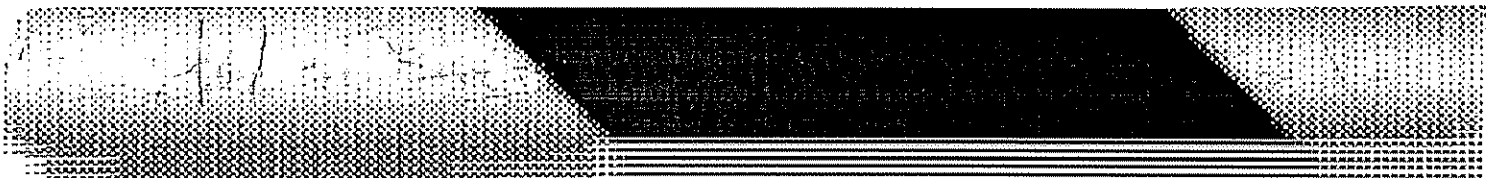
The effectiveness of a communication is commonly presumed to depend on who delivers it. Aspirin commercials on television are bolstered by the support of "80% of the doctors interviewed," and U.S. Government reports are authored by "a group of distinguished scientists." Does the credibility of the communicator actually affect communication acceptance? In an experiment by Hovland and Weiss (1951), subjects were presented with communications attributed to either high or low credibility sources. For example, a communication dealing with the advisability of certain drugs being sold without a doctor's prescription was either attributed to the *New England Journal of Biology and Medicine* (high credibility) or a mass circulation monthly pictorial magazine (low credibility). The subjects' opinions were obtained immediately after reading the articles and again 4 weeks later. The result of the immediate testing indicated that high credibility sources had a substantially greater effect on the audience's opinions than low credibility sources. However, when tested 4 weeks later, the positive effect of the high credibility sources tended to disappear. The low credibility sources, however, tended to begin to have an effect on opinion. This latter effect has been called the "sleeper effect."

In a further experiment, Kelman and Hovland (1953) again presented subjects with either a high or low credibility source communication. This time the experimenters reminded the subjects of the source of the communication just before the delayed attitude measurement. Subjects who were reminded of the source of communication showed the same effects that had appeared immediately following the communication. The authors concluded that the sleeper effect was caused by dissociation of the source from the communication. More simply, the source who had served as a cue for acceptance or rejection of the communication had been forgotten.

The nature of the communication should also be considered. Several years ago, the Surgeon General of the United States released a report warning of the dire effects that cigarette smoking has on health. The report was met with a sudden drop of cigarette sales, which lasted about 2 months. Within a year, cigarette sales had reached an all-time high. It seems that, contrary to common opinion, high fear communications may not be the most efficacious.

Janis and Feshbach (1953) presented subjects with a questionnaire concerning dental hygiene care. One week later, the subjects attended a 15-minute illustrated lecture on the perils of tooth decay that aroused strong, moderate,

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or minimal fear (A different form of the communication was used for each level of fear) The three talks contained the same information on tooth decay and oral hygiene, but differed in the amount of threatening material presented. A week after the communication was presented, the subjects again answered the questionnaire on their dental hygiene practices. The results indicated that the minimal fear appeal was most effective in eliciting verbal conformity to the suggestions presented in the communication.

Leventhal has reported several studies (e.g., Dabbs & Leventhal, 1966) that have suggested the opposite relationship. In a series of experiments, Leventhal has aroused differential levels of fear concerning tetanus, and has suggested in the communication that subjects get tetanus inoculations. The studies have repeatedly indicated that the high fear condition creates the greatest attitude change. In an attempt to eliminate any differences in topic or communication that might have accounted for the discrepancy between his own results and those of Janis and Feshbach, Leventhal (Leventhal & Singer, 1966) replicated the original Janis and Feshbach experiment using the same topic and communications used in the original study. The data regarding acceptance was clear-cut. Acceptance was greater in the high than in the low fear condition.

### **URBAN STRESS**

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Anybody visiting New York City for the first time becomes aware of many aspects of city life that hard core New Yorkers hardly notice. Milgram (1970) has characterized the city with its complex myriad of stimuli as overloading the individual's system. Unable to cope with all the potential inputs in his environment, the person adapts. He "tunes out" unimportant information and is aware of only those stimuli that are relevant to his normal functioning.

It is clear that in the cognitive sense of not being aware, as well as in the physiological sense of not responding, humans can adapt and "tune out" much of their environment. Unfortunately, this adaptation is not always beneficial as it might seem. We can tune out noise, but are we paying in other ways? Some recent research seems to indicate we are.

