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REVIEW OF RESEARCH IN EDUCATION 1974; 2; 108
DOI: 10.3102/0091732X002001108

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Moral Development

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Several meanings of the term “moral” can be distinguished in ordinary language (Ossowska, 1970). Historically, morality has been concerned with human relationships having implications for the welfare of others. Many current conceptions, however, encompass highly personal behavior, including cleanliness, sexual habits, and proficiency and persistence in achievement. Moreover, many identify morality with religious precepts.

In this chapter, the domain of moral development is narrowly conceived. Philosophical and religious doctrines are not considered, nor is research on constructs such as aggression or achievement. The review deals with empirical findings in three areas: cognition, emotion, and behavior. The first includes values—general beliefs concerning rightness and wrongness of actions—and judgment—the thought structures underlying moral concepts. The second is concerned with guilt. The third is divided into prosocial behavior (sharing, helping, donating, and rescuing) and resistance to temptation (resistance to lying, cheating, stealing, and disobedience of prohibitions).

VALUES

Research on the cognitive component of morality has proceeded in two

LAWRENCE KOHLBERG, Harvard University, was the editorial consultant for this chapter.

*This review arose from Adkins' interest in the measurement of moral development and from her preliminary studies of such measurements. She gave overall direction to the project, and Payne did the major share of organizing the literature. O'Malley drafted the section on moral judgment, and Payne drafted the other four sections. All the authors participated in preparation of the final manuscript. We are grateful to Dr. Lawrence Kohlberg and to Dr. Ronald Johnson, who reviewed the manuscript in one of its late versions.

independent directions: a largely unsystematic body of literature, which has dealt with general values and beliefs, and a more integrated body of literature related to the theoretical writings of Piaget (1965) and Kohlberg (1969) on higher values and judgmental processes. Although general values have continued to receive some theoretical attention as crucial determinants of moral behavior, research on the topic has dealt largely with issues such as sex differences among college students and other adults (Eisenman, 1970; Middleton & Putney, 1962; Peretti, 1969; Wright, 1971; Wright & Cox, 1967) and age differences on questionnaire surveys (Gooch & Pringle, 1966; Gump & Kounin, 1961; Pressey & Kuhlen, 1957). In comparison with studies of judgment, research on general values and beliefs has suffered from the lack of an articulated theoretical framework and has provided little information regarding their acquisition and development. Only the handful of studies that has dealt with relationships between general values and overt moral behavior will be considered here.

One of the first investigations to deal with this issue was the large-scale Character Education Inquiry of Hartshorne and May (Hartshorne & May, 1928; Hartshorne, May, & Maller, 1929; Hartshorne, May, & Shuttleworth, 1930), which included several tests of moral knowledge along with measures of moral behavior. No consistent differences were found between those who violated moral prohibitions and those who did not on either individual items or the complete tests of knowledge. Correlations between overt measures and tests of knowledge generally did not exceed .20. Some years later, Brogden (1940) found that paper-and-pencil tests and story completions measuring "acceptance of the moral code" marked a factor separate from that defined by overt behavioral tests for sixth-grade boys. Havighurst and Taba (1949) and Ligon (1956) also failed to find significant correlations between moral beliefs and behavior in their studies of "character" and personality. Mills (1958) found that sixth-grade cheaters and noncheaters did not differ in attitudes toward cheating. Finally, Bryan and Walbek (1970b) reported that third- to fifth-grade children's pronouncements regarding charity were unrelated to overt acts of donation.

Various explanations have been proposed to account for the lack of relationship between verbally expressed attitudes and overt behavior (Aronfreed, 1968; Burton, 1963; Kohlberg, 1969; Pittel & Mendelsohn, 1966). These explanations include the following:

1. Measures of values assess generalized and often highly abstract dispositions rather than attitudes toward realistic, specific situations.
2. Many procedures for assessment of values may have been inadequately standardized and validated.
3. Many individuals respond to paper-and-pencil items in terms of social desirability.

4. The attempt to make a good appearance by cheating also may lead to lying about values.
5. Immediate affective experience exerts at least as much influence on behavior as do cognitive beliefs.
6. Situational measures of overt behavior do not have the variety and complexity that can be presented in assessment of values.
7. Situational tests are unreliable.
8. Components of behavior and cognition often have different and unrelated antecedents.

All of these explanations appear reasonable to some degree, and until these problems are dealt with effectively the importance of general values for overt behaviors remains seriously in doubt.

MORAL JUDGMENT

Moral judgment is concerned with the child's evolving conceptions of rules, of justice, and of criteria for decisions that affect property and persons. The child's developing understanding of these facets of morality and experiences that lead to increasingly mature forms of judgment have been of principal interest in research. Correspondence between moral judgment and behavior of children has received only secondary attention.

Attempts to understand moral judgment have generally been made by categorizing responses to semistructured interviews rather than by observing behavior in moral situations and drawing inferences regarding intentions. The interviews usually pose moral dilemmas to the child, which he must resolve by verbalizing rules governing behavior, criteria for judgments, or the distribution of justice following malfeasance.

According to cognitive-developmental theories (Kohlberg, 1969; Piaget, 1965), which are the principal models of moral judgment, mature moral judgment is attained by advancement through stages that are functions of the child's underlying cognitive structures. The stages are conceived to be *structured wholes*, with logically consistent behaviors that appear to represent a common level. They are also thought to *differ qualitatively* rather than quantitatively, that is, to be distinctly differentiated from one another by the form rather than the incidence of behavior represented. A third characteristic is that advancement from one stage to the next follows an *invariant sequence*, such that progression occurs universally in the same order. Fourth, a *hierarchical integration* occurs as new stages emerge, in that behaviors which will become integrated wholes are blended with previous behaviors. Finally, progression from one stage to the next is an *active process* in which a child engages the environment in interactions that eventually modify cognitive structures underlying behavior.

Piaget's Theory of Moral Judgment

The comprehensive formulation of child development advanced by Piaget was early extended to moral judgment and remains one of two prominent theories. *The Moral Judgment of the Child* (Piaget, 1965) included many concepts from his earlier works, particularly the research methodology and the approach to interpreting behavior, in addition to central ideas such as egocentrism.

The children studied by Piaget ranged in age from 4 through 13. Standard questions evoked responses from which the child's level of moral sophistication could be inferred. Typically, the child was requested to explain rules in simple games, criteria for moral decisions, and principles of justice that applied to a variety of stories involving degrees of moral behavior. From the children's ideas of origins, legitimacy, and mutability of rules in a simple game of marbles, Piaget generalized to their understanding of rules in general; and from their descriptions of the standards and judgments of moral behavior in simple stories dealing with transgressions, he developed a theory of stages and the manner in which they emerge.

He concluded that the moral judgments of children represent one of two stages, moral realism or autonomous morality. Moral realism is characterized by belief that rules originate in omniscient authority and are therefore immutable. The earliest adherence to rules, however, is a product of sensorimotor performance, in which the cyclic and ritualistic repetition of an act with minor variations is an end in itself. With the advent of symbol formation and adult constraint regarding rules for sanctioned behavior, the child's sensorimotor rituals yield to variations that conform to heteronomous prescriptions for action. The egocentric vantage point of the child of this age permits no differentiation between internal standards and adult constraint, leading to the position that alternative modes of action are unavailable and, if exercised by others, unacceptable. The lack of perspective characteristic of egocentrism limits the child's capability to discern that his own actions in some cases fail to conform to the standard to which he subscribes, albeit he avows that the rules are immutable.

A corollary of the child's belief that behavior is heteronomous is the notion of immanent justice, that the consequences of transgressions are inevitable and are willed by an omnipotent authority. His judgment of transgressions, consistent with the idea that rules are unilateral and obligatory, is severe and tends to be based objectively on the extent to which acts produce adverse consequences, deviate from the rules, or elicit punishment. Consequences for transgressions are based on a literal interpretation of negative sanctions involving expiation and retribution.

Autonomous morality, the higher level, is characterized by a perception

of rules as products of social interactions, generally with peers but conceivably also with adults, in which reciprocity and mutual agreement are paramount. Authority for rules arises from social consent, and the rules may be altered by consensus. The concept of justice is expanded to include intentions of the individual who commits an unacceptable act, benevolent intent being adequate justification for vindication, even with severe transgressions. Punishment is conceived no longer as impersonal and expiatory but rather as reciprocal and restitutive.

