

## Social Learning Theory and Developmental Psychology: The Legacies of Robert Sears and Albert Bandura

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Social learning theory began as an attempt by Robert Sears and others to meld psychoanalytic and stimulus-response learning theory into a comprehensive explanation of human behavior, drawing on the clinical richness of the former and the rigor of the latter. Albert Bandura abandoned the psychoanalytic and drive features of the approach, emphasizing instead cognitive and information-processing capacities that mediate social behavior. Both theories were intended as a general framework for the understanding of human behavior, and their developmental aspects remain to be worked out in detail. Nevertheless, Bandura has provided a strong theoretical beginning: The theory appears to be capable of accounting well for existing developmental data as well as guiding new investigation.

This article offers an evaluation of social learning theory from a historical perspective. It focuses on the work of two major exponents of the position: Robert Sears and Albert Bandura. The undertaking is somewhat difficult in the case of Bandura, because he continues to be an active contributor to psychology. On the other hand, it is probably fair to say that Bandura's major substantive contributions to developmental psychology were in the work he and his students did during the 1960s and 1970s and that his energies now are directed more toward other fields such as health psychology. Thus the main focus here is on his research and theory in the 1960s and 1970s which, of course, is also more easily seen in its historical context.

This analysis of social learning theory involves consideration of the work of two individuals who were very different in their approaches, even though united by a common theoretical label. Sears and Bandura were not collaborators at any point in their respective careers, although they were colleagues at the same university and had a strong influence on each other. Bandura is clearly the intellectual heir of Sears, influenced by but also reacting against the tradition that Sears represented. The two overlapped in their published contributions to social developmental psychology by approximately 6 years (from *Adolescent Aggression* in 1959, the first book by Bandura and Richard Walters, to Sears, Rau, and Alpert's 1965 publication of *Identification and Child Rearing*). However, except for a very brief theoretical overlap in Bandura and Walters (1959), they charted quite distinct courses for developmental psychology. What they did have in common was their use of a set of learning principles to understand issues in human social development. Hence the label of social learning theorist for each of them, although the form of learning theory was different for the two. For Sears it

was stimulus-response theory. For Bandura it began with some influence from Skinner's radical behaviorism, although with added concepts such as modeling. It quickly evolved, however, into a form of learning theory heavily informed by concepts from information-processing theory.

The social learning theory of Sears has little direct influence on modern conceptualizations of development. Even Bandura's approach is less central as a formalized theory in developmental psychology than it once was. This is probably because it is not a theory that focuses primarily on age-related changes in behavior and thinking, although both Sears and Bandura were obviously developmentalists in the sense of being interested in processes of behavior acquisition and change. Nor do biology or notions of evolutionary adaptiveness figure strongly in Bandura's approach to development. It nevertheless continues to be a strong force in current thinking and provides, among other things, a critical skepticism that guards against too-ready acceptance of stage theoretical, constructivist, or evolutionary theses. It should also be noted that social learning theory no longer holds center stage simply because its basic concepts, those of observational learning and learning through direct consequences, have become an accepted part of our knowledge base.

A brief comment about terminology is in order. As noted earlier, although Sears and Bandura are both social learning theorists, their brands of social learning theory are markedly different. Not only was the learning theory of Sears adapted from Hullian learning theory, but it also had a strong overlay of psychoanalytic theory. Bandura's social learning theory, somewhat more influenced by the operant tradition, completely disavowed the influence of psychoanalytic theory in anything other than its content areas. But, in Bandura's hands, the operant theory of Skinner quickly acquired a most non-Skinnerian cognitive flavor. As he struggled to make theoretical sense of the phenomenon of modeling, Bandura quickly abandoned mechanistic conditioning explanations and turned instead to the concepts of information processing. As his interest in self-regulative capacities and self-efficacy grew, he became even

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more distant from the anticognitive stance of the behaviorist tradition. In 1986, in fact, Bandura relabeled his approach "social cognitive theory" as a more suitable and adequate description of what he had been advocating since the late 1960s. The relabeling was useful because it made the features of his position clearer. On the other hand, there is nothing in the concept of learning that denies the importance of cognitive mechanisms in behavior change. It is only the historical association of the study of learning with strong anticognitivist views that may have led to misunderstanding or misinterpretation on the part of some of what Bandura was attempting.

In this article the major theses of Sears and Bandura are outlined, along with a chronology of their theoretical developments. Then their contributions are evaluated in the context of current approaches to the study of social development.

### Social Learning Theory: Sears and His Colleagues

Freud provided us with a first theory of personality development, one with impressive staying power. Through the work of his disciples as well as his numerous critics who nevertheless remained within the general structure he proposed, a rich and creative insight into human nature evolved over the years. It has always been the contention of psychoanalysts, however, that the hypotheses of psychoanalytic theory are not amenable to scientific testing but can be assessed only through use of the psychoanalytic method, that is, the free associations of patients undergoing analysis or the behavior of children during structured play. Academic psychologists, seriously interested in the development of a theory of personality and impressed by the insightfulness of Freud's, found these limitations on their scientific activities troublesome. A movement thus arose to make psychoanalytic principles amenable to scientific investigation in spite of objections that it could not be done. It was possible to operationalize psychoanalytic constructs and to make predictions, even if the operationalization was considered inadequate by exponents of the theory. But even further rigor could be achieved by joining psychoanalytic theory to theories more amenable to scientific investigation; during the 1930s and 1940s, behaviorism and learning theory provided the ultimate in scientific rigor.

The major formal effort to combine learning and psychoanalytic theories in order to understand personality and social development throughout the life span began at the Yale Institute of Human Relations. The institute's mission was to construct a unified science of behavior, which it started to do in 1935. The enterprise commenced under the direction of Mark May and with the intellectual leadership of Clark Hull (who had arrived at Yale in 1929 with an active program of research on hypnosis and a dedication to the principles of behaviorist psychology), as well as with input from representatives of a variety of related disciplines. From psychoanalytic theory and from "the closely charted regions of rigorous stimulus response theory" (Sears, 1975, p. 61), Hull, Sears, and others including John Dollard and Neal Miller welded together a new approach to the science of human development and behavior. Their first undertaking was an account of frustration and aggression (Dollard, Doob, Miller, Mowrer, & Sears, 1939) that included an analysis of the socialization of aggression throughout childhood, a problem

on which Sears continued to work (e.g., Sears, 1941). In 1941 Miller and Dollard published *Social Learning and Imitation*, in which they presented the first major account of social learning theory supported in part by experiments on imitation in young children.