### **Psychological Effects of Noise**

Noise has long been the cause of hearing impairments as well as a source of irritation for the urban dweller, but today, more than ever, noise is an omnipresent unwanted companion. In fact, a recent report from the United

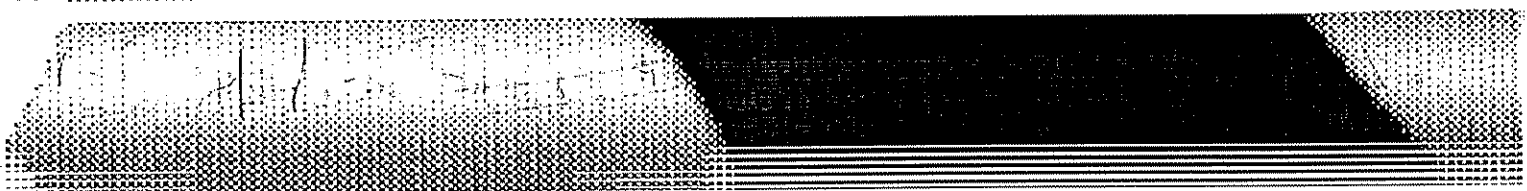
States Environmental Protection Agency (1971) has declared that noise is an insidious form of pollution that may affect at least 80 million Americans. The report stated that "all of the factors clearly support the contention that noise can be a source of psychological distress through annoyance, disturbance of activities such as sleep and speech communications . . . (and that distress) can contribute to a list of symptoms such as nausea, irritability, general anxiety and change in mood." The impact that noise can have on psychological processes is exemplified by a noise survey in London that found a correlation between the noise in certain areas of the city and admissions to psychiatric hospitals there (McKenna & Hunt, 1966).

Glass and Singer (1972) undertook a series of experiments to demonstrate some of the adverse effects of noise. In each experiment, the subjects were tested individually. On entering the laboratory, the subject was seated in a comfortable chair. Sensors were attached to one of his hands so that the experimenter could monitor the subject's physiological responses. After a short period during which the subject relaxed and got accustomed to his surroundings, he was instructed to work on a task that involved solving arithmetic problems. He was also forewarned that, while he was working on the task, he would be hearing bursts of loud noise through a speaker directly over his head and behind him. Half the subjects heard noise that was administered on a random schedule, that is, it was administered in a way that made it impossible for the subject to know when the next burst would start. The other half of the subjects were administered the noise on a fixed schedule, which allowed them to predict when each consecutive noise burst would start.

Unlike previous studies, Glass and Singer were not primarily interested in how the subjects in the two conditions would perform on the arithmetic task that they were working on during the noise, but rather they were interested in the subjects' performance on subsequent tasks worked on after the noise exposure period had ended. One of these subsequent tasks was designed to measure the subject's tolerance for frustration. In this task, he was instructed to solve several puzzles. However, the subject did not know that many of the puzzles were unsolvable. The measure of tolerance for frustration was the amount of time the subject would spend on the unsolvable puzzles. The results indicated that subjects exposed to unpredictable noise spent less time on the unsolvable puzzles, that is, they had less tolerance for frustration, than those exposed to predictable noise or no noise. The unpredictable noise group also performed poorer on other tasks following noise exposure.

In subsequent studies, a small button was attached to the arm of the subject's chair. Half of the subjects were told that they could stop the noise if it became too stressing by merely pressing the button. But they were asked not to press the button unless it was absolutely necessary, since it would termi-

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nate the experiment. The remaining half of the subjects were not told anything about the button. Obviously, the subjects who were told that they could terminate the noise felt that they had some control over the stressing situation (although the button was never actually pushed), whereas subjects who were not told that the noise could be terminated perceived no such control. The results indicated that subjects who were exposed to unpredictable noise and given the perception of control showed appreciable improvement in frustration tolerance and postnoise task performance.

The Glass-Singer research has demonstrated two interesting and important points. (1) Cognitive (mental) factors, such as predictability and perceived control over the noise, to a great extent determine its effects. "Psychological factors, not simply physical parameters of the noise stressor, are the important elements in the production of noise aftereffects [Glass & Singer, 1972, p. 157]" (2) Exposure to high intensity noise may lead to short-term and even long-term effects in both task performance and the ability to deal with frustration.

### Psychological Effects of Crowding

In Chesapeake Bay, about 14 miles from Cambridge, Maryland, lies James Island, approximately half a square mile of uninhabited land. In 1916, four or five deer were released on the island. Allowed to breed freely, the herd grew until, in 1955, there were about 280 or 300, a density of about one deer per acre. The island was called to the attention of John Christian, an ethologist with training in medical pathology. Several years earlier, Christian had proposed that increases and decreases in certain animal populations are controlled by physiological mechanisms that respond to density. According to Christian, as the number of animals in a given area increases, competition and aggressive behavior increases. This style of behavior is the cause of a continually stressing state that builds up until it triggers an endocrine mechanism that operates in the animals to regulate the population. Christian had been looking for an opportunity of this kind to test his theory.

Christian (Christian, Flyger, & Davis, 1960) continued to count heads for several years. Apparently, the population density that had been reached in 1955 was about the maximum that the species would allow. From 1955 to 1957, the population density remained at about one deer per acre. In 1958, however, 60% of the deer died and 109 deer survived. In 1959, the population further decreased to 80 deer. After 1960, the population resumed growth.