The determinants of advancement from one stage to the next are general cognitive development and the child's sustained interactions with peers or adults in social situations requiring mutual decisions. Development in cognition is in part the foundation for progression in the moral area, in that facets of cognition, such as egocentrism and realism, have a critical limiting effect on moral judgment. Interactions with peers are likely to be more effective in promoting growth than those with adults, because role relationships with adults tend to be defined in terms of unilateral respect rather than reciprocity.

Piaget's notions on development have sparked the interest of researchers who prefer more objective evidence for characteristics of stages and conditions of development than may be obtained from interpretation of children's responses to semistructured questions. Investigators have generally isolated stage attributes rather than studying them as a complex and have focused on variables related to development, including training, as well as on whether or not they unfold in predicted order (Hoffman, 1970).

An impressive array of studies has been mustered by Hoffman in which the age-related order of the following attributes was for the most part consistent: (1) from absolutism to relativism of moral perspective, (2) from immanent justice to a reality-based view of punishment, (3) from judgment based on consequences to judgment based on intentions, (4) from expiatory to retributive justice, and (5) from obedience under adult authority to acknowledgment of peer expectations. Research purporting to disprove that age changes are saltatory rather than gradual will not be considered here, since it is based on a misinterpretation of the theory (Piaget, 1965, pp. 27, 85, 133). Evidence related to the idea that Piaget's stages are tied to specific ages will not be reviewed for the same reason.

Consistency in the sequence with which the stage attributes unfold is predicted independently of the socioeconomic stratum from which a child originates. The studies in which age was found consistently to relate to the predicted sequence of attributes were performed on children from a variety of different socioeconomic levels (Hoffman, 1970), although Piaget's original works were conducted largely with children "from the poorer parts of Geneva" (1965, p. 46).

Stage attributes also are predicted to occur in sequence, irrespective of cultural variables. Cross-cultural data are ambiguous (Hoffman, 1970), since a decrease in immanent justice with age was not found among urban West Indian school children (Jahoda, 1958) and Hopi Indians (Dennis, 1943), and an increase in immanent justice has been reported among 4 of 10 American Indian groups (Havighurst & Neugarten, 1955). The latter investigation also reported a decrease with age in the view of rules as immutable in two of seven Indian tribes that attended schools, an increase in three tribes, and no change in the remainder. Piaget's stages appear to be subject to the differential conditions of social interaction and belief within various cultural milieux.

The two principal conditions claimed by Piaget to contribute to moral advancement are reciprocal social interaction and general cognitive development, by which he probably means development of cognitive structures rather than IQ or MA. Most studies of cognitive development in relation to moral development, which nevertheless have used IQ, have supported the predicted relationship (Hoffman, 1970). Reciprocal social interaction is described by Piaget as involving peer interactions and egalitarian child-rearing practices, yet only the latter have received extensive attention. Confirmation has been reported for the predicted influence of child-rearing practices on moral development with a measure of parental control based on information obtained from children (MacRae, 1954) but not for attitudes of parents (Johnson, 1962).

The validity of Piaget's claim that interactions producing mutual respect are in part responsible for stage-related progressions depends upon whether or not alternative experiences influence the level of moral judgment. Observational learning, if it affects moral judgments, may shed light on this matter. Two highly similar studies with children aged 5 to 11 (Bandura & MacDonald, 1963) and 5 to 12 (Cowan, Langer, Heavenrich, & Nathanson, 1969) have been conducted in which exposure to moral judgments that were either more or less mature than those typically expressed by children resulted in modeling. Imitation persisted in the replication for two weeks and, in a third study with adolescents, for three months (Le Furgy & Woloshin, 1969) when the subjects initially expressed a strong commitment to the position. Hence variables additional to or instead of intellectual development and mutuality may influence level of moral judgment. Hoffman (1970) notes methodological difficulties with these studies that obfuscate their interpretation, so that the identity of variables that influence moral judgment remains unclear.

Kohlberg's Theory of Moral Judgment

The second major theoretical position on moral judgment is that of

Kohlberg, who since 1958 has evolved a refined extension of the cognitive-developmental view. He has proposed six developmental stages of moral development, defined in terms of 30 attributes.

The scheme was based on interviews with boys aged 10 to 16 years in which a choice in 10 hypothetical moral dilemmas was required between conformity to expectations, values, or laws and the welfare and human rights of others. A statement of the rationale for the choice, obtained with probe questions, was categorized as representing one of six stages on each of the 30 attributes. A score for each stage was obtained by determining the percentage of the total number of statements assigned to that stage across attributes and dilemmas. A single subject's responses typically fell at stages no further than one removed from his dominant stage, which usually contained 50 percent of all coded responses.

Kohlberg has elaborated his work on the cognitive-developmental approach to moral judgment (1963, 1968a, 1968b, 1969, 1971a, 1971b). His test has been administered in Malaysia, Taiwan, Mexico, Turkey, and the United States. The theoretical rationale has been extended, while experimental work has focused on explorations of the consistency of stages with stage theory.

Kohlberg's six stages are differentiated into three levels, with two stages per level, as indicated in Table 1. The 30 attributes, incorporating some suggested by Piaget but with important additions are arranged in three broad categories (Kohlberg, 1971a):

1. Judgments of obligation and value pertaining to attributes such as duty and obligation, punishment and reward, or justification and explanation.
2. Elements of obligation and value pertaining to attributes such as social welfare, equality, or reciprocity and contract.
3. Issues or institutions pertaining to attributes such as social norms, personal conscience, life, or property.

That judgments at the higher stages represent advanced moral sophistication is claimed on the basis of their hierarchic integration, explanatory power, and consistency with criteria for developmentally advanced structures. The higher stages are viewed as involving a higher order logical structure that incorporates a lower order logical structure and is characterized by greater "cognitive difficulty," since the ability to understand stages other than one's own extends downward to any stage but upward no more than one (Rest, Turiel, & Kohlberg, 1969). Related to hierarchic integration of stages is the notion that they represent structured wholes, which is supported by evidence that correlations between adjacent stages are higher than those between remote ones (Kohlberg, 1968b). Increased explanatory power for resolving complex moral conflicts is the second

TABLE 1
Definition of Morai Stages

Levels	Stages
<p>I. Preconventional level. Cultural labels of right and wrong are responded to but are interpreted in terms of either physical or hedonistic consequences of action.</p>	<p>1. Punishment and obedience orientation. Avoidance of punishment and unquestioning deference to power determine action and are valued implicitly rather than in terms of their support of an underlying moral order.</p> <p>2. Instrumental relativist orientation. Action is determined by the instrumental satisfaction of one's own needs and occasionally of the needs of others. Reciprocity may be present but is more a matter of <i>quid pro quo</i> exchanges than of gratitude, loyalty, or justice.</p>
<p>II. Conventional level. Maintaining the expectations of the individual's family, group, or nation is perceived as intrinsically valuable. The attitude is not only one of conformity to expectations in social order, but of loyalty to it, largely maintaining it, justifying it, and identifying with the persons involved in it.</p>	<p>3. Interpersonal concordance (good-boy) orientation. Action is determined by what pleases or helps others, with much conformity to stereotypical images of majority behavior. Behavior is judged by intentions for the first time.</p> <p>4. Authority and social-order-maintaining orientation. Action governed by duty, respect for authority, fixed rules, and concern for maintaining the social order.</p>
<p>III. Postconventional, autonomous, or principled level. There is a clear effort to define moral values and principles that have validity apart from the authority of the groups or persons holding these principles and apart from the individual's own identification with these groups.</p>	<p>5. Social-contract legalistic orientation. Action is defined in terms of general individual rights and standards that have been critically examined and agreed upon by the whole society. There is a clear awareness of the relativism of values and opinions and a corresponding emphasis upon procedural rules for reaching consensus. Emphasis is upon the possibility of changing law in terms of rational considerations or social utility rather than maintaining it rigidly, as in the previous stage. Outside the legal realm, free agreement and contract are the binding elements of obligation.</p> <p>6. Universal ethical principle orientation. Action is defined by a decision of conscience in accord with self-chosen ethical principles that appeal to logical comprehensiveness, universality, and consistency. These are universal principles of justice, of the reciprocity and equality of human rights, and of respect for the dignity of human beings as individual persons.</p>

Source: Adapted from L. Kohlberg. From is to ought: How to commit the naturalistic fallacy and get away with it in the study of moral development. In T. Mischel (Ed.), *Cognitive development and epistemology*. New York: Academic Press, 1971.

justification for assigning reasoning to an advanced stage. The notion of consistency with developmental trends is tied to the idea that mature structures in cognitive-developmental theory are characterized by certain formal criteria, namely differentiation and integration, which appear to be represented in mature moral judgment. Kohlberg thereby argues that advanced stages are justifiable independently of cognitive complexity or congeniality to his predilections.

