

groups and other population segments have the kinds of self-concepts they do, and follows development of the self-concept from childhood into late adolescence.

Rosenberg's primary concern is with self-esteem, which consists of the positive or negative feelings we have toward ourselves. The self-concept is a motivating force in behavior through the vital efforts to maintain self-esteem and self-consistency. Rosenberg's data are interviews with 1917 elementary, junior high, and senior high school students and their parents in Baltimore, questionnaires from 5024 high school juniors and seniors in New York State, and interviews with 2300 adults in greater Chicago.

Established wisdom has it that people tend to accept as their own the negative or positive attitudes that other people have toward them. If one is a member of a disparaged minority group, one tends to accept the low opinion held of the minority group and translate it into low personal self-esteem. In some instances resentment turns the low self-esteem into a pathological pattern of self-hatred. Low self-esteem and self-hatred interfere with learning and adjustment in school and success outside of school. But Rosenberg finds, as others have recently discovered, that black children do not necessarily have lower self-esteem than whites, that lower-class children do not differ from middle-class children in self-esteem, and that children from minority religious groups do not have less favorable views of themselves than Protestant children. Besides verifying what others have begun to find, Rosenberg's important contribution is to show how the misapplication of fundamentally sound theoretical principles led to these faulty assumptions.

Rosenberg lays down four principles governing formation of the self-concept, three of which he then uses with good effect to clarify the anomaly of black and lower-class children with high self-esteem. First, accepted wisdom is correct that we do tend to accept others' evaluations as our own (the reflected appraisals principle). But the child in a homogeneous environment does not experience the attitudes of the larger society but only the evaluations of others like himself or herself. Rosenberg shows that older adolescents from lower-class backgrounds exhibit lowered self-esteem as they become more aware of the larger society. Also, blacks and members of religious minorities have lower self-esteem if they live in mixed neighborhoods where they receive conflicting signals.

Self-esteem is also formed by comparing oneself with others (social comparisons principle). Again, young children make comparisons only in the immediate environment. Other investigators have found that black children bused to white neighborhood schools suffer a loss in self-esteem, but Rosenberg finds similarly that blacks in mixed neighborhoods have lessened self-esteem. Similarly, blacks from single-parent families have lessened self-esteem in mixed neighborhoods where such families are relatively uncommon, but not in all-black neighborhoods where they are quite common.

The self-hatred thesis is muted when Rosenberg finds that most children do not reject the groups with which they are identified. But, even when they do, group rejection is not translated into self-hatred. Rosenberg's principle of psychological centrality explains why this translation does not occur. The self-concept is organized hierarchically, with some identities being quite important to self-esteem and others quite unimportant. As Rosenberg has shown earlier, identities that consistently carry unfavorable evaluations tend to be shifted to positions of low importance in the hierarchy of the self-concept. Thus the child who disparages his or her race, religion, or class disengages the troublesome identity and finds self-esteem in other aspects of the self-concept.

Rosenberg's fourth principle, self-attribution, is essentially reality testing. The level of self-esteem is a sensitive indicator of objective experience with success and failure, except as modified by the other three principles.

There is not space here to show how Rosenberg clarifies the nature and causes of disturbance in the self-concept during adolescence. But the findings shed new light on the crisis of adolescence with its crucial significance for educational policy.

Rosenberg's analyses are ingenious yet simple, and they are persuasive. Nevertheless, there is a school of thought among behavioral scientists that is skeptical of the sharp analytic distinctions he makes and the instruments he has devised. Rosenberg's techniques bring out more order than the skeptics find in human behavior. The skeptics fear that the organization of questions may have provided an artificial order into which the subjects of investigation fitted their answers.

Not knowing whether people have been asked questions that permit them to answer in ways that are most meaningful

to them is akin to the problem of not knowing for certain what difference self-esteem makes. Vast sums of public and private money were invested in programs based on the assumption that minority children have low self-esteem and that raising their self-esteem will enhance their school achievement. Rosenberg has effectively debunked the first part of this thesis and isolated many correlates of high and low self-esteem. But what difference it makes whether self-esteem is high or low still remains to be demonstrated empirically.

RALPH H. TURNER

Department of Sociology, University of California, Los Angeles 90024

Unintended Consequences

The Hidden Costs of Reward. New Perspectives on the Psychology of Human Motivation. MARK R. LEPPER and DAVID GREENE, Eds. Erlbaum, Hillsdale, N.J., 1978 (distributor, Halsted [Wiley], New York). xiv, 262 pp. \$16.50.

Some investigators believe that attitudes (dispositions toward things, events, ideas) can be formed or changed by the contiguous pairing of attitude objects with rewards; many investigators believe that learning can be enhanced by rewards, indirectly if not directly; and everybody believes that the promise of rewards can induce people to perform acts they otherwise would avoid. For the followers of B. F. Skinner, rewards are a major means by which to reinforce behaviors, that is, to increase the probability that target behaviors will occur; widespread use of behavior modification in therapy has followed. These beliefs and practices notwithstanding, the present collection of writings tells us that rewards can impede learning and performance and adversely affect attitudes, self-esteem, and feelings of control and efficacy.