The attempt to marry psychoanalytic and stimulus-response (S-R) theories appeared promising. It was, of course, little more than a reinterpretation of Freudian hypotheses within the framework of S-R formulations, a translation made relatively straightforward by certain similarities between the two theories. Both, for example, viewed the goal of behavior as drive reduction, and reinforcement and the pleasure principle were concepts that could be equated easily. Certainly the individual integrity of each theory was to an extent violated by the marriage, but the exercise did serve to suggest that ideas based on the richness of clinical observation and interpretation could be subjected to rigorous scientific evaluation and therefore made acceptable to the scientific community. Yarrow and Yarrow (1955) summarized the contributions of social learning theory when they noted that

Rather slowly, but very perceptibly, a new point of view is emerging in child psychology. It is not a point of view which is an irresponsible, radical departure from the conservative empiricism which has epitomized this discipline, but it is a reformulation of the problems in terms of a more dynamic conception of behavior and development. (p. 1)

In fact, the approach was particularly exciting because it was an attempt to account for developmental phenomena through concepts that formed part of a general theory of human behavior. Moreover, it offered a stimulating change from the more descriptive approaches characterizing the field in the 1940s and early 1950s, enabling the generation of theoretical propositions about social development that could be empirically tested.

### *Some Features of the Approach*

It was the focus of Sears on socialization processes that had a particularly strong impact on research and theory in social developmental psychology. Much of his theoretical effort was expended on developing an understanding of the way that children come to internalize, or to take on as their own, the values, attitudes, and behavior of the culture in which they are raised. His interest centered on issues having to do with the control of aggression, the growth of resistance to temptation and guilt, and the acquisition of culturally approved sex-role behaviors. Sears stressed the place of parents in the fostering of internalization, concentrating on features of parental behavior that either facilitated or hampered the process, features that included both general relationship variables such as parental warmth and permissiveness and specific behaviors such as punishment in the form of love withdrawal and power assertion, as well as reasoning.

### *Aggression, Dependency, and Identification*

Three content areas, largely dictated by the focus of psychoanalytic theory, attracted the attention of Sears: aggression, dependency, and identification (subsuming moral and sex-role development). With the exception of altruism, achievement,

and peer social competence, they remain the major areas of interest to social developmentalists to this day, although the focus on dependency has been transformed into one on attachment.

The initial efforts of the Yale group had been directed toward an analysis of aggression. The work was influenced by Freud's early notions of aggression, in which he maintained that the cause of aggression is exposure to frustration. Thus frustration of an activity induces a behavior whose goal is injury to a person or object. Aggression is attributed to a drive—not the instinctual drive (Thanatos) of later Freudian theory but one whose strength is linked to experience with frustrating events. Although the early social learning view of aggression (Dollard et al., 1939) stated that frustration led inevitably to aggression, Sears (1941) argued that reactions to frustration could be altered through learning. Nevertheless, although dependency, regression, or increased problem solving could become the predominant response to frustration through learning, aggression was viewed as the dominant one in the hierarchy of responses elicited by frustration. Aggression's dominance was accounted for either on the basis of an innate connection between frustration and aggression or because aggression in response to frustration has a high probability of being acquired during socialization.

Several specific hypotheses amenable to empirical test were derived from the general frustration-aggression hypothesis. One example of these hypotheses is that the strength of instigation to aggression would be a function of the strength of instigation to and the degree of interference with the frustrated response. Another is that the extent to which aggressive behavior was inhibited would be a function of the amount of punishment it elicited, although Dollard et al. (1939) also realized that punishment is frustrating and might therefore also increase the instigation to aggression. In the latter case one would expect displacement of aggression to another object or person, with increased amounts of punishment meaning that increasingly dissimilar events would be sought out for the displacement. The Dollard et al. formulation also suggested that acts of aggression were functionally equivalent, so that all aggressive behaviors would work to reduce the aggressive impulse, a position corresponding to the psychoanalytic notion of catharsis. The problem with this conclusion, however, was that it failed to take into account another obvious prediction from learning theory, that aggressive responses that successfully remove sources of frustration will be reinforced and, hence, aggression is likely to be increased rather than decreased. In 1958 Sears addressed the as yet unclear issue of how an aggressive drive is acquired, suggesting that the motive to injure is learned through secondary reinforcement. The successful elimination of frustrating conditions by an aggressive response, as well as the possible evocation of pain in the frustrator by that act, is primarily reinforcing. Pairing of this primary reinforcement with the aggressive response thereby causes aggression to acquire secondary reinforcement properties.

The importance of secondary drives and their development is seen again in the manner in which Sears wrote about dependency. How does the young child learn to want to be near his or her primary caretaker? According to Sears, Whiting, Nowlis, and Sears (1953), dependency results from the fact that the

child from birth has so many drive states reduced by others, particularly the mother. Through the pairing of the mother—her appearance, voice, and so on—with reduction of hunger, thirst, and provision of warmth and comfort, her attributes take on secondary reward value. (In fact, Sears and his colleagues emphasized feeding experiences in their research on dependency apparently for no other reason than the major importance assigned to feeding by Freud.) Thus being near the mother and being held and touched by her become secondarily reinforcing events. And this desire to be near her produces “dependent” behaviors—clinging, following, and reaching out—that are reinforced by maternal attention.

Some would have been content to leave the story at this point, with the mother established simply as a secondary reinforcer. But both the Hullian and Freudian tradition necessitated further development of the concept of dependency. Some kind of motivational system had to be invoked, given that dependency seemed to be displayed even when all primary drives had been reduced and when, therefore, conditioned reinforcers ought to have lost their effectiveness. Thus, Sears et al. (1953) proposed that dependency acquires drive properties. The source of these drive properties, they proposed, lay in the fact that dependent behaviors are sometimes reinforced and sometimes punished. The incompatible expectancies of reward and frustration produce conflict that provides the drive strength for energization of the dependent action. From this viewpoint it is easy to see that punishment for dependency should heighten dependent behaviors by increasing the level of drive. Punishment also makes it likely that displacement will occur, with the new object of dependency being increasingly different from the mother as a function of the extent to which dependent behavior directed toward her has been punished. In later years Sears (1963) acknowledged the lack of evidence to support these speculations but was not yet ready to give up the notion of drive completely.