The incentive for advancement through stages is based on interactions of the child's particular conceptual scheme with features of his social environment. It may facilitate moral development through role-taking opportunities, those peculiar to any culture determining in part the level to which he may advance. The roles that entail higher level moral solutions are appealing to the child in that they tend to resolve interpersonal conflicts to a greater extent than lower level moral solutions. His capacity to assume more sophisticated roles, however, is limited by the extent to which he can understand them, and children tend not to comprehend advanced solutions that differ from their habitual approach by more than one stage (Rest et al., 1969).

The stages are thought by Kohlberg to be universal by virtue of the nature of human social arrangements and conditions of sociomoral development. Data on subjects from diverse backgrounds tend to support the claim for universality of moral judgments in that the sequence in which stages appear is fairly constant, and the attributes discussed are used across cultures in the solutions to moral dilemmas (Kohlberg, 1968a). A positive relationship was found between age and level of stages. The more advanced stages do not appear in certain cultures, however, purportedly because limitations in the range of moral conflict situations may prevent opportunities for assuming new roles.

Inconsistency between moral judgment and moral action is resolved in Kohlberg's system by construing such action as supposedly representative for individuals at lower stages of moral development. Individuals at higher stages base judgments on principles that have logical consistency and power to resolve diverse moral conflicts and are more inclined to follow thought with action. Experimental studies of cheating confirming this prediction have been reported by R. L. Krebs (1967) for sixth-grade children and by Schwartz, Feldman, Brown, and Heingartner (1969) with college undergraduates. Kohlberg (1971a) has suggested that the resistance of individuals at higher stages to cheating in these studies was based not on greater endorsement of honesty than expressed by those who cheated but on the cognitive independence of their definition of right and wrong. A conflicting report in which maturity of moral judgment did not relate to resistance to temptation (Nelson, Grinder, & Challas, 1968), however, leaves the issue of consistency unresolved.

The transition from facts of development to a prescription for moral order is inherent in the stages of moral development, according to Kohlberg. Most significant is not the content of moral judgment or behavior recommended in a moral dilemma but the form of action as determined by characteristics of judgments at higher stages. A dilemma pitting obedience to rules against the welfare of others may be resolved by favoring either, and the extent to which the judgment is logically consistent, hierarchically integrated, and explanatory determines its acceptability.

The prescriptiveness of the system is conceived as a foundation for moral education in which the goal is stimulation of development toward the natural orientation of the child rather than manipulation of behavior toward adult convenience by unilateral or group incentive, which limits opportunities of the child to advance beyond the conventional level. Moral education, Kohlberg argues, should focus on presenting realistic and immediately important hypothetical dilemmas to the child that generate active judgments in which value conflicts must be resolved. The dilemmas are matched to the stage of the child's predominant responses, because children fail to understand solutions remote from their present stage. They prefer solutions at the next higher stage, which resolve the dilemma more satisfactorily. Thus, the teacher's role should be to support and request clarification in group discussions of solutions that match the predominant stage for the group, ignoring judgments at lower stages but, when the children indicate comprehension, supporting those that exceed the predominant responses by one stage. This tactic was used by Blatt and Kohlberg (1971) in a four-month program of once-weekly moral discussions with a class of 12 children aged 11 to 12. Fifty percent of the children moved up one stage from pre- to posttest, 10 percent moved up two stages, and the remainder stayed the same. Only 10 percent of a control group advanced one stage in this period, and the others remained stationary. The results were maintained in a delayed posttest administered after one year. Similar, but smaller, changes occurred in a replication involving 11- and 15-year-old blacks and whites.

Even though Kohlberg's writings are extremely compelling, certain areas need further research prior to full acceptance of the theory. First, the scoring procedures require independent verification and the methods of estimating reliability need updating, as in an approach recommended by Cronbach, Gleser, Nanda, and Rajaratnam (1972). Although Kohlberg has offered workshops on his scoring procedures, a cross-validation study does not seem to have emerged. Second, verification of a universal sequence of moral stages through which all *individuals* progress is difficult to justify by data showing *group* progression. Recognizably, however, errors of measurement that may distort results for the individual case are conveniently dissolved in group data.

GUILT

Although several specific emotions—fear, shame, and guilt—have been suggested as crucial to morality, empirical research has concentrated on guilt. Rawlings (1970) defines guilt as “. . . a particular type of discomfort either (a) aroused by the anticipation of violating an internal standard of ‘right’ or ‘wrong’ conduct or (b) following an actual transgression [p. 164].” The major assumption regarding the self-critical reaction of guilt is that it functions as a primary source of motivation for moral behavior. The literature contains repeated assertions regarding the tendency of guilt to lead to expiation, self-punishment, and confession (Freedman, 1970). It also has been suggested that guilt produced as a consequence of harming another person may motivate an individual to do something good for the harmed person or some other person (Rawlings, 1970).

Guilt has been assessed by structured self-report or, more often, by projective devices. In the latter case, subjects usually have been asked to complete stories in which the central figure has committed a transgression under conditions minimizing likelihood of detection. Occasionally, projective doll-play situations have been used. The subject presumably identifies with the story hero and reveals his own internal reactions in his responses. All such projective measures present difficulties. Subjects may not identify with the central figure and reveal their own feelings of guilt. To the extent that some degree of verbal fluency is involved, responses may depend partly upon verbal fluency and intelligence. Intercoder reliability may be inadequate, and subjects’ responses over time may be inconsistent. Because these issues seldom have been faced in projective measures of guilt, the adequacy with which guilt has been assessed is often in doubt.

In spite of the theoretical importance of guilt, empirical research has not dealt extensively with its development. Consequently, only the relationship of guilt to child-rearing practices and to overt acts of moral behavior will be considered here.

Child-Rearing Practices

Child-rearing practices may be considered in terms of four variables: power assertion, love withdrawal, induction, and parental affection. The first three concern parental disciplinary practices. Power assertion is characterized by physical punishment, material deprivation, and application of force, or the threat of any of these. In love withdrawal, the parent gives direct, but nonphysical, expression of his disapproval; he ignores the child, turns away, refuses to speak, says he dislikes the child, or isolates him. In induction, painful consequences of the child’s act for the parent or others are pointed out, and explanations or reasons for requiring the child to change his behavior are given. Parental affection concerns simply the extent to which the parent shows love and affection toward the child.

Four studies (Allinsmith, 1960; Allinsmith & Greening, 1955; Aronfreed, 1961; Hoffman & Saltzstein, 1967) have dealt with relationships between parental practices reported by children or parents and guilt. Hoffman (1970) recently has reclassified the child-rearing data from several of these studies in terms of the practices described above. Only two investigations were relevant to fathers' practices (Allinsmith & Greening, 1955; Hoffman & Saltzstein, 1967), and neither obtained significant relationships. Findings from the four studies with respect to mothers' practices were by no means consistent. Two (Allinsmith & Greening, 1955; Hoffman & Saltzstein, 1967) found a negative relationship between power assertion and guilt—one for 20-year-old men but not women (Allinsmith & Greening), the other for 13-year-old girls but not boys (Hoffman & Saltzstein). In the other two studies, no significant relationship was obtained for 13-year-old boys (Allinsmith, 1960) or 11-year-old boys and girls (Aronfreed, 1961). Induction was positively related to guilt for 13-year-old boys and girls in one study (Hoffman & Saltzstein, 1967), but unrelated to guilt in another study of boys of the same age (Allinsmith, 1960). A positive relationship of induction to guilt was obtained for 20-year-old men, while no relationship was obtained for women (Allinsmith & Greening, 1955) or for 11-year-old boys and girls (Aronfreed, 1961). In the single study that dealt with affection (Hoffman & Saltzstein, 1967), a positive relationship with guilt was found for 10-year-old boys but not girls, and a significant relationship between love withdrawal and guilt was not found.

Several explanations for lack of significant findings may be suggested. First, as indicated below, guilt may normally subsume several distinct processes instead of consisting of a unidimensional construct. (Also see Kohlberg, 1964.) Second, guilt may have been assessed inadequately by projective methods. Third, measurement of parental child-rearing techniques by retrospection may have resulted in distorted information. Finally, *interaction* of parental practices may be a more crucial determinant of guilt than any one practice alone (Aronfreed, 1968). A cautious conclusion appears advisable regarding the role of these parental practices in development of guilt.

