



2. Four Views of Learning and Development

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DESIGNERS of programs for children, in deciding upon goals, objectives, means of implementation, and evaluation techniques, have obviously used various sets of guidelines. Disciplines such as history, sociology, and political science traditionally have influenced the choices made in program planning and implementation. The ASCD Early Childhood Education Council, however, decided to examine programs primarily through the rubrics of developmental psychology and/or child development. These disciplines¹ have been concerned with understanding, describing, and predicting human behaviors, particularly learning, and have coexisted with developments in the broad field of psychology.

Whatever these fields have been or may be, developmental psychology and child development can now provide the framework for understanding the study of man. Also, it is from the context of the study and theorizing of psychologists that many program developers seem to draw most content. As Michael Scriven² has pointed out, much of psychology has been common sense through the ages and, in contrast to other disciplines, many psychological problems, if not always solved, have been identified and discussed.

This does not mean that we do not have

a long way to go before we will adequately understand human development and learning in all its variety. Neither does it mean that many existing early childhood programs are consciously based on any one of the four views described in this article. These views are presented as four of the best available frameworks which can be used to help shape our understanding of what early child development involves and how programs offered to young children may be made better. We are currently in a situation analogous to that described in the classic tale of the four blind men and the elephant. Each of the four contrasting views of man is far from complete; the four views are in many ways far more complementary than competitive, in the same way that neither the trunk nor the leg describes the whole elephant.

Approaches to Research

Boyd McCandless³ has discussed four sets of contrasting approaches to research that, according to his judgment, may best be employed to typify the kind of work found in child learning and behavior:

Normative-Explanatory. The normative approach is one that is concerned with adequate descriptions of various behaviors as

¹ John Nash. *Developmental Psychology*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970. pp. 4-6.

² Michael Scriven. "Views of Human Nature." In: T. W. Wann, editor. *Behaviorism and Phenomenology*. Chicago: University of Chicago Press, 1964. pp. 165-67.

³ Boyd McCandless. *Children*. New York: Holt, Rinehart and Winston, Inc., 1967. pp. 59-64.

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they occur at different stages or ages in the lives of a group of children. The explanatory mode is an attempt to discover the kind of relationships that can help one predict future behaviors. The work of Arnold Gesell and his associates is a good example of both of these approaches, although not all explanatory theories focus on the principle of maturation.

Historical-Ahistorical. Ahistorical research is concerned with present behaviors only and is not wrapped up with whether or not past events made any difference on the behaviors observed. A majority of behaviorists would follow such a regimen; one of the most famous and best known is B. F. Skinner. His work has also influenced child programs such as those of Bushell, Englemann, and Becker.

Historical approaches have something in common with explanatory methods, but are primarily focused on the past and its relationship to the present. The classic psychoanalytic method involves a retrospective search for the roots of contemporary behavior patterns in which change is desired. Historical research is most fully represented in longitudinal studies carried out over several decades (e.g., the Berkeley Growth Study).

Naturalistic-Manipulative. Research with children has often been done through a naturalistic approach in which the child is studied in his own setting at home, in his neighborhood, or at school. This method is exemplified by the work of Roger Barker and Herbert Wright. More recent manipulative studies of children have been largely confined to short-term laboratory exercises focused on such factors as serial and paired-associate learning and problem solving, in which hypotheses about learning are tested through trying to cause learning to occur. Due to ethical considerations, there has been a good deal of hesitancy to "tamper" with children in their larger environment. In fact, until the present decade, the majority of laboratory manipulative studies were conducted with animals.

Atheoretical-Theoretical. The early history of child study showed a lack of concern and even a disdain for theory. Skinner pro-

fesses to be atheoretical, while Piaget has developed a rather comprehensive theory. Such prominent child development specialists as Edward Zigler⁴ have made reasoned pleas for more attention to theory as child learning is investigated.

Hayne Reese and Lewis Lipsitt⁵ have proposed two additional types of research methods that need to be added to the McCandless list:

Basic-Applied. Basic research has been conducted primarily with the hope of adding to scientific knowledge without regard to whether or not the knowledge would ever be useful in practical or technological matters. Conversely, applied research is conducted specifically to advance technology or practical matters. Often, however, basic research can be applied to practical issues. Moreover, problems rising from practical experience can suggest definite areas in which basic research is needed.