Building on the notion of a dependency drive, Sears also proposed a theory of identification. Once a dependency drive has been established, young children, because they cannot discriminate between themselves and their mothers, perceive her actions as an integral part of their own action sequences. The reproduction of her actions is reinforcing, and thus a stable habit of responding imitatively is built up along with a secondary motivational system for which “acting like the mother” is the goal response (Sears, 1957). In this account, “what Sears has ingeniously accomplished is to restate in the language of learning theory Freud's theory of anaclitic identification” (Bronfenbrenner, 1960, p. 28). On the other hand, the formulation was far from totally satisfying. In the mid 1960s (Sears et al., 1965) Sears noted the lack of a mechanism for explaining why the child begins to imitate the mother and suggested simple acceptance of the fact that observational learning (as the term was used by Bandura & Walters, 1963) occurs early in life and that this tendency to reproduce maternal acts provides a way in which children can reward themselves.

### *Testing Hypotheses: The Research*

At the same time as these theoretical proposals were being made, Sears and his colleagues were engaged in a series of stud-

ies to test them. The results of the first large-scale assessment of parenting practices and children's social development guided by the social learning tradition were published in *Patterns of Child Rearing* (Sears, Maccoby, & Levin, 1957). The study was based on interviews of 379 mothers. In the research Sears et al. determined how these mothers reared their children, what the effects of this rearing were, and what determined the choice of one rearing method over another, for example, the effects of marital satisfaction, self-esteem, and personal attitudes on parenting technique. Techniques of discipline, permissiveness, and severity of training were targeted as some variables important for socialization, and a variety of deductions from social learning theory were assessed. Sears et al. found a relationship between the use of withdrawal of love by warm mothers and conscience (compliance with parental dictate in the absence of surveillance); here the explanation was that the absence of valued parental attention motivates the child to imitate and, therefore, to incorporate parent behaviors including standards for morality. Other predictions that also were supported in this work were that the strength of identification (or conscience development) would vary positively with the amount of affectionate nurturance given to the child as well as with the severity of the demands placed on the child by the mother (the more the demands, the more the mother would not provide immediate help and the more the child would have to reproduce her behavior). Punishment for aggression was correlated with immediate suppression of aggression but later high levels of aggression, presumably because punishment elicited hostility in the child and because physical punishment provided a model for aggressiveness.

*Patterns of Child Rearing* had serious methodological problems. Sears, trained as an experimentalist, was far from successful in his use of the interview method. Data about both child-rearing practices and child outcomes came from one source, the mother, and so were subject to maternal perceptual biases. Mothers were assumed to be giving accurate accounts of when and how such events as weaning and toilet training were carried out, even though we now know that they are highly likely to be inaccurate in their memories of such events. It is to his credit that Sears improved his assessment methods in a second major research program (Sears et al., 1965). Thus the methodology was extended from parent interviews to also include observation of mother-child interactions in a playroom, the administration of attitude scales, observations of child behavior, and doll play. The focus of the study now was exclusively on identification, with a search for the child-rearing correlates of behaviors such as self-control, prosocial aggression, guilt, and sex-role behaviors. The work nevertheless had less impact on the field, probably because social learning theory as it had been developed by the Yale group was being supplanted by newer approaches to the understanding of human behavior and development.

### *Mechanisms of Development*

Social learning theory is not a stage theory. The developmental aspects of psychoanalytic theory—critical periods and stages—had been omitted in the translation from psychoanalytic to social learning theory. Instead, Sears (1957) offered a set

of developmental mechanisms that are simple and straightforward to say the least. First, there is learning by which the child acquires appropriate actions or responses. Second, there is physical maturation of the child, a mechanism “so obvious as to require no discussion” (Sears, 1957, p. 151). In fact, the main impact of physical change is through its social implication; that is, influences on behavior do not come about directly due to physical change but rather through the differential reaction of agents of socialization as they expect new actions in accord with increasing maturity. Changes in kind and amount of dependency, for example, are a reflection of what adults consider acceptable; clinging is rewarded in the very young but punished or extinguished as the child grows older and different forms of dependency are tolerated. The final change mechanism rests on the expectancies for action held by agents of socialization, expectancies determined not only by physical changes but also by realization that the child is learning new things.

### *Commentary and Evaluation*

The contributions of Sears and his Yale colleagues to developmental psychology were substantial. They set the study of personality and social development on its scientific course, proposing a theory of human development in such a way that it was amenable to empirical study. They relied on a variety of methods in the course of this study, including parental interview, projective techniques, measures of parent attitudes, behavioral observations, and behavioral ratings. *Patterns of Child Rearing* provided a model for a multitude of subsequent studies addressing the central problem of socialization, that is, how parents transmit the values and standards of society in a variety of domains to their children. Socialization processes remain a central focus of study for developmental researchers, and Sears and his colleagues clearly demonstrated how one could begin to tackle these important issues. Probably the only recent breakthrough that is at all comparable in its importance for research in social development is the formulation of attachment theory and of a methodology for assessing the quality of caretaker-infant relationships.

### *The Limitations*

Many of the details of the theory have not stood up to the test of time. Psychoanalytic and learning theory make such different basic assumptions about human behavior that they seem strange bedfellows indeed. For example, biological emphases and critical periods are central to the former and foreign to the latter, so Sears chose simply to ignore them. Clearly, Sears found himself in some difficulty in his attempts to explain the growth of drives, attempts necessitated by the importance of motivation for both psychoanalytic and stimulus-response theory; eventually he was forced to abandon the concept of drive and rely on notions of reinforcement and incentive alone. As a result, some of the theory's distinctiveness was lost.

### *The Successes*

*Data generated.* One criterion for a good theory lies not so much in whether its predictions are ultimately confirmed but

whether or not it generates data that are useful and important. By this criterion, social learning theory as formulated by Sears has been a success. He identified variables that are still of central interest to socialization researchers and established empirical relationships that have continued to be replicated. Distinctions between short- and long-term compliance with parental dictate; a concern with differential treatment of boys and girls; and a focus on the effects of maternal self-esteem, marital adjustment, perceptions of child-rearing self-efficacy, and social class on discipline practices are but a few examples of topics that have a very contemporary ring. In identifying specific relationships between parent discipline and internalization of societal standards, Sears et al. (1957) set the stage for a view of discipline effectiveness that has remained relatively unchanged to this day. Any modern textbook in developmental psychology still points to parental warmth and psychological techniques of discipline as facilitative of internalization. It is true that a variety of other theoretical explanations have been provided for the relationships, but the basic ideas remain unchanged even after more than 30 years of relatively intense investigation in the area.