Generality of Guilt

An assumption underlying much research on morality is that conscience is a unitary dimension. This implies that guilt itself should be unitary—persons high in guilt in one area should be high in other areas—and that guilt should be interchangeable with other indices of morality; for instance, it should be correlated highly with resistance to temptation.

Several studies have dealt with the unidimensionality of guilt as measured by projective techniques. Allinsmith and Greening (1955) asked young adults to respond to projective story-completion items dealing with violations of prohibitions in different situations and reported that measures

of intense guilt in different areas were unrelated. Allinsmith (1960) also found little consistency in projected guilt over different kinds of transgressions among junior high students. Johnson and Kalafat (1969), assessing guilt among adolescent subjects, found no relationships among measures based on affective-projective stories, projective TAT-like pictures, and sociometric nominations.

Objective methods of measuring guilt have presented a similar picture. Factor analysis of college students' ratings of guilt on objective items revealed no unitary dimension (Black & London, 1965). Sixth- and seventh-grade Caucasian and American Samoan children's responses to three multiple-choice items connected with each of five transgression stories correlated fairly highly but not enough to justify a summary index (Grinder & McMichael, 1963).

The relationship between measures of guilt and overt resistance to temptation has been explored in five studies. Two reported positive relationships: MacKinnon (1938) found a low positive correlation for self-reported guilt over transgression for graduate students, while Grinder (1962) found a positive relationship for sixth-graders when guilt was measured by mothers' reports. Burton, Maccoby, and Allinsmith (1961), however, reported a *negative* relationship between overt resistance and parental reports of four-year-old children's guilt; and Grinder and McMichael (1963) found that sixth- and seventh-graders who resisted temptation differed significantly from those who yielded on only one of three projective indices of guilt. Subsequently, McMichael and Grinder (1964) obtained no differences between seventh-graders who resisted or yielded on any of the three components of guilt. Similar nonsignificant findings have been reported in two studies that involved projective measures of resistance to temptation among 13-year-old boys (Allinsmith, 1960) and adolescents (Johnson & Kalafat, 1969).

Guilt does not appear to be unitary, nor is it strongly or consistently related to resistance to temptation. There is no reason, therefore, to assume that guilt is part of a unitary dimension of conscience. Nevertheless, the general lack of significant relationships between resistance to temptation and guilt may be due partially to problems with the projective techniques used to assess guilt (Pittel & Mendelsohn, 1966). *Absence* of projective guilt may reflect (1) alternative ways of handling potentially guilt-arousing situations or (2) failure to identify with the hero of the projective situation or to respond in a personal way. *Presence* of projected guilt, instead of revealing strong values, may reflect (1) inability to act in accordance with values despite guilt, (2) awareness of societal standards and the demand characteristics of the situation, or (3) the tendency to feel guilty empathically with imagined moral transgression. Although these are plausible reasons for the absence of strong association between guilt and resistance

to temptation, an alternative explanation is that guilt is not so major a determinant of moral behavior as theorists have argued.

PROSOCIAL BEHAVIOR

Moral behavior, studied scientifically, can be divided into two areas: prosocial behavior and resistance to temptation. The latter, which is the subject of the next section, includes behaviors that society ordinarily wishes to suppress—lying, stealing, and cheating. Prosocial behavior, on the other hand, includes actions that are usually encouraged—helping, sharing, donating, and rescuing those in distress. Moreover, while resistance to temptation involves *not doing* something one desires to do, prosocial actions involve *doing* something one may not want to do. Prosocial action typically involves active rather than passive behavior which, when it occurs, is beneficial to others but is costly to the individual.

Empirical studies of prosocial behavior have dealt primarily with factors affecting its elicitation rather than its learning or development (Midlarsky, 1968). Hence, much is known about its immediate situational determinants (Krebs, 1970a) but little about conditions that contribute to its development. A few studies have dealt with child-rearing antecedents, as well as effects of material reinforcements and “empathy.” Much more has been done on effects of observation of models, although the extent to which this research concerns development as opposed to elicitation is questionable.

In measurement of prosocial behavior, a few studies have used ratings, self-report measures, or projective indices, but most have employed overt behavioral measures. Of these, a small number have dealt with natural, “real-life” settings. Hoffman (1963), for instance, measured “consideration for others” by observing children in nursery school. Hornstein (1970) and Hornstein, Fisch, and Holmes (1968) unobtrusively observed reactions of passersby to wallets protruding from envelopes on sidewalks in Manhattan. The majority of studies, however, have employed contrived situations in a laboratory setting. For example, Rosenhan and White (1967) had young children interact with an adult experimenter (model) while playing a miniature bowling game in which the child could win gift certificates. Each child later played alone, and the degree to which he donated winnings to charity was recorded. Similar procedures have been used by others, often with the addition of a videotaped model (Bryan & Walbek, 1970a, 1970b).

Compared with laboratory situations, the major advantage of naturalistic settings is that the behavior is representative of customary actions. In laboratory studies, the possibility exists that behavior is artificial or may be influenced by demand characteristics (Orne, 1962) or experimenter effects (Rosenthal, 1966). Nevertheless, naturalistic studies, often time-consuming and expensive, frequently do not allow investigation of variables of inter-

est. In addition, extraneous variables seldom can be controlled so as to allow unequivocal interpretations. There is often no substitute, therefore, for controlled, laboratory investigations. Many experiments, aware of the possible artificiality of laboratory measures, have attempted to make such situations as real as is practicable (Staub, 1971a, 1971b, 1971c). The likelihood of unrepresentativeness, however, remains a problem.

A second issue, crucial regardless of setting, is the extent to which measurement situations have tapped prosocial behavior adequately. Much of the research has dealt with trivial forms of sharing and helping, such as donation of small amounts of money or candy received during an experiment (Midlarsky, 1968). Few investigations have included prosocial behavior requiring the giving up of one's own's time or material goods. Most research has dealt with sharing or helping, while rescue behavior among young children has been largely ignored until recently. Trivial or low-cost, as opposed to high-cost, prosocial behavior may follow different laws or be affected by different variables; relinquishment of material goods may be controlled by conditions different from those where danger or risk exists. Until it has been demonstrated that the same laws govern behavior in two different situations, it is unwarranted to assume that the situations measure the same thing.

Child-Rearing Practices

Few studies have been done on relationships between parental child-rearing practices and children's prosocial behavior. Hoffman (1963) investigated three types of disciplinary techniques (power assertion, love withdrawal, and induction) and degree of parental affection in relation to nursery-school children's "consideration for others." Information on parental practices was obtained from interviews with mothers, and data on child behavior were based on observations at nursery school. "Consideration for others" represented the frequency with which the child gave direct, unsolicited help to another in distress or showed awareness of other children's needs. None of Hoffman's parental measures related to the child's consideration for others. Dichotomization of the sample on the basis of the mother's use of power assertion, however, showed other-oriented induction to be related positively to consideration for others among the group with low power assertion but negatively in the group with high power assertion. Although these results indicate the possible importance of interaction among child-rearing practices in determining prosocial behavior, lack of additional research precludes firm conclusions.

In a second study involving the same child-rearing practices (Hoffman & Saltzstein, 1967), consideration for others was measured by having seventh-grade children nominate the classmate most likely to care about other children's feelings and to defend a child being made fun of by the

group. Information on parental practices was obtained from reports by parents and the children. Girls' consideration for others was positively related to induction discipline and parental affection, negatively related to power assertion, and unrelated to love withdrawal. Among boys, consideration for others was positively related to power assertion and affection, negatively related to love withdrawal, and unrelated to induction.

Perhaps the contradictory findings can be explained by assuming that the index of consideration for others measured something different for boys and for girls (Hoffman, 1970). Most of the variance for boys was contributed by a question on defending an underdog. Such activity may have an aggressive antiauthority component for boys that might be augmented by power assertion in the child's home. Elms and Milgram (1966) did find that male college students who resisted experimenter requests to shock a peer reported more frequent use of power assertion in their homes than did those who complied. Despite these speculations, the lack of significant findings in Hoffman's earlier study, as well as contradictory results for boys and girls, provides little support for general conclusions on relationships between these child-rearing practices and prosocial behavior.