The importance of the univocal message "the hidden costs of reward" can hardly be overstated, for the message bears on a variety of under-researched and still poorly understood phenomena of human behavior and it has widespread implications for such concerns as child rearing, education, and worker satisfaction. The central chapters in this volume, each by a separate investigator or pair of investigators, present theoretical orientations and summaries of supporting research. The orientations, though overlapping to some degree, vary from those

concerned with the understanding of human learning and performance to those concerned with the effects of rewards on the self-concept. Intrinsic motivation, the tendency to perform an activity for its own sake rather than for some (extrinsic) reward, is the conceptual variable of common concern for most of these investigators. And, though they may disagree about the reasons for the effects, they are unanimous in concluding that rewards can reduce intrinsic motivation.

What is particularly informative is that each of the research programs has had some success in stipulating the conditions under which rewards have detrimental effects. For example, both McCullers and McGraw report that rewards result in poor performance only when the task is initially intrinsically interesting and at the same time requires some sort of inventive mental processing. From Deci and Porac, Kruglanski, and Lepper and Greene we learn that rewards reduce intrinsic motivation, but only when the rewards are clearly contingent on participating in the activity and only when they do not convey information about competence at the activity.

Also of value are the introductory historical chapters, by McCullers and Kruglanski, which give the reader some appreciation of how the present investigators got involved in this work and why the work is theoretically important. In complementary fashion, the final chapters describe a variety of (sometimes speculative) implications and applications. Curiously, the very last chapter, by Lepper and Greene, goes to great lengths to explain that there may be little or no conflict between the school of thought presented in this volume and the school followed by the behavior modifiers. I find this an unfortunate way to conclude the book, and it leaves one with the feeling of having just heard a "shaggy dog" story. It is unfortunate because it neglects to mention that there is in fact an important conflict between the Skinnerian theory, with its emphasis on rewards as shapers of behavior, and one of the antecedents of the present work, Festinger's theory of cognitive dissonance, which says that, as long as overt behavioral compliance is obtained, the less the reward the greater the development of intrinsic motivation. It is also unfortunate because it detracts from the substantial contribution that the book makes to the study of intrinsic motivation.

JACK BREHM

*Department of Psychology,
University of Kansas, Lawrence 66045*

Inheritance and Environment

The Psychology of Individual and Group Differences. LEE WILLERMAN. Freeman, San Francisco, 1979. xii, 532 pp., illus. \$15. A Series of Books in Psychology.

Twenty years ago differential psychology occupied a well-established niche in the overall discipline of psychology, but the social upheavals of the next decade nearly obliterated it from view, especially as it related to intelligence. The possibility that inherent biological factors might contribute to individual differences was actively disputed or else simply dismissed.

Willerman's book marks a welcome return to a more balanced and integrative view. It deals with individual differences in a large number of behavior variables such as intelligence, school achievement, personality, and psychopathology, and it does so from a perspective that openly acknowledges the joint contributions of inheritance and environment. To quote from the preface, "One of my biases is to emphasize psychological traits that have some promise of being linked to biological phenomena. Such a view explicitly acknowledges the value of an interdisciplinary approach. . . . This book has a distinctly behavior genetic bias" (pp. 18-19).

Reflective of this interest, the book opens with a pair of chapters on statistics and genetics, to set the stage for the later analysis of genetic and environmental contributions to behavior. The chapters furnish a clear perspective on the origins and measurement of individual differences, especially with respect to estimating the strength of relationship among various kinship combinations. The material is necessarily complex, and, since the book is intended as a textbook, assistance from teachers will be an aid to grasping these main concepts.

The largest portion of the book is composed of chapters on individual differences in intelligence and educational achievement, including such ancillary topics as mental retardation and the unusually gifted. Willerman examines the main theories relating to intelligence, both historical and current, and then surveys the burgeoning data that speak to the proportional contributions of heritage and environment. Among other valuable features of this section is the resur-rection of the early adoption studies by Burks and Leahy, which remain landmarks for thoroughness and care.

There is also an extensive review of the many environmental variables ex-

pected to affect intelligence, including several enrichment programs. Willerman concludes that there is a substantial heritable component to IQ, and those cases showing the greatest receptiveness to environmental impact are instances of either extreme deprivation now redressed or participation in an enrichment program involving a major reorganization of the child's daily experience.

The chapter on educational achievement gives an informative overview of this subject, dealing with the distinction between intelligence and achievement, the various modes of instruction, the effects of busing and integration, the contribution of school facilities and teacher quality in comparison with family background, and the role of personality and motivational variables. The consensus seems to be that certain basic skills related to reading, writing, and arithmetic can be facilitated in the early grades by innovative programs and thus provide a better foundation for learning. Later academic performance, which depends more heavily on adequate conceptual ability, may not be as susceptible to educational innovations.

Subsequent chapters deal with individual differences in personality and psychopathology. Willerman gives full treatment to the theories of personality and the methods of measurement, and for psychopathology he provides a broad and intensive review of the syndromes themselves and the potential contribution of genetic and environmental factors. Predictably, studies involving twins, family pedigrees, and adopted children receive a special emphasis for assaying a genetic role in personality and psychopathology. Willerman makes it abundantly clear, however, that environmental factors play a powerful role in shaping personality or predisposing the individual toward psychopathology.

The final three chapters deal with overall group differences—by age, sex, and race, of which the last is clearly the most sensitive topic in the book. Willerman gives a thoughtful and guarded interpretation of ethnic differences in intelligence and academic achievement, touching not only on the preponderant black-white comparisons but also on the less frequent studies of Orientals, Indians, Jews, and Mexican-Americans. The differences are well established but the reasons much less so, and Willerman considers the possibility that both environmental and genetic factors are implicated. The prospect of biochemical therapy he holds forth, however, has much less to recommend it than a restructuring