Single Subject-Group. Analysis of a single subject (rather than a group) has indicated how one person can perform or respond across time or tasks. Present statistical knowledge is not able to cope with single subjects, while group research has been almost wholly dependent upon use of statistical techniques. Whether or not differences obtained between and among groups were significant has had to be determined.

Clearly, research methods in child development have differed and continue to be diverse. What kinds of data one collects and how they are interpreted depend in large measure on what one considers to be the "proper research methods." In addition, some investigators (for example, Bijou and Baer⁶) focus on development to the exclu-

⁴ Edward Zigler. "Metatheoretical Issues in Developmental Psychology." In: Melvin Marx, editor. *Theories in Contemporary Psychology*. New York: The Macmillan Company, 1964. pp. 341-67.

⁵ Hayne W. Reese and Lewis P. Lipsitt. *Experimental Child Psychology*. New York: Academic Press Inc., 1970. pp. 15-16.

⁶ Sidney W. Bijou and Donald M. Baer. *Child Development, I: A Systematic and Empirical Theory*. New York: Appleton-Century-Crofts, 1961.

sion of learning; others (for example, Gagné⁷) have the opposite focus; while still others (for example, Piaget⁸) use both concepts and show a relationship between them.

All continue to be at variance with one another in regard to the theory or approach that "best" describes and explains behavior. Educators, in turn, decide which explanation best suits their philosophical stance, hunch, or whim, and then try to apply it to educational settings. The major approaches to developmental psychology as they apply to children have recently been categorized by Jonas Langer⁹ into three major groups: "mechanical mirror" theory, "organic lamp" theory, and psychoanalytic theory.

Lawrence Kohlberg¹⁰ has arranged these approaches into another set of categories: behaviorist, cognitive-developmental, and nativist-maturational. Whereas Kohlberg omits the psychoanalytic approach, Langer includes the maturational view in his description of both the psychoanalytic and the "organic lamp" categories. Neither Langer nor Kohlberg makes any mention of the neurophysiological theorists or the work of phenomenologists; and, interestingly enough, most programs for children more nearly follow the Langer and Kohlberg views.

Four Views of Development

In this article, four views will be described separately: behavioral-environmental, cognitive-transactional, psychosexual-personality, and normative-maturational.

Behavioral-Environmental View

The behavioral-environmental view includes the reinforcement-learning theory of Skinner, the developmental behavior-analysis approach of Bijou and Baer, and the cumulative learning model of Gagné. In its more classic form, this has been known as "S-R" psychology or, simply, behaviorism.

In brief terms, this view is strongly allied with a receptive or passive orientation to human development based on the belief that the environment, within certain broad genetic limits, shapes the man. The child becomes the adult his environment has made him. In the view of Bijou and Baer, each child is thought to be born with the necessary physiological equipment and a basic set of responses. As a result of the outward forces that impinge upon him, each of these basic responses becomes increasingly associated with: (a) new cues to set it off (including other responses), and (b) new combinations of reinforcement contingencies. Complex behavior patterns are thus built up from simpler ones through environmental shaping. The main mechanism for this shaping is reinforcement, or patterns of reward and punishment, provided by the environment. Reinforced behavior continues; unreinforced behavior does not.

The research foci of the behavioral-environmental approach are identified in the name. They are primarily observable behavior (responses) and the stimuli from the environment which elicit and sustain (or extinguish) these responses. Whatever "structures" may be involved are described in terms of observable cue-response-reinforcement patterns rather than in terms of mental impressions or any inner psychic life a child may have. Although some psychologists have been making increasing mention of "mediating variables," on the whole such variables are at this point considered to be unresearchable. In other words, it appears much simpler for the behaviorist to be concerned with responses than to be concerned with any internal reactions or impressions. Nevertheless, it is easy to see how the notion that psychological being is behavior could be

⁷ Robert M. Gagné. *Conditions of Learning*. New York: Holt, Rinehart and Winston, Inc., 1965. Also: Robert M. Gagné. "The Contribution of Learning to Human Development." *Psychological Review* 75: 177-91; 1968.

⁸ Jean Piaget. "Development and Learning." In: R. E. Ripple and V. N. Rockcastle, editors. *Piaget Rediscovered: A Report of a Conference on Cognitive Studies and Curriculum Development*. Ithaca, New York: School of Education, Cornell University, March 1964.

⁹ Jonas Langer. *Theories of Development*. New York: Holt, Rinehart and Winston, Inc., 1970. pp. 4-11.

¹⁰ Lawrence Kohlberg. "Early Education: A Cognitive-Developmental View." *Child Development* 39 (4): 1013-62; December 1968.

attractive to a wide group of psychologists and educators.