The facilitating role of parental affection is weakly supported, however, by the consistent positive relationships for boys and girls (Hoffman & Saltzstein, 1967) and by a study that involved sharing of candy by nursery-school boys (Rutherford & Mussen, 1968). Generous boys perceived their fathers as more highly nurturant than did stingy boys, this perception having been assessed in a projective doll-play test. No differences were obtained with regard to perceptions of nurturance of mothers. These findings are merely suggestive of the role played by parental warmth and affection.

A study in a laboratory setting provides further information on effects of induction or reasoning techniques (Staub, 1971c). When positive consequences of help for recipients were pointed out to kindergarten children, comparisons with a control group revealed little effect of the treatment on behavior in situations that called for rescuing a child in distress and sharing candy. In combination with the inconsistent results reported by Hoffman (1963) and Hoffman and Saltzstein (1967), therefore, it must be concluded that induction techniques have not been demonstrated to contribute to prosocial actions.

Reinforcement and Empathy

Although prosocial behavior no doubt *can* be developed and maintained through contingent application of external reinforcement, research using this technique is almost nonexistent. Fischer (1963) has demonstrated that four-year-olds, when reinforced with bubblegum, shared more marbles with a peer with whom they were unacquainted. And Midlarsky, Bryan, and Brickman (1972) have shown that social approval, as opposed to no

social approval, significantly increased young children's donation behavior. They also found that social approval for donation by a selfish model decreased donation below levels obtained for no social approval by generous or neutral models. Reinforcement through social approval by an "inconsistent" and selfish model therefore may decrease altruistic behavior.

More research has been done on empathy as a mechanism of reinforcement for prosocial acts. According to Aronfreed (1968), prosocial acts are developed by a two-stage process in which (1) potentially reinforcing empathic or vicarious changes in affectivity become associated with social cues that transmit information about experiences of others and (2) the instrumental value of overt acts for which such social cues are contingent outcomes becomes established. In the case of "altruistic" responses, for example, the child's empathic positive affect may be paired first with cues that express a corresponding affective state in the agent of socialization, followed by establishment of the altruistic value of an overt act that the child can use instrumentally to produce the agent's expressive cues.

Several studies indicate that empathic responsiveness may be critical to prosocial behavior. Nursery-school children's aiding behavior, assessed by a tendency to give helpful instructions to a hero in a puppet show, was positively associated with ability to express distress in the nursery-school environment (Lenrow, 1965). Male college students, exposed to conditions designed to create empathy, later scored significantly more papers for another person than did controls (Aderman & Berkowitz, 1969). D. L. Krebs (1970b) attempted to induce positive and negative empathic responses and assess their effect on altruistic behavior. Subjects who had witnessed a performer appear to receive rewards and punishments were given a chance to help him. Those led to believe that they were similar to the performer evidenced the greatest physiological reaction to his plight, reported the greatest experience of empathy, and behaved most altruistically.

Aronfreed and Paskal (see Aronfreed, 1968) and Midlarsky and Bryan (1967) have explored effects of empathic experience within the context of an experimental conditioning paradigm. The former investigators studied sympathetic behavior among seven- and eight-year-old girls. The procedure involved three separate phases immediately following one another in a treatment condition and four control conditions. In the first phase of the treatment condition the child's experience of distress was associated repeatedly with expressive cues indicating similar experiences of distress by an adult experimenter. The purpose was to condition empathic reactions to the observed distress of another person. During the second phase, only the child was exposed to distress experiences, while the experimenter acted to relieve his distress, serving as a model of sympathetic action. In the final phase, a second child was introduced and the original subject was placed in

the position occupied before by the adult model. The subject then was able to relieve the distress of another child. Children exposed to this two-stage conditioning paradigm exhibited a greater tendency toward sympathetic actions during the third, test phase than subjects in the four control conditions. Results were regarded as confirming contributions of both empathic conditioning and observational learning to acquisition of sympathetic behavior.

Aronfreed and Paskal (see Aronfreed, 1968) also investigated altruistic behavior among six- to eight-year-old girls. Three treatment conditions—one experimental and two control—were employed with a two-lever choice apparatus. In the basic conditioning paradigm, the child first learned that one lever produced candy, whereas the other resulted in the experimenter's expressing "joy" and hugging the child. In this condition, the experimenter's expressed joy was associated with positive affect on the part of the child, and the child learned that a particular instrumental act, pressing the second lever, produced expressive cues of joy. In one of two control conditions, the experimenter emitted expressive cues alone, while in the other she only hugged the child. Effects of conditioning were then tested by having the experimenter emit expressions of joy when the second lever was pressed and by having candy dispensed when the first lever was pressed. Children who had had the full conditioning procedure were more willing to forego candy than were those in control conditions. Midlarsky and Bryan (1967) repeated this experiment with first- to fourth-grade girls. Two more control conditions were added, as was a transfer condition in which subjects were given the chance to make an anonymous donation to "needy children." Those in the empathy condition, as compared with controls, were more altruistic on both the performance test and the test for transfer.

These three studies appear to confirm the importance of empathy as a reward mechanism underlying prosocial actions. The findings also might be explained by demand characteristics of the situations and increased nurturance of the model in the empathy-conditioning paradigms. Nevertheless, when all of the research on empathy is considered, reasonably strong evidence is provided for the importance of empathic processes to prosocial behavior. Whether or not empathy is *the* mechanism for maintenance of internalized prosocial action (Aronfreed, 1968) is still debatable.

Observation of Models

In relation to effects of observation of the behavior of others (i.e., "models"), D. L. Krebs (1970a) has pointed out that, before conclusions can be drawn about the acquisition of behavioral dispositions, effects must be shown to be lasting and generalizable to situations dissimilar to the original testing context. Few studies of modeling have demonstrated acquisition of such stable, internalized dispositions. Most effects of obser-

vation of models may be temporary and situation specific, or they may represent nothing more than results of experimenter demand, with the subject perceiving the model's behavior as an indication of what the experimenter expects of the subject.

Nevertheless, much recent research has been done on relationships between observation of models and prosocial behavior. Although these studies should not be assumed to deal with internalization, neither should they be assumed to be irrelevant. Hence investigations of modeling effects are considered here without regard to their demonstrated lasting general effects. The following conditions will be considered: (1) simple exposure to a physical demonstration by a model; (2) characteristics of models (e.g., warm, neutral, hostile); (3) observation of consequences to a model; (4) physical demonstration versus verbal description; and (5) inconsistency in model practices.

Physical Demonstration by a Model. That simple exposure to practices of a model can affect subsequent prosocial behavior has been demonstrated in naturalistic and laboratory settings, among young children and adults, and with a variety of prosocial behaviors. Naturalistic studies with adults and college students have revealed that, in comparison with ordinary, no-model conditions, exposure to a model engaging in the specific prosocial activity increases rates of volunteering (Rosenbaum, 1956; Rosenbaum & Blake, 1955; Schachter & Hall, 1952), donating (Blake, Rosenbaum, & Duryea, 1955; Bryan & Test, 1967; Wheeler & Wagner, 1968), signing a petition (Hain, Graham, Mouton, & Blake, 1956), and helping to change a flat tire or complete a task (Bryan & Test, 1967; Test & Bryan, 1969). Laboratory studies with children have demonstrated that, in contrast to no-model control conditions, exposure to a model engaging in the specific prosocial activity increases anonymous donation activity (Rosenhan & White, 1967), sharing behavior (Harris, 1970, 1971), and rescue attempts (Staub, 1971a). In addition to increasing prosocial activity, witnessing a model engage in selfish activity or refuse to engage in prosocial behavior decreases acts of volunteering (Blake, Berkowitz, Bellamy, & Mouton, 1956; Schachter & Hall, 1952) and donation (Wheeler & Wagner, 1968).

Evidence regarding short-term, specific effects of observation of models is unequivocal. However, hardly any attempts have been made to show that observation of a model results in enduring dispositions. Perhaps the closest to an adequate test in the research cited above occurred when subjects who had volunteered for an experiment under modeling conditions were found not to differ from controls in actually attempting to fulfill their commitment (Schachter & Hall, 1952).

Characteristics of Models. Several studies have manipulated characteristics of models, such as warmth or hostility, in attempting to elucidate factors related to effectiveness of modeling procedures. In one study,

increased model nurturance in the form of hugging the child did not increase altruistic behavior (Midlarsky & Bryan, 1967). Rosenhan and White (1967) studied model nurturance more directly in an investigation of donation behavior among fourth- and fifth-graders, using a miniature bowling-game apparatus. Subjects interacted with either a warm, neutral, or hostile adult model during a brief preexperimental session. The later anonymous test for donation behavior revealed no differences among subjects exposed to the three different model conditions. Within a similar laboratory paradigm, third- and fifth-grade children exposed to either a high- or low-nurturance model exhibited no significant differences as a function of model nurturance (Grusec & Skubiski, 1970).