*The importance of the dyad.* Sears (1951) was among the first to argue that the study of personality and social development must acknowledge not only that the external world acts on an individual, but also that the individual has an effect on the external world. He maintained that a dyadic rather than a monadic analysis of behavior was necessary for the understanding of social relationships. Personality is the result of learning experiences, but experiences are also determined by an individual's personality. This is a position developmentalists have all come to accept, and technological developments and modern methods of research design and analysis have made it easier to deal with the complexities of dyadic analyses. It was the social learning theorists, however, who first alerted researchers to the fact that both agents of socialization and the objects of their attention are subject to the laws of learning.

*The interview as a research tool.* In addition to asking important questions, Sears also was responsible for methodological innovations that have left their imprint on current research practices. For example, he demonstrated that a wealth of information could be acquired from intensive but structured interviews of parents. Some of the features of the approach have been modified so that now we tend to focus on self-report concerning concrete and specific situations and actions that are reasonably fresh in the mind of the interviewee rather than on self-report based on more generalized questions (e.g., "How do you handle it if X is saucy or deliberately disobedient?"). Nevertheless, it was Sears et al. (1957) who demonstrated the usefulness of this major methodological tool for students of socialization.

*Setting the stage for future developments.* A final contribution of Sears and his collaborators was their refinement of a way of thinking about development that was a precursor of Bandura's sociobehavioristic and, ultimately, social cognitive approach to social development. Sears sensitized Bandura to (a) the importance of identification as a process in personality development, (b) the crucial nature of a dyadic analysis of social behavior, and (c) the problems of pursuing a drive model.

## Social Learning Theory: Bandura and His Colleagues

Albert Bandura did his graduate work at the University of Iowa, a choice dictated in part by the presence there of Kenneth Spence. Spence's association with Hullian theory made the activities of the Yale social learning group salient to Iowa psychologists. In addition, Bandura's first academic appointment was at Stanford University, where he arrived at the same time that Sears also joined the faculty there. It is hardly surprising then that his work should bear the strong impact of social learning theory. Bandura's first graduate student was Richard Walters, and the two began an immensely fruitful collaboration that resulted in two books. It was the second of these books that turned the study of social and personality development in yet another direction, inspired a large number of researchers for a great many years, and still remains a strong force in current thinking in developmental psychology.

The first book by Bandura and Walters was *Adolescent Aggression*, published in 1959; it was still very much in keeping with social learning theory as it then existed, a juxtaposition of psychoanalytic and learning principles. The data reported in the book came from interviews of adolescent boys—half of them engaged in delinquent activity—and their parents, as well as from the boys' responses to a projective test consisting of pictures and stories involving the possibility of deviant action. The theoretical structure drew on the old notions of drive and reinforcement. Specifically, Bandura and Walters elaborated a theory of dependency that suggested that aggressive boys were suffering from dependency anxiety arising from rejection and punishment of dependent responses and that the frustration created by neglect and rejection was in large part responsible for their antisocial behavior. Bandura and Walters also turned their attention to the role of identification in the internalization of controls over behavior. The theory of identification they put forward was that of Sears, and the predictions they made about the relationship between parental warmth, use of withdrawal of love, and conscience development was similar to those of Sears et al. (1957).

Even while the finishing touches were being put on *Adolescent Aggression*, however, its authors were being attracted to a different approach to social development. In their second book, *Social Learning and Personality Development* (Bandura & Walters, 1963), they rejected psychoanalytic ideas and adopted a "purer" learning approach. In fact, Bandura and Walters labeled the new theory a "sociobehavioristic approach," presumably to distinguish it both from the Yale form of social learning theory and also from the current operant or learning theory approach to personality development, deviant behavior, and psychotherapy that seemed to them deficient in its failure to consider social issues.

On the very first page of *Social Learning and Personality Development*, Bandura and Walters (1963) argued that most prior applications of learning theory (including Miller & Dollard's [1941] analysis of imitation) had relied too heavily on a limited range of principles established from studies of animal and human learning in situations involving only one organism. They noted as well the 1951 call of Sears for the study of principles developed in dyadic or group situations. Bandura and

Walters used analyses of displacement as an example of failure to appreciate the operation of social forces in human life. On the basis of animal learning data, learning theorists (e.g., Miller, 1948) had hypothesized that when an organism was both reinforced and punished for a given response, this would give rise to an approach-avoidance conflict, with the behavioral outcome of that conflict dependent on the relative strength of the approach and avoidance responses. Assuming that avoidance gradients are steeper than approach gradients, and using the notion that responses can generalize to stimulus situations similar to those in which they were originally learned, Miller was able to predict at what point along a continuum of stimulus similarity a punished response would reappear. The model, then, predicted behavior from knowledge of three variables only: the strength of instigation to a behavior, the severity of punishment of the response, and the dimension of stimulus similarity. What it failed to take into account, however, was the fact that original agents of punishment continue to act in ways that may influence the trajectory of the response in question. Through teaching, example, and control of reinforcement contingencies, they determine the exact nature of the displaced response. For example, the parents of highly aggressive boys punish aggression in the home but reward it outside the home (Bandura & Walters, 1959). Thus apparent displacement is, in reality, simply an account of discrimination training.

The most important omission of learning theories, however, lay in their account of observational learning.

The weaknesses of learning approaches that discount the influence of social variables are nowhere more clearly revealed than in their treatment of the acquisition of novel responses, a crucial issue for any adequate theory of learning. (Bandura & Walters, 1963, pp. 1-2)

Skinner suggested that novel responses could be acquired through the process of successive approximation, but the experimental work of both Bandura and Walters had drawn attention to a much more effective process: imitation. This process formed the central core of the new approach. Miller and Dollard (1941) had written a book about the role of imitation in social learning, but they saw it as a special case of instrumental conditioning, with social cues serving as discriminative stimuli and behavioral matches to those cues being reinforced. Indeed, in their book on personality and psychotherapy (Dollard & Miller, 1950), there were only three passing references to imitation, certainly an indication that it was not considered very important. But, for Bandura and Walters, imitation was elevated to a position of central importance. Contrary to the learning theory treatments of imitation, they documented that observational learning occurs even when a model's responses are not reproduced during acquisition and, therefore, could receive no reinforcement. In addition, they pointed to a fact previously unnoted, that the response consequence experienced by a model can influence the subsequent behavior of the observer by inhibiting or disinhibiting behavior. Thus behaviors that might previously have been displayed are suppressed even though the child has never actually had to engage in the behavior and be punished for it. Similarly, the stage can be set for acts that might have been suppressed in the past but that are en-

gaged in again through the acquisition of information gained by observing an unpunished model.