It should be noted that Christian was able to rule out food shortage as the cause of the decrease in the population. Food was abundant on the island and the dead animals that were examined showed no signs of malnutrition.

[Several well accepted theories of population control (e.g., Wynn-Edwards, 1968) had been based on the concept of food scarcity.] He was also able to rule out disease and poisoning as possible causes of the die-off.

If the animals did not die of starvation or disease, what was responsible for the sudden death of more than 190 deer in a 2-year period? In an attempt to find out, Christian collected carcasses during the years of the die-off and also shot several deer in the later years when the population had begun to grow again. Autopsies performed on 18 of the deer indicated that adrenal weight of the deer increased through 1958 when the die-off began and started to decrease after 1960 when the population had started to grow again.

The change found in the adrenal glands points to great stress in the animals during the die-off years. The adrenals play a great part in the regulation of growth, reproduction, and the level of the body defenses. The size and weight of these important glands are not fixed, but respond to stress. When an animal is under excessive stress, the adrenals will enlarge. Therefore, the increases in the size of these glands during the die-off years lend significant support to Christian's theory. The animals during those years seemed to be under considerable stress.

Is there similar evidence for humans? Certainly, overpopulation is one of the most serious problems facing the world today. Even if we were able to control population, we would still be stuck with disproportionate amounts of people living in restricted spaces. Overcrowded buses and subways, not to mention living quarters, are a way of life in the city. Yet, despite the fact that scientists in many fields are embracing ecological problems, there are only a few controlled experiments on the effects of crowding on human behavior.

Before delving further into how crowding might effect human behavior, it is important to decide exactly what constitutes crowding. An experiment by Desor (1972) of Cornell University provides us with a clue. Desor presented his subjects with scaled-down rooms and miniature human figures and asked them to place as many people as possible in the room without overcrowding them. The area of the miniature rooms was constant, but architectural features such as partitions, number of doors, and changes in dimensions were different for each room. The results indicated that the perception of being crowded depended on the architectural features of the room, even though the space in all the rooms was the same. For example, more miniature people were placed in partitioned rooms than in nonpartitioned rooms. Desor explains his findings by defining crowding as the reception of "excessive social stimulation" and not merely the lack of space.

These results are consistent with those of many researchers concerned with man's use of space (e.g., Dubos, 1966; E. T. Hall, 1966; Sommer, 1967)

who view crowding largely as a matter of perception. Hall's (1966) description of the Arab who tucks his ego down inside his body, so that even when in close physical contiguity he does not feel crowded, exemplifies the cultural relativity of the concept.

For humans, crowding is relative, a matter of perception. Still, this finding does not give us a clue to how humans react under crowded conditions. Is there a biological mechanism in man similar to the one in animals that reacts unfavorably to overpopulation? And if there is, why is it not operating in countries like India and Pakistan where the crowds of humanity make our cities look like paradise? Kessler (1968) who feels that there may be such a mechanism in humans suggest that it may be overshadowed by learning.

An examination of the few human experiments investigating the effects of crowding on human behavior may give us an answer to our problem. An experimental study by Hunt and Vaizey (1966) found that children were more aggressive and destructive during free-play periods when the playroom was more densely occupied. In a series of studies, Jonathan Freedman (1970) of Columbia University investigated the effects of crowding on task performance and cooperation. Freedman placed both men and women (never in mixed groups) in both small and large rooms for 4 hours. Although he found no appreciable difference in performance on a wide variety of tasks between crowded and uncrowded subjects, he did find that men were more competitive and more aggressive in crowded situations than in uncrowded ones. Women were less affected by room size, but competed somewhat less in crowded rooms.

According to Christian, as the number of animals in a given area increases, competition and aggressive behavior increases. This style of behavior is the cause of a continually stressing state that builds up until it triggers an endocrine mechanism that operates in the animals to regulate the population. Is the competitiveness and aggression reported in the human studies of crowding the first link in this chain? The question is still unanswered.

## SUMMARY

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This chapter has provided a glimpse of how the social psychologist views several contemporary social problems. Several of these problems were analyzed in terms of existing psychological theory. Bandura and Walters' conception of imitation learning was discussed as a possible basis for understanding why viewing television violence would lead to subsequent viewer aggression. Reference group theory and Stouffer's concept of relative deprivation provided a con-

ceptual framework to be used in the understanding of the causes of the riots of the late 1960's. Research and theory concerning the group's influence on an individual's attitudes and behavior, as well as research on factors affecting the efficacy of mass communicative techniques, were the basis of a discussion on the persuasion process.

A second approach, the systematic examination of a specific social problem, was also exemplified. This included correlational studies on the relationship between viewing television violence and subsequent aggressive behavior, as well as studies designed to examine human response to urban stress. Both of the approaches, analysis through existing theory and direct examination of a problem, help to provide a greater understanding of the nature of the problems and the nature of human processes.

### SUGGESTED READINGS

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