Essentially, the behavioral-environmentalist view contributes to educational programs that depend on external rewards and punishments. A major focus of these programs is to "control" the child's specifically defined behaviors in the service of external program goals and objectives. Also involved would be a regular schedule of criterion-referenced measurements of a learner's overt behavior change.

Cognitive-Transactional View

The cognitive-transactional view of human learning and development includes the genetic epistemology of Jean Piaget and the Geneva group,¹¹ the organismic-developmental approach of Heinz Werner, and the information-processing approaches of Jerome Bruner and J. McV. Hunt. The cognitive-transactional view has ties to the "reconstructionism" of John Dewey and to the cognitive views of the Gestaltists and the behaviorist Edward Tolman.

In contrast to the behaviorist-environmental outlook, the cognitive-transactional approach views man as a naturally active, seeking, adapting being who learns and is shaped through continual transactions (most of which he initiates) with the environment.

Jean Piaget is often considered to be the chief proponent of this point of view. According to Piaget, the child is born with a set of sensorimotor operations (or responses) to perform upon his environment in order to "know" it and himself. As a result of these transactions, and physiological maturation, the original sensorimotor operations are: (a) built into increasingly more complex patterns; (b) internalized so they can be carried on mentally; and (c) tied to language symbols and language systems.

This development takes place on a continuum of three main hierarchical stages: the sensorimotor, in which the physical environment is acted upon directly; the con-

crete operations stage, in which classes of objects and actions are formed, mentally related to each other, and represented in language; and the stage in which formal operations are performed upon the classes and series of the second stage with the addition of hypothetical-deductive thinking and problem solving. The main mechanism for this process is cognitive dissonance, or the confrontation of discrepancies between the child's current conceptions of aspects of the world and input that does not fit. If there is an event which he cannot assimilate to his existing mental structures, he must accommodate those structures to it. This mechanism is called by Piaget "equilibration."

Research on the cognitive-transactional approach has until quite recently been focused on engaging children in "experiment-interviews" in which they are typically asked to make certain judgments about selected phenomena (or give solutions to problems) and then to explain their judgments. The nature of the cognitive structures thought to be the basis of behavior is then inferred from the pattern of answers and explanations given by children of different age levels. Piaget has shown that the thought and behavior of the child are governed by the inner logic of his stage of development. The child's conception of the world is in many ways quite different from that of the adult—and often different beyond the unsuspecting adult's wildest dream.

In the terms used in the beginning of this article, this view can be described as explanatory, historical, theoretical, and basic research-oriented to individuals.

Educational programs that reflect the cognitive-transactional view are concerned with planning environments that respond to the child and are designed to "match" his level of development, as well as permitting the child a good deal of choice of his own activities. In practice, programs said to be based on this view range widely in scope from the "open curriculum" of the "pace-maker" British Infant Schools to those that involve carefully structured materials and equipment on which children practice sensorimotor and concrete operations.

¹¹ Jean Piaget and Barbel Inhelder. *The Psychology of the Child*. New York: Basic Books, Inc., 1969. pp. 1-159.

The psychosexual-personality view can, of course, be traced back to the psychoanalysis of Sigmund Freud. Of more direct relevance to the understanding of children's development are the adaptations that have been made of Freud's theory as represented by the work of Anna Freud, Erik Erikson, and Robert White.

Classic psychoanalytic theory views man's behavior as being governed primarily by his irrational impulses and affectivity. How the child copes with each of a series of psychosexual stages through which he must pass determines the kind of adult he will become, and whether he will be relatively rational and productive ("normal").

A child is thought to be born with certain basic drives and appetites (represented by the "id"), which must be brought under control (by the "ego"), so that the child may function acceptably in society (represented by the "superego"). Erikson¹² sees the channeling of these drives, presented to the child, as a number of stages or "crises." Each of these drives is identified with a particular part of the body, and in each there is a focal developmental issue at stake: oral-sensory (trust vs. mistrust), muscular-anal (autonomy vs. dependence), locomotor-genital (initiative vs. guilt), latency (industry vs. inferiority), and puberty-adolescence (identity vs. role conflict). The mechanism involved is partly environmental and partly maturational.

The research approach of those who hold this view has been based largely on case studies of individuals. Such individuals had been referred for clinical treatment because their symptoms appeared to be at least partially a result of their unsuccessful resolutions of certain developmental crises. However, increasing attention has been given recently to the more positive task of identifying the characteristics of the "competent" child and the conditions under which a child becomes competent.