In their conception of imitation, Bandura and Walters (1963) differed in several respects from Sears. First of all, they gave up the Freudian term of identification. Second, they had no need for the concept of drive or for imitative responses to be reinforced in order for observational learning to occur. Third, they moved observational learning into primary position among learning mechanisms, arguing that it was a much more efficient technique of behavior change than either direct learning or successive approximation.

One would not . . . permit an adolescent to learn to drive a car by means of trial-and-error procedures, nor would one entrust a fire-arm to an armed services recruit without a demonstration of how it should be handled. (Bandura & Walters, 1963, p. 52)

### *Some Features of the Approach*

Throughout the 1960s and 1970s, Bandura presented a theory of social development that in fact has changed very little in its basic premises in the intervening years. It was markedly different from extant conditioning approaches, including that of Sears as well as those put forward by individuals with a more Skinnerian bent. Bandura's theory is mainly concerned with how children and adults operate cognitively on their social experiences and with how these cognitive operations then come to influence their behavior and development. Individuals are believed to abstract and integrate information that is encountered in a variety of social experiences, such as exposure to models, verbal discussions, and discipline encounters. Through this abstraction and integration, they mentally represent their environments and themselves in terms of certain crucial classes of cognitions that include response-outcome expectancies, perceptions of self-efficacy, and standards for evaluative self-reactions. These cognitions are believed to affect not only how they respond to environmental stimuli but also the sorts of environments they seek out for themselves. The discussion that follows demonstrates how Bandura emphasizes the role of cognition, abstraction, and integration in several areas that were of particular interest to him as he developed his own form of social learning theory. From now on, that form of social learning theory is referred to as social cognitive theory in keeping with contemporary terminology.

### *Observational Learning, Self-Regulation, Self-Efficacy, and Reciprocal Determinism*

*Observational learning.* According to Bandura's theory of observational learning (see Bandura, 1969, 1977b, 1986), there are four components involved in the process of modeling. Each of these components has a role to play either in the acquisition of information about events and of rules or in the decision to put this information to use in guiding behavior. First, the observer must pay attention to events—live or symbolic—that are modeled. Attention is determined by a variety of variables, including the power and attractiveness of the model as well as the conditions under which behavior is viewed: Television, for example, is a compelling medium for capturing and holding

attention. Second, when material has been attended to, it must then be retained, with the observed behavior represented in memory through either an imaginal or a verbal representational system. In the third step, symbolic representation now must be converted into appropriate actions similar to the originally modeled behavior. For instance, motoric reproduction of complex actions is much less likely to be successful than that of simple actions. The final process governing observational learning involves motivational variables. There must, for example, be sufficient incentive to motivate the actual performance of modeled actions.

*Self-regulation and self-efficacy.* A significant challenge for any theory of socialization is to explain how control over behavior shifts from external sources to the individual. How does one move from prosocial behavior that is maintained by expectation of externally administered consequences to behavior that is maintained by the self? Sears found the mechanism for internalization in identification. Bandura found it in self-regulation. People do not behave like weather vanes, constantly shifting their behavior in accord with momentary influences; rather they hold to ideological positions in spite of a changing situation. They can do this because they bring judgmental self-reactions into play whenever they perform an action. Actions that measure up to internal standards are judged positively, and those that fall short of these standards are judged negatively (Bandura, 1977b).

The source of self-regulative functions lies in modeling and in direct tuition. Adults respond differentially to children's behaviors, and this differential responsivity is one kind of information children take into account when formulating personal standards or ideas about which behaviors are worthy of self-blame or self-praise. Children observe that people prescribe self-evaluative standards for themselves as well, and this behavior is also considered when formulating personal standards. In addition to imitating the evaluative behavior of others, children are also reinforced by agents of socialization for engaging in self-regulation. In the end, self-regulation depends, then, on external forces. It may, however, also produce personal benefits that maintain it as, for example, when self-denial pays off in weight reduction for the fat person.

It is important to note that people do not passively absorb standards of behavior from whatever influences they experience. Indeed, they must select from numerous evaluations that are prescribed and modeled by different individuals as well as by the same individual in differing circumstances. This conflicting information must be integrated so that rules can be generated, or general standards formed, against which individuals judge their own behavior. The selection of standards depends on the weighting of such factors as disparities in perceived competence between the model and the self, how much a specific activity is valued, and the extent to which individuals see their behavior as a function of their own effort and ability rather than external factors over which they have little control.

Self-efficacy is a major determinant of self-regulation and has been a central focus of Bandura's research since the late 1970s. Bandura's interest in self-efficacy arose from his studies of the role of participant modeling in the treatment of phobic disorders. A striking feature of the outcomes of these studies was the extent to which individuals' perceptions of their own

feelings of effectiveness determined how easily changes in behavior and fear arousal were achieved and maintained. According to self-efficacy theory (first formalized in Bandura, 1977a), people develop domain-specific beliefs about their own abilities and characteristics that guide their behavior by determining what they try to achieve and how much effort they put into their performance in that particular situation or domain. Thus self-percepts provide a framework or structure against which information is judged: They determine how or whether individuals put into action the knowledge they have. (Self-efficacy should be distinguished from locus of control, which refers to individuals' beliefs that outcomes are a result either of their own actions or of chance.) When people have negative self-percepts about a situation, believing they are ineffective and do not have the ability to perform well, they become preoccupied with themselves as well as being emotionally aroused, two conditions that distract them from performing effectively. Beliefs about self-efficacy arise from the individual's history of achievement in a domain, from observation of what others are able to accomplish, from attempts of others to mold feelings of self-efficacy through persuasion, and from consideration of one's own physiological state during a task as a reflection of personal capabilities and limitations.