The only contradictory results are in connection with rescue behavior among kindergarten subjects (Staub, 1971a). Children exposed to a warm and friendly adult subsequently exhibited more rescue activity in reaction to sounds of severe distress from an adjoining room than did children exposed to a neutral and task-oriented adult. Perhaps, as Staub suggests, nurturance indicated to children that the adult in charge was not likely to punish them for helping behavior. This interpretation is consonant with previous findings (Staub, 1970, 1971b), which suggest that children fear disapproval for initiating action that is not clearly permissible. Thus nurturance may have had a different function than in the donation and sharing situations. These data suggest that model warmth does not enhance effectiveness of the model himself in relation to prosocial activity.

Consequences to a Model. Consequences of a model's behavior may affect the degree to which observers seek to reproduce the model's actions. Hornstein (1970) notes that "the consequences to the model for his behavior provide observers with evidence about reward-cost contingencies that can be associated with his behavior. If the observer anticipates similar experiences with the same behavior, negative consequences to the model will lead to less emulation of his behavior than positive consequences [p. 30]." Positive effects of the model's actions also may lead to greater imitation than neutral effects. Behavior of others toward the model's actions is one kind of consequence, the model's own reactions another.

Support for the importance of consequences is provided in a study by Hornstein, Fisch, and Holmes (1968) in which adult passersby happened upon a wallet that had been "found" by a model and then, accompanied by the model's letter to the owner, relost. Those who were led to believe that they were somewhat similar to the model returned the wallet more frequently when the letter indicated that the model felt good or neutral, rather than bad, about returning the wallet. When the letter revealed that the model was dissimilar—a foreigner—the model's expressed feelings had no effect. A study by Midlarsky and Bryan (1972) supports the role of positive affect among fourth- and fifth-graders. Children were exposed to a

model who expressed positive affect either contingently or noncontingently following acts of greed or charity. The expression of contingent positive affect significantly influenced anonymous donation behavior, but the effect did not hold up on a generalization task a week and a half later. Another study by Bryan (1971), which involved first- and second-grade children, indirectly substantiates the role of expression of positive affect. Subjects exposed to a model who immediately expressed positive affect donated significantly more than those exposed to a model who delayed such expression.

Negative findings for the importance of observed consequences have been reported in two studies. First- to fourth-grade children exposed to a model who emitted expressive signs of joy following "self-sacrifice" did not differ in later self-sacrifice and donation behavior from subjects exposed to a model who did not emit these cues (Midlarsky & Bryan, 1967). Praising a model did not affect subsequent donation behavior among fourth- and fifth-graders (Harris, 1970).

Presbie and Coiteux (1971) have indicated the complicated manner in which effects of observed consequences may operate. They investigated sharing behavior among first-graders as a function of exposure to models who either did or did not express self-praise and who were either praised or not praised by the experimenter. No main effect was found for either self-praise or experimenter praise, although a significant interaction was obtained. Only when praise was delivered by either the model or the experimenter alone was sharing accentuated by exposure to a generous model or attenuated by exposure to a stingy model. Joint administration of praise failed to increase sharing under the generous-model condition.

Although these results are difficult to integrate, some support is provided for the facilitating role of expression of positive affect by a model and for the attenuating effect of expression of negative affect. There is less evidence that external praise of a model significantly affects prosocial activity. Even the former effects appear to occur only under as yet unclear conditions. Possibly the major reason for inconsistencies is that some subjects did not perceive themselves as sufficiently similar to the model to warrant expectation that similar consequences would occur to them.

Physical Demonstration versus Verbal Description. Although studies of modeling effects on prosocial activity typically have involved physical demonstrations by models, prosocial behavior *may* be affected also by verbal description by models. Investigations have contrasted verbalization—"moral exhortation" or "preaching"—with either no-model conditions or physical demonstrations.

In one study (White, 1967), fourth-grade children were instructed to donate half of their winnings to charity. They donated significantly more than controls in an anonymous test, but the effect did not generalize to a second test several days later. Subsequent studies (Bryan, 1971; Bryan &

Schwartz, 1971; Bryan & Walbek, 1970a, 1970b; Walbek, 1969) have exposed children to models who either preached charity or greed or were neutral in what they said. Moral exhortations in these investigations have concerned the general desirability or undesirability of contributing to charity by stating, for example, that "You should give money" or "People should not give money to sick children." One study (Walbek, 1969) also emphasized potential reinforcements from altruistic behavior. Investigations consistently have failed to reveal that such exhortations affect young children's donation behavior. However, physical demonstrations by models in the same studies usually have affected donation behavior significantly.

Although these studies appear to provide ample evidence that verbal descriptions do not affect prosocial activity, the verbalizations may have been too superficial or too general. Midlarsky and Bryan (1972) tested this possibility by exposing fourth- and fifth-grade children to a model who preached either charity or greed by means of "rationalized or justified" exhortations stressing the impact of the model's practices on potential recipients. As opposed to previous results, what the model said significantly affected later donation behavior under conditions of anonymity, and the effect was maintained in a donation situation a week and a half later. Although exhortations that do little more than remind children of prosocial norms do not affect donation behavior, rational and justified exhortations may.

Inconsistency in Model Practices. Several studies (Bryan & Walbek, 1970a, 1970b; Midlarsky & Bryan, 1972) have dealt with effects on donation behavior of a model's inconsistency between physical and verbal behavior. The experimental manipulation has consisted of exposing second-through fifth-grade subjects to a model who either preached generosity but practiced greed or preached greed but practiced generosity. Model inconsistency has not been found to affect significantly later, anonymous donation behavior. This is especially important in view of the more powerful manipulation of exhortation in the Midlarsky and Bryan (1972) study. That children in this age range are unaffected by inconsistency between verbal and physical behavior would appear to indicate that exposure of young children to models does not trigger articulate cognitions regarding social obligations (Bryan & London, 1970).

RESISTANCE TO TEMPTATION

Resistance to temptation involves ". . . a type of conflict where a choice must be made between (a) conformity to some socially expected role behavior and non-attainment of a goal and (b) non-conformity and attainment of the goal (Grinder, 1961, p. 679)." Traditionally, researchers in this area have been concerned with behaviors such as lying, stealing, and

cheating that are ordinarily supposed to be inhibited or suppressed.

During the 50 years of study of resistance to temptation, various measurement techniques have been used, but the majority have entailed some overt, situational index. Five such measures have been used frequently. In one classroom cheating situation (Hartshorne & May, 1928), subjects score their own tests, ostensibly because the instructor has been unable to do so. Unknown to them, recorded scores on original performance can be compared with scores they submit. Improvements indicate cheating. Another widely used technique of Hartshorne and May is the "peeping" test. With eyes closed, the subject places an X in a series of circles or draws a line around a series of squares. Because the only way to get a high score is by looking, high scores signify cheating.

Two measures developed by Grinder (1961) require elaborate apparatus. In the beanbag game, the child attempts to win a prize by tossing five beanbags at concealed "targets" behind a panel. He is informed that a correctly thrown bag will turn on one of five lights and that three lights win a prize. An observer behind a one-way vision screen controls the lights, and the child can win only by cheating. Following practice, the experimenter leaves the child "alone" to play the game. Grinder's ray-gun game consists of a "ray-gun" pistol connected to an electrical target enclosure. The subject is told that he can win by "hitting" the two rotating rockets in the target enclosure, although actually he can win only by recording his score incorrectly. Following a practice-instruction period, the child plays the game and records his score in the absence of the experimenter.

In another procedure, used in investigations of punishment in relation to resistance to temptation, children are trained under various conditions of punishment to avoid touching one or more toys. Following training, each child is ostensibly left alone with the prohibited toy, while an observer behind a one-way screen records the time the child takes to touch the forbidden toy, if he does, as well as how long he holds it.

In view of the developmental focus of this survey, attention will be directed to research on effects of child-rearing techniques, parameters of punishment, and observation of models. These represent the major developmental variables studied in the literature on resistance to temptation. The final section will deal with the generality of resistance to temptation behavior.