¹² Erik H. Erikson, *Childhood and Society*. Second edition. New York: W. W. Norton & Company, Inc., 1963.

Educational programs based upon a psychosexual-personality view are designed to help the child learn to cope with the world as competently as possible. Development in language, cognition, and perceptual motor abilities is considered important because of its contribution to the broader development of competence and healthy functioning in the world. Stated negatively, the interest is in helping the child pass through his crisis stages with as few scars as possible, and the latter stage of early childhood through the beginning of middle childhood is viewed as the time when the human would be most amenable to conflict-free learning.¹³

Normative-Maturational View

The normative-maturational view is best represented by the work of Arnold Gesell and his associates.¹⁴ It is also quite compatible with the views of Konrad Lorenz and other "evolutionists."

In this approach, man is viewed as being primarily the product of his genetic inheritance, and only secondarily the product of his experience in the environment. The child becomes an adult in much the same manner that an acorn becomes an oak.

Each child is thought to be born with a full set of genes to guide his development. Given the proper nourishment and physical-psychological setting, he will achieve each stage of growth and development on a predetermined schedule. Therefore, environmental experience influences only (a) the relative ease with which each developmental stage unfolds and the fullness to which it unfolds, and (b) the particular shape which more general developmental patterns take; for example, the general pattern, language, might be particularized to "English." Physiological maturation is the main mechanism of development.

The research focus of the normative-

¹³ Rudolph Ekstein and Rocco Motto. *From Learning for Love to Love of Learning: Essays on Psychoanalysis and Education*. New York: Brunner Mazel Publishers, 1969. pp. 1-278.

¹⁴ Arnold Gesell et al. *The First Five Years of Life: A Guide to the Study of the Preschool Child*. New York: Harper & Brothers, 1940. pp. 1-190.

maturational view has been to gather normative data on development to determine the average chronological age range in which specific aspects of social, emotional, intellectual, and physical development are expected to take place, or to reach a given level. Gesell's report on his work with middle class children has given us what are perhaps the most complete descriptive data in regard to children in America.

In the terms used earlier, these data are the result of normative, historical, naturalistic research on groups.

Educational programs based on the normative-maturational view attempt to provide the child with a rich, emotionally supportive environment in which there is maximum leeway allowed for self-expression and minimum imposition of knowledge through verbal communication or other means. The concept of "readiness," which is central to this view, involves matching to a child's stage of development the materials presented to the child and the demands made upon him.

As has been suggested, each of the views of human development and learning which have been presented has tended to specialize in different dimensions of development, although there is some overlap. The behaviorist-environmentally oriented studies have, for example, dealt with the problem of how to bring about behavior change, but have left complex patterns of behavior relatively untouched. The cognitive-transactionally oriented studies have mapped elaborate stages of development inclusive of both simple and complex behavior, but are only beginning to turn to the problem of how this development is brought about. The concept of competence which several investigators in the psychosexual-personality category have developed may turn out to be a better organizing focus for the cognitive-transactional theorists than their own, and yet these two groups have traditionally taken separate paths of study.

It should be remembered that all of these theoretical views are as yet incomplete, still being developed.

According to Ray Loree, "Theories are not proven or disproven. No single present day psychological theory is sufficiently com-

prehensive to encompass all the research data that are relevant to educational problems."¹⁵ Also, many programs for children may use material from more than one point of view. Nevertheless, the manner in which one views child development as a whole, and the growth of an individual child in particular, will have much bearing on the kind of environment and curriculum that is planned.

The crucial issue within the nuances, arguments, and "hair splitting" that exist among theorists is to decide the following:

- Which theories have relevance for today's needs?
- Are programs incorporating strong points from each?
- What is best for children? Who decides?
- In what framework will we operate?

References

The work herein has not covered many nuances that will be found in any serious study of learning theories and systems. Space restriction and adaptation to the history of early childhood development have of necessity limited a more complete discussion. Interested readers are referred to the following sources for a more complete overview:

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Robert M. W. Travers. *Essentials of Learning*. New York: The Macmillan Company, 1967.

T. W. Wann, editor. *Behaviorism and Phenomenology: Two Contrasting Bases for Psychology*. Chicago: University of Chicago Press, 1964. □

¹⁵ M. Ray Loree. *Psychology of Education*. Second edition. New York: The Ronald Press Company, 1970. p. 8.

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