Self-efficacy theory has guided research in a variety of domains, including academic achievement, health-related behavior, parenting styles, children's self-concept, athletic performance, and clinical disorders. Recently, researchers interested in age-related changes in memory functioning have used it in an attempt to understand performance deficits in the elderly, suggesting that concerns over a believed decline in memory ability will be reflected in choice of activities, effort expended, and persistence of actions in tasks requiring memory. Thus training designed to show the elderly how efficacious they can actually be in the domain of memory should lead to an increase in self-efficacy and in subsequent memory performance (e.g., Rebok & Balcerak, 1989). The results of current research on maternal responsiveness and infant security, although guided by attachment theory, can also be fitted into a self-efficacy framework. Thus Bandura (1986, 1989) suggests that the social and cognitive competence observed in infants who are classified as securely attached in the Infant Strange Situation is a result of their highly developed sense of self-efficacy. This sense of self-efficacy is fostered by responsive parents, who react to the communicative behavior of their babies and who provide enriched environments that allow the babies to see that their actions on that environment can be efficacious. In this way accelerated social and cognitive development is promoted.

*Reciprocal determinism.* Social cognitive theory acknowledges the interrelationship between the individual, the environment, and behavior. In his formalization of triadic reciprocal determinism, Bandura (1977b, 1986) argues that behavior, the environment, and cognition as well as other personal factors operate as interacting determinants that have a bidirectional influence on each other. Thus expectations, self-perceptions, goals, and physical structures direct behavior, with the results of that behavior having an impact on those cognitions and biological properties. Environmental events in the form of modeling, instruction, and social persuasion affect the person, and the person in turn evokes different reactions from the environ-

ment depending on his or her personality and physical features. Finally, behavior determines aspects of the environment to which the individual is exposed, and behavior is, in turn, modified by that environment.

The concept of reciprocal determinism handles well one of the central and intriguing phenomena of human behavior to which attachment theorists, among others, have currently addressed themselves: the relative lack of plasticity of human behavior and the fact that some people seem continually to seek out relationships that have similar negative outcomes for them. Bandura argues that people contribute to their own life course by selecting, influencing, and constructing their own circumstances:

We are all acquainted with problem-prone individuals who, through their obnoxious conduct, predictably breed negative social climates wherever they go. Others are equally skilled at bringing out the best in those with whom they interact. (Bandura, 1977b, p. 197)

Competencies, self-efficacy beliefs, and self-regulatory capacities are acquired through experience, but they in turn determine the individual's experience in such a way that they are maintained.

### *Testing Hypotheses: The Research*

Bandura's theoretical writings have continued to be supported by his reports of empirical research. The research has been of two sorts: experimental analogues of socialization situations (particularly modeling) and demonstrations of procedures for achieving therapeutic change, such as vicarious desensitization and training in self-efficacy. The experimental analogues of socialization were hailed at the time of their appearance as clever simulations of complex social situations and relationships that enabled developmental psychologists to make major progress in their studies of processes involved in socialization. Thus they opened up new modes of investigation that freed researchers from reliance on interviews with their attendant limitations and enabled them to make causal inferences from data rather than having to guess at the direction of effect. The following are but a few examples of this work. Bandura, Ross, and Ross (1963) were able to take the complex and often nebulous concepts of three theories of identification—social power, status envy, and secondary reinforcement—and test them in a manageable way through manipulations of the characteristics and behavior of models to whom young children were exposed. A series of studies in which children viewed aggressive models showed with startling clarity how such exposure could lead to increases in the children's own aggression, rather than serving some cathartic function. They also demonstrated how knowledge could exist in the absence of performance, and that children could be fully cognizant of the nature and consequences of a given behavior without ever having engaged in it (see Bandura, 1973). Bandura and McDonald (1963) questioned the basic tenets of cognitive developmental theorizing concerning moral development by showing that, through a training procedure involving social reinforcement and modeling, the moral judgments of young children could be modified. Bandura and Schunk (1981) demonstrated how the enhance-

ment of perceived self-efficacy could improve children's cognitive skill development and their intrinsic interest in academic subjects.

### *Mechanisms of Development*

Bandura's analysis of development (e.g., Bandura, 1977a, 1986, 1989) is much more elaborated than was that of Sears and is a reflection of the refocusing on developmental issues that took place among North American psychologists in the 1960s. His position, however, stands in marked contrast to a traditional Piagetian one, being informed as well by a large body of recent research on children's changing information-processing capacities.

Bandura maintains that cognition involves knowledge and the skills for acting on that knowledge: Rather than conceptualizing the development of thinking in terms of discrete and uniform stages, he argues that it is best regarded as guided by specialized cognitive capacities that change over time as a function of maturation and experience. These capacities or skills involve a number of domains. One is attention. The ability to attend to relevant parts of the environment is essential for children to begin to see connections between or to acquire information about relations between actions and outcomes. But when they are young, children have attentional deficiencies—including difficulty in attending simultaneously to multiple cues and in maintaining attention for sufficiently long periods of time—that limit their proficiency. Children must also transform observed material to symbolic form, first by using imaginal symbols and then, as language develops, verbal ones. Memory is another important cognitive skill, enabling information about observed and personally experienced events to be retained so that it can guide the formulation of rules for behavior. Memory improves over time with the acquisition of language and a knowledge base that allows new information to be related to what is already known and hence remembered better. The ability to monitor the match between ideas about relations of actions and outcomes and the actual effects of actions, as well as to correct mismatches, is yet another cognitive ability necessary for successful behavioral functioning. And, finally, children's reasoning skills must be refined so that they can make and apply decision rules governing behavior.

Piaget argues that cognitive conflict produced by discrepancies between existing mental schemata and perceived events motivates changes in thinking. The social cognitive approach finds the source of change in maturation, exploratory experiences, and, most important, the imparting of information by social agents in the form of guided instruction and modeling. Parents and other teachers, for example, help young infants to learn contingencies between their actions and outcomes by making connections salient. They teach them ways to improve their attention and memory skills. They increase their knowledge base so as to aid comprehension and retention. When imparting moral standards, they use physical sanctions initially because of their children's poor command of language, but switch to more cognitively sophisticated techniques as language improves. As the child's social reality expands and as the nature and potential seriousness of possible transgressions change with age, moral standards of a more complex and generalized

nature are introduced. Parents both foster and respond, then, to their children's improved attentional skills, ability to process greater amounts of information, and increasing knowledge so as to promote greater sophistication in cognitive functioning over age. They also take changing social needs into consideration in their interactions.