Child-Rearing Practices

Research on child-rearing practices and resistance to temptation has dealt with the same four variables considered above in relation to guilt and prosocial behavior: power assertion, love withdrawal, induction, and affection. Hoffman (1970) has reviewed studies of relationships among these practices and resistance to temptation. Almost all of the studies dealt with

reported parental practices rather than observation of parental behavior. Data in several instances were reclassified by coding "nonpower assertive" responses as either love withdrawal or induction.

No consistent relationships were found for fathers' child-rearing practices. With regard to mothers' practices, findings were complex and highly variable. For power assertion, only two studies (Burton, Maccoby, & AllinSmith, 1961; MacKinnon, 1938) out of four reported a negative association with resistance to temptation; no significant differences were found in the other two studies (Grinder, 1962; Sears, Rau, & Alpert, 1965). Moreover, in one of the two investigations that reported a significant effect (Burton et al., 1961), the difference applied only to girls. In the case of induction, one study (Sears et al., 1965) out of three found a positive association with resistance to temptation, although the effect was evident for four-year-old girls but not boys; in contrast, Burton et al. (1961) found a significant *negative* relationship for four-year-old boys and girls and Grinder (1962) reported no significant differences for 11-year-olds. Finally, among four-year-olds, use of affection was *negatively* associated with resistance to temptation for girls and exhibited no significant relationship for boys (Burton et al., 1961) and boys and girls (Sears et al., 1965). A lack of relationship also was found for 11-year-old boys and girls (Grinder, 1962).

Several explanations exist for the inconsistent findings. The contradictory results of Burton et al. (1961), for instance, may have been due to unequal motivation in the test for resistance to temptation. Children with high, as opposed to low, achievement motivation were probably more tempted to cheat, and, to the extent that parental use of induction is associated with high achievement standards (Walters & Parke, 1967), induction would have correlated negatively with resistance. Second, the general lack of significant findings, as well as several of the inconsistencies, *may* have arisen from the assessment of child-rearing practices by parents' or children's retrospection. Antecedent and consequent conditions sometimes have been obtained from the same subjects in these procedures, and the same responses have been used in the classification of parental practices and the child's morality. Coder reliability often has been low. There is evidence, in addition, that parental retrospection regarding child-rearing practices has little validity (Yarrow, Campbell, & Burton, 1968). Third, inconsistent results may have arisen from failure to deal with interactions among parental practices (Aronfreed, 1968)—the relative amounts of each parental practice and their relationship to each other may be more crucial than the tendency to use any particular procedure alone. Depending on the balance among practices, any one of them could be either positively or negatively related to resistance to temptation. There has been insufficient research to evaluate this hypothesis, but hopefully future research will give

it attention. Finally, perhaps early parental child-rearing techniques are simply not major determinants of later resistance to temptation behavior.

Punishment

Laboratory investigations of punishment, dealing primarily with effects of timing and intensity on resistance to deviation, have used the "forbidden toy" procedure described above.

If the major function of punishment is conditioning of fear or anxiety to stimuli surrounding the punished act, then the greater the intensity of punishment the greater should be the response inhibition. Several studies provide evidence that intensity of punishment can work in this manner. In one experiment by Parke and Walters (1967), six- to eight-year-old boys who had received high-intensity punishment (a 96-dB tone and verbal rebuke) deviated less quickly, less often, and for shorter periods than did those who had received mild punishment (a 65-dB tone and verbal rebuke). Findings in a second experiment were in the same direction but not significant, which might be attributed to methodological difficulties pointed out by the authors. Finally, first-grade boys exposed to low-intensity punishment deviated sooner and for a greater length of time than those exposed to either high-intensity punishment or elaborated verbal punishment (Cheyne, 1971).

Under certain conditions, however, intensity of punishment may have an opposite effect. In a third experiment by Parke and Walters (1967), only subjects punished early exhibited less deviation when punishment was intense. Subjects punished late showed greater resistance under *low*-intensity punishment. The authors argued that the low-intensity stimulus may have been more effective in the late-punishment condition because it had a cue or cognitive rather than a simple aversive function.

That cognitive processes can alter the effect of intensity of punishment has been borne out in subsequent studies that have involved the systematic manipulation of cognitive structure. In these experiments, "high cognitive structure" has been produced by providing verbal cues or explicit rules and reasons for conduct, while "low cognitive structure" has consisted of the absence of such information. With low cognitive structure, second-grade boys exhibited higher resistance to deviation when they received higher intensity punishment; with high cognitive structure, greater resistance occurred with lower intensity punishment (Cheyne, Goyeche, & Walters, 1969). Parke (1969) found high-intensity punishment superior only when verbal cues were minimized. These studies indicate that punishment of high versus low intensity is superior in suppressing forbidden behavior only under conditions of *low* cognitive structure.

The importance of cognitive processes is also illustrated in studies on severity of threat (Aronson & Carlsmith, 1963; Turner & Wright, 1965). Al-

though these involved different procedures and a different dependent variable, they have often been cited in connection with intensity of punishment because they appear to contradict earlier findings. These studies revealed that greater *devaluation* of a preferred toy occurred under conditions of *low* threat than *high* threat. Nevertheless, low threat may have evoked cognitive processes leading to devaluation of the toy in order to maintain self-control (Walters & Parke, 1967). High threat, on the other hand, may have been sufficient to produce fear-motivated inhibition that would not have required the toy's devaluation. Rather than contradicting findings on intensity of punishment, studies of severity of threat perhaps have provided additional support for the overriding importance of cognitive processes in suppression of behavior.

A similar trend is shown in studies involving timing of punishment. Early investigations, which dealt neither with verbal cues nor cognitive mediation, revealed that children punished early rather than late deviated less quickly, less often, and for shorter periods of time (Aronfreed, 1965; Aronfreed & Reber, 1965; Walters & Demkow, 1963; Walters, Parke, & Cane, 1965). Early punishment generally was administered when the child was reaching for a toy or first touched it, while late punishment involved punishing the child when he touched the toy or after he had held it for several seconds.

More recent studies of the timing effect have revealed that it occurs only under conditions of low cognitive structure or uncertainty (Cheyne, 1971; Solomon, Turner, & Lessac, 1968). Effects of short delays have been eliminated or reversed by providing information on the nature of the prohibited response or by giving an explanation of social rules, that is, high cognitive structure (Cheyne & Walters, 1969; Parke, 1969; Parke & Walters, 1967). The Cheyne and Walters study, for example, reported that early timing of punishment produced greater resistance than late timing under low cognitive structure, while the opposite occurred under high cognitive structure. Although replicating the findings obtained under low cognitive structure, others (Cheyne, 1971; Parke, 1969) have found that, when subjects were given reasons for prohibitions, resistance to deviation was not significantly affected by timing of punishment.

In summary, punishment may affect young children's resistance to temptation in two ways, depending on context (Parke, 1970; Walters & Parke, 1967). In a low-cognitive context, punishment may produce an emotional response such as fear or anxiety. In a high-cognitive context, a cognitive response may predominate, with little attendant fear. In the low-cognitive context, high-intensity is more effective than low-intensity punishment, and early punishment is superior to late. In the high-cognitive context, intensity and timing of punishment may be relatively unimportant or may produce effects opposite to those in the low-cognitive situation. Early or high-inten-

sity punishment under high cognitive structure actually may interfere with the cognitive function of punishment by interrupting the response sequence and distracting the child. Late or low-intensity punishment in such a situation therefore would produce greater resistance to temptation.

The cognitive function of punishment, however, may vary with age. As the child becomes more capable of understanding adult prohibitions, cognitive components of self-control should become more important than emotional components (Cheyne, 1972; Parke, 1970). According to Cheyne (1971), kindergarten children have not been found to benefit from elaborated reasoning, while third-grade children do benefit. Perhaps greatest resistance to temptation among very young children will be produced by maximizing the emotional function of punishment, while among older children the cognitive function should be stressed.

Observation of Models

The few studies of relationships between observation of models and resistance to temptation have dealt with effects of having a young child observe (1) a resisting or yielding model, (2) an inconsistent model, or (3) consequences to a yielding model. The first approach has been explored by Bryan (in two unpublished studies cited in Bryan & Schwartz, 1971) and Stein (1967). In Bryan's first investigation, kindergarten children witnessed an adult model either refrain from yielding or yield to the temptation to steal M & M candies. When the children then were left alone to play, the two groups did not differ in resistance to temptation. However, when the data were reclassified in terms of the children's perceptions of the treatment, those exposed to the resisting model rather than the yielding one deviated less. Essentially the same results were obtained in Bryan's second study, in which a peer model stole money from a younger child.