### *Commentary and Evaluation*

Bandura's contributions to a theoretical understanding of human development have been of major significance for the field. To begin with, he rescued the process of identification from the confusion of hypothesized roots in dependency and acquired reinforcement and motivation, directing the theoretical focus to a more fruitful basis in cognitive processes, including attentional and memorial factors. Bandura's empirical contributions during the 1960s and 1970s provided ample evidence of the central role of observational learning in a diversity of areas, particularly aggression and self-regulation. The research also highlighted the variety of mechanisms mediating the acquisition of behavior through observational learning. It is doubtful that anyone today would argue that modeling does not play a dominant role in socialization. The concept of self-efficacy, although developed largely in the context of understanding therapeutic change, has major potential for explaining how children's changing self-concepts can affect their social and cognitive behavior.

Bandura must also be credited with quickly moving the social learning orientation from its roots in stimulus-response theory to one within information-processing theories of memory, imagery, and problem solving. The antipathy to mentalistic constructs evident in many learning theory formulations is in no way evident in even early presentations of his position: Mental processes are not discussed at length by Bandura and Walters in 1963, but they begin to appear in published work soon thereafter (e.g., Bandura, 1965). Bandura's analysis of modeling draws strongly on concepts of information coding, information storage, and development of rule-governed behavior. His descriptions of how human beings select and transform information and how they generate rules to guide their own behavior was a major achievement in understanding social developmental processes. Bandura did not break new ground in his specific cognitive formulations that relate directly to current information-processing approaches, but he was a pioneer in his fundamental interest in relating thought to behavior.

### *Some Issues and Reactions*

One question is why, in spite of being in the mainstream of North American cognitive psychology, social cognitive theory lost its position of preeminence in North American developmental psychology. This is not to say that Bandura's contributions went unheeded. Indeed, many of social cognitive theory's basic premises and mechanisms have simply become an accepted and thoroughly entrenched part of our beliefs about human social behavior. Yet, it is also true that the methodology favored by Bandura, as well as his less than central focus on development, was not in keeping with the changing zeitgeist of developmental psychology during the 1970s and 1980s.

Turning first to the (less important) matter of methodology, it was noted earlier that one of the exciting features of Bandura's work was his very clever use of laboratory analogues of real-life situations to test hypotheses, an approach influenced not only by that of learning researchers but also by the experimental work of Kurt Lewin. The ability to manipulate independent variables in controlled settings and to draw causal conclusions provided a solution for one of the great problems of the correlational approach of Sears, and it appeared to be another giant step forward in making the study of social development a truly scientific undertaking. The methodological soul-searching of the 1970s, however, detracted somewhat from Bandura's achievement in this regard, as a myriad of arguments were presented concerning the difficulties of the experimental approach: Experimental analogues of reality lacked ecological validity (Bronfenbrenner, 1977), psychology had missed out on the important first stage of science that involves observation and identification of phenomena later to be explained (McCall, 1977), and so on. Along with these warnings came technological advances that facilitated the use of observational methodology as well as statistical developments that enabled at least the inference of causal relationships from correlational data. In all this flurry of discussion and changing focus, experimentation lost its place of favor, and social cognitive theory through association may have lost some of its luster as well.

Nonetheless, the use of experimental analogues of social situations is not integral in any way to assessment of the tenets of social cognitive theory. The theory can be tested using either experimental or correlational methodologies and does, in fact, guide many current correlational investigations. Bandura's preference for the experimental method, moreover, is a useful reminder that no amount of statistical sophistication can allow us to draw causal conclusions in the absence of experimental manipulation, and that greater use of this methodology in the many areas that lend themselves to such an approach could prove beneficial in augmenting our understanding of social developmental processes.

More important to an understanding of the changed role of social cognitive theory in developmental psychology was the fact that Bandura was less concerned with developmental issues than he was with other parts of his theory. As Piagetian approaches became more familiar to developmental psychologists during the late 1960s and early 1970s, social cognitive theory began to be criticized for its lack of attention to the importance of changes with age that might have an impact on behavior (e.g., Coates & Hartup, 1969). Although Bandura responded to the increasing emphasis on changing cognitive capacities in his theoretical writings, there was little accompanying research that specifically addressed developmental issues and that seemed specifically generated by social cognitive theory. For that reason, other approaches that concentrated more clearly on matters of age-related changes in development moved to the forefront of interest for many developmental psychologists. This is probably the main reason social learning theory lost its central position.

### *Current Status of the Theory and Issues for Further Exploration*

Social cognitive theory has evolved over the years in a way that is responsive to new data. The fact that modifications have

been accomplished with relative ease speaks to the strength of the initial formulations: There is as yet no evidence of distortion or convolution that might ultimately lead one to a recommendation of abandonment. Its position in the mainstream of current cognitive psychology suggests that it can continue to guide the acquisition of new data as well as to accommodate research findings that have been generated by other theoretical approaches.

There are, of course, areas of social learning and social cognitive theory whose full potential has yet to be realized. Two are briefly mentioned. The first is obvious from the immediately preceding discussion: More attention needs to be paid to development. The second concerns the basic building blocks of social learning and social cognitive theory: reinforcement, punishment, reasoning, and modeling. Bandura concentrated his theoretical and empirical efforts on the latter; however, we still have much to learn about the first three techniques of behavior change.

*A theory of development.* Both Sears and Bandura set out to formulate a general theory of human behavior. In the course of this activity, their interests spanned the entire range of human psychological functioning. Thus their concern was not exclusively with developmental issues. This is particularly the case for Bandura, whose interest in clinical matters has always been at least as strong as his interest in child development. Although Sears was more clearly focused than Bandura on issues of personality and social development, his adherence to a theory that suggested that development could be viewed most easily as the acquisition of new behaviors caused him to pay relatively little attention to specific developmental issues. For Bandura, this has not been the case. What has been less emphasized in the empirical work, however, is the interaction between age and experience. The theoretical underpinning of such work has been provided by Bandura. But what we need now is a more elaborated demonstration of how cognitive skills in the domains of memory, attention, self-monitoring, and reasoning are modified through maturation and experience and how they then influence social behavior. We need to know how children at different ages go about the process of weighing and synthesizing information that leads to the kinds of cognitions emphasized by social cognitive theory. With such an elaboration, social cognitive theory may well hold greater promise than any other contemporary developmental theory for providing an integrated view of processes of social development.

*Further analyses of socialization techniques and processes.* The great contribution of social learning/social cognitive theory has been in aiding our understanding of how children are socialized to accept the standards and values of their society. Sears and his colleagues oriented psychologists to the importance of internalization, reinforcement, punishment, modeling, reasoning, and affectional relationships in their understanding of socialization. Bandura developed conceptions of modeling, dealt with the issue of affectional relationships particularly as they relate to modeling, and focused on mechanisms of internalization. However, in his belief in the primacy of modeling, he has been less concerned with reinforcement and punishment, which are, after all, central concepts of learning theory. Nor does reasoning receive the detailed attention it has been given by others.