Stein (1967) confirmed these findings with a different paradigm and four-year-old boys, but added a qualification. While subjects who witnessed a yielding model yielded to temptation significantly more than those exposed to a resisting model or to no model, those who witnessed a resisting model did *not* differ significantly from subjects not exposed to a model. No-model controls demonstrated slightly greater resistance than subjects in the resisting-model condition. One explanation is that the deviant response was less available to subjects who had not witnessed a model than to those who had. The disinhibiting effects of observing a model violate a prohibition may be more potent than the inhibiting effects of witnessing a resisting model.

Effects of inconsistent models have been explored with a miniature bowling-game apparatus by Stein and Bryan (1972) and Rosenhan, Frederick, and Burrowes (1968). In the former study, third- and fourth-grade girls viewed a televised 10-year-old model who verbally encouraged

either conformity or violation of rules governing self-reward and who behaviorally conformed to or violated the rules. Subjects who witnessed a "preacher" and "practitioner" of rule adherence exhibited greatest resistance to inappropriate reward, while those who viewed a model who preached and practiced rule transgression showed an intermediate degree of rule violation. Subjects who had viewed a model who preached cheating but practiced rule adherence or vice versa demonstrated lowest resistance to temptation. Thus behavior transgressions increased over the rate established for either consistent rule adherence *or* rule violation when children witnessed inconsistency between verbal and behavioral communications.

In the study by Rosenhan et al. (1968), fourth-grade boys and girls interacted with a male, adult model who, with regard to self-reward, was either strict with himself and the subject (consistent-strict), lenient with himself and the subject (consistent-lenient), strict with himself but lenient with the subject (discrepant: child-indulgent), or lenient with himself but strict with the subject (discrepant: self-indulgent). When the child played a game alone, lowest norm violation occurred for the child-indulgent condition, followed by the consistent-lenient, consistent-strict, and self-indulgent conditions. Like the findings obtained by Stein and Bryan, these results indicate that, for children at this age, failure to integrate verbal and behavioral modes of communication can produce low resistance to temptation. Lack of research using different experimental paradigms and ages precludes generalization.

Three studies (Walters, Leat, & Mezei, 1963; Walters & Parke, 1964; Walters, Parke, & Cane, 1965) have dealt with effects of observing consequences to a model who broke a prohibition. With minor variations, all studies have used the same paradigm. Walters and Parke had five-year-old children observe a film in which a boy of similar age played with a forbidden toy and later was either "rewarded" or "punished," or neither "rewarded" nor "punished" ("no consequence condition"); in a control condition subjects did not view a film. On a subsequent test, which involved prohibition against playing with certain toys, subjects who had viewed the model-rewarded or no-consequence conditions deviated more quickly, more often, and for a greater length of time than control subjects who had not viewed a film. No significant differences were obtained between subjects who had viewed a punished model and those who had not been exposed to a model.

Walters, Leat, and Mezei (1963), again for five-year-olds, replicated the disinhibiting effects of observing a deviant model who was rewarded (the no-consequence condition was not included), but found that children who had viewed a punished model deviated significantly less than control subjects. Walters and Parke (1964) postulated that lack of correspondence be-

tween the studies may have resulted from high general resistance to temptation of the children of middle socioeconomic status used in their study, as opposed to low general resistance of subjects of low socioeconomic status used by Walters et al. (1963). In a later study, kindergarten and first-grade children in the model-punished condition deviated less often and for shorter periods than did those who viewed no model (Walters et al., 1965). As before, the model-rewarded or no-consequence groups deviated more quickly, more often, and for longer periods of time than the control group. Despite contradictory findings, the data provide evidence that observation of a model who yields to temptation and is later punished tends to inhibit rule violation.

Taken together, these studies indicate, first, that exposure of young children to a yielding model disinhibits adherence to rules and leads to low resistance to temptation. The inhibitory effect produced by witnessing a resisting model is less robust but does occur under certain conditions. Second, inconsistency between a model's verbal and behavioral practices may produce high rates of rule violation. Consistency between these two modes of communication leads to low rates of transgression. Finally, observation of positive consequences or of lack of negative consequences to a model who has transgressed increases yielding behavior, while observation of negative outcomes to such a model leads to suppression of forbidden behavior.

Because age ranges were limited, these studies provide little information on developmental trends, nor have possible sex differences been dealt with. Perhaps most important, it has yet to be demonstrated that observation of models produces more than transitory effects on resistance to temptation. These issues deserve further research.

Generality of Resistance to Temptation

There are two opposing positions on the generality of resistance to temptation. The unidimensional view (for example, MacKinnon, 1938) asserts that behavior is consistent across different situations—a person who lies in one context tends to lie in other situations and to cheat and steal as well. The specificity view (for example, Hartshorne & May, 1928) emphasizes that a person acts in each situation according to how he has been taught to behave in it. Predictability from one context to the next depends on the number of identical elements shared by the two settings. Since overlapping of contexts differs across individuals, no general relationships between different kinds of moral action should emerge when data are summarized over individuals.

The specificity theory of Hartshorne and May grew out of their early investigations of generality of moral behavior. In their large-scale study of the overt behavior of fifth- to eighth-grade children, they found, first, that test-retest reliabilities for 12 overt measures of honesty repeated on two occasions ranged from .47 to .79. Second, average intercorrelations between

tests of the same type, given on the same day, generally were lower than retest reliabilities. Third, average correlations among tests of different types ranged from .00 to .29 and were lower than either reliabilities or correlations among tests of the same type. The magnitude of the correlations varied with the similarity of the measures. They concluded that moral behavior was situation specific rather than general across situations.

Two reanalyses of the same data led to different conclusions. Maller (1934) applied Spearman's tetrad-difference technique to correlations among summary scores for honesty, cooperation, inhibition, and persistence to find a common factor of moral behavior. Burton (1963), analyzing the six most reliable tests of overt honesty and using a variety of factor-analytic procedures, found a general factor of behavioral honesty, although much of the variance was due to specific test determinants. Obviously, in both studies, the basic pattern and magnitude of correlations were similar to those that had led Hartshorne and May to conclude that generality of moral behavior did not exist.

Several other studies employing factor-analytic techniques have produced similar results. Brogden (1940), factoring correlations among 40 "character" tests by the Thurstone centroid method, found the most clearly defined factor to be loaded by behavioral tests of honesty. The subjects were sixth-grade boys, and 4 of the 40 tests were behavioral measures of honesty or cheating. Barbu (1951) also obtained evidence for a general trait of honesty in 14-year-old Romanian boys when he applied Thurstone's multiple-factor method to correlations among 10 tests of honesty, 9 of which were behavioral measures. Surprisingly, his average intercorrelation was much higher than Hartshorne and May's— $.46$, as opposed to $.23$.

Nelson, Grinder, and Mutterer (1969) applied factor-analytic and other procedures to results of six situational tests of resistance to temptation administered to sixth-graders. Analysis of variance revealed that from 15 percent to 26 percent of the score variance was due to persons. Neither subjects nor tasks alone accounted for more than 26 percent of the behavioral variance, the major proportion being confounded between interaction and error. The conclusion was that *neither* of the contrasted positions regarding generality of moral behavior predicts the manner in which situational and personality variables interact to determine resistance to temptation. The suggestion was made that greater attention be paid to person-situation interactions influencing temptation behavior and defining the generality *or* specificity of such behavior.

The foregoing findings reveal that an extreme generality position is not viable. Despite results obtained from factor analyses, overt actions in different situations are not highly related. On the other hand, positive but generally low correlations, as well as general factors that, although not strong, nonetheless do appear, indicate that behavior is by no means specific to each situation. Since truth lies in between, future research might

profitably explore specific person-situation interactions (Nelson et al., 1969). Implications for personality theorists interested in relating an index of moral behavior to other aspects of a person should be obvious. Such investigators should use an index that provides a reliable and somewhat general measure of the behavior of interest. If honesty were measured by behavior in only one or two situations, for instance, it would be misleading to speak of the relationships between "honesty" and other characteristics.

Although the generality of prosocial behavior has not been considered here due to the dearth of studies dealing with that issue, the findings obtained for resistance to temptation may be relevant to prosocial actions as well. Prosocial behavior appears to be as complex as resistance to temptation, and under empirical scrutiny similar findings may be obtained. Until future research has explicated the nature of the prosocial domain, researchers should not assume that it is unidimensional. Investigation of the dimensionality of prosocial behavior remains an important area for further exploration.

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