It is notable that views about the relative effectiveness of punishment and reasoning in socialization have changed remarkably little since *Patterns of Child Rearing*. And yet there are a number of anomalies in the research and a number of unanswered questions that indicate the topic needs to be revisited. Is punishment always detrimental to the socialization process? Why are mothers who are flexible in their responses to children's misdeeds more effective as agents of socialization (Hoffman, 1970)? Why do children rate certain forms of reasoning as more acceptable than others depending on the domain of misdeed (Nucci, 1984)? Why are relationships between reasoning and internalization dependent on age of child, gender of parent, and socioeconomic class (Brody & Shaffer, 1982)? Does reasoning serve any other function than clarifying the contingency between behavior and outcome? Do different forms of punishment (e.g., withdrawal of love, physical punishment, withdrawal of privileges, and criticism) have different affective and cognitive impacts on children? Similarly, we still have much to learn about reinforcement. Reinforcement can be material in nature and presumably has a detrimental effect on the internalization of values. But it can also be psychological in its form, running the gamut from praise of a specific act, positive attributions about the physical or psychological characteristics of the actor, reflection of the pleasurable feelings of the object of an action, positive social comparison, or simple acknowledgement that an act has occurred. Are some of these more detrimental to internalization than others? How do they vary in their effects on behavior, and why? It is the answers to these sorts of questions that will be needed before we have a really complete understanding of how these basic and fundamental processes—ones that form the cornerstones of learning theory approaches—make their contribution to children's internalization of societal standards and values and, hence, to their social development.

## Conclusion

In the hands of Robert Sears and Albert Bandura, social learning theory has progressed from the initial achievement of bringing the language and data of learning theory to bear on an understanding of complex human functioning to a sophisticated application of modern information-processing concepts. Clearly, the theory in its present form offers an extremely useful way of organizing existing data as well as providing a framework for future research. The theory's potential for developmental psychology has yet to be fully realized. However, both Sears and Bandura, in company with their colleagues, have given us a substantial lead along the way. Our debt to them is great.

## References

- Bandura, A. (1965). Vicarious processes: A case of no-trial learning. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 1–55). San Diego, CA: Academic Press.
- Bandura, A. (1969). Social-learning theory of identificatory processes. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 213–262). Chicago: Rand McNally.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice-Hall.

- Bandura, A. (1977a). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1977b). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1989). Social cognitive theory. *Annals of Child Development*, 6, 1-60.
- Bandura, A., & McDonald, F. J. (1963). The influence of social reinforcement and the behavior of models in shaping children's moral judgments. *Journal of Abnormal and Social Psychology*, 67, 274-281.
- Bandura, A., Ross, D., & Ross, S. A. (1963). A comparative test of the status envy, social power, and secondary reinforcement theories of identificatory learning. *Journal of Abnormal and Social Psychology*, 67, 527-534.
- Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41, 586-598.
- Bandura, A., & Walters, R. H. (1959). *Adolescent aggression*. New York: Ronald Press.
- Bandura, A., & Walters, R. H. (1963). *Social learning and personality development*. New York: Holt, Rinehart & Winston.
- Brody, G. H., & Shaffer, D. R. (1982). Contributions of parents and peers to children's moral socialization. *Developmental Review*, 2, 31-75.
- Bronfenbrenner, U. (1960). Freudian theories of identification and their derivatives. *Child Development*, 31, 15-40.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513-531.
- Coates, B., & Hartup, W. W. (1969). Age and verbalization in observational learning. *Developmental Psychology*, 1, 556-562.
- Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.
- Dollard, J., & Miller, N. E. (1950). *Personality and psychotherapy: An analysis of thinking, learning, and culture*. New York: McGraw-Hill.
- Hoffman, M. L. (1970). Conscience, personality, and socialization techniques. *Human Development*, 13, 90-126.
- McCall, R. B. (1977). Challenges to a science of developmental psychology. *Child Development*, 48, 333-344.
- Miller, N. E. (1948). Theory and experiment relating psychoanalytic displacement to stimulus-response generalization. *Journal of Abnormal and Social Psychology*, 43, 155-178.
- Miller, N. E., & Dollard, J. (1941). *Social learning and imitation*. New Haven, CT: Yale University Press.
- Nucci, L. (1984). Evaluating teachers as social agents: Students' ratings of domain appropriate and domain inappropriate teacher responses to transgression. *American Educational Research Journal*, 21, 367-378.
- Rebok, G. W., & Balcerak, L. J. (1989). Memory self-efficacy and performance differences in young and old adults: The effect of mnemonic training. *Developmental Psychology*, 25, 714-721.
- Sears, R. R. (1941). Non-aggressive reactions to frustration. *Psychological Review*, 48, 343-346.
- Sears, R. R. (1951). A theoretical framework for personality and social behavior. *American Psychologist*, 6, 476-483.
- Sears, R. R. (1957). Identification as a form of behavioral development. In D. B. Harris (Ed.), *The concept of development* (pp. 149-161). Minneapolis: University of Minnesota Press.
- Sears, R. R. (1958). Personality development in the family. In J. M. Seidman (Ed.), *The child* (pp. 117-137). New York: Rinehart.
- Sears, R. R. (1963). Dependency motivation. In M. R. Jones (Ed.), *Nebraska Symposium on Motivation* (Vol. 11, pp. 25-64). Lincoln: University of Nebraska Press.
- Sears, R. R. (1975). Your ancients revisited: A history of child development. In E. M. Hetherington (Ed.), *Review of child development research* (Vol. 5, pp. 1-80). Chicago, IL: University of Chicago Press.
- Sears, R. R., Maccoby, E. E., & Levin, H. (1957). *Patterns of child rearing*. Evanston, IL: Row, Peterson.
- Sears, R. R., Rau, L., & Alpert, R. (1965). *Identification and child rearing*. Stanford, CA: Stanford University Press.
- Sears, R. R., Whiting, J. W. M., Nowlis, V., & Sears, P. S. (1953). Some child-rearing antecedents of dependency and aggression in young children. *Genetic Psychology Monographs*, 47, 135-234.
- Yarrow, M. R., & Yarrow, L. J. (1955). Child psychology. *Annual Review of Psychology*, 6, 1-28.

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