Significant Books

Reviewer:
James A. Phillips, Jr.

Schooling for Individual Excellence.


The Cognitive Processes. Robert J. C. Harper, Charles C. Anderson, Clifford M. Christensen, Steven M.

What could be more timely than a discussion of excellence in education? What more central to the achievement of excellence in teaching and learning than a thoroughgoing knowledge of the learning process? What more crucial to contemporary learning theory than developments in the field of cognition? Though related in topic, dissimilarities are noted among the central purposes of these volumes. Such divergencies warrant individual discussions of these books.

In his introduction Dr. Parker asserts that American education is on dead center. The purpose of his book is to explore possibilities for new arrangements within the school to move it off dead center. The solution to the problem, Parker holds, is to help each individual attain his maximum growth potential. Early chapters are devoted to assessing the current state of education and citing several assumptions which he calls invalid and upon which educational decisions are too frequently based. Later chapters concentrate on enumeration of proposals designed to better individualize instruction. Throughout the book significant questions are raised regarding the efficacy of commonly utilized means for individualizing instruction such as ability grouping and tracking systems.

The author holds out considerable hope for his "Multilevel Philosophy." This is his terminology to explain the concept of teachers working with pupils as individuals so as to capitalize upon the wide range of potentialities discovered in any single classroom, regardless of the basis upon which pupils were assigned to that classroom. Implementation of the "Multilevel Philosophy" requires a "science of schooling"—a concept of schooling based upon a clear distinction between what the author terms training as opposed to education. Among his suggestions for attaining this duolithic achievement is utilization of whatever technical devices and programmed materials might best serve the ends of the program. Dr. Parker’s recommendations are replete with proposed outlines for school and class organization, and check-lists for evaluating individual learning opportunity for pupils in one's own school setting.

While the book may serve to re-explode some oft-held myths about pupil similar-
ity within a class group, serious-minded educators who have addressed themselves to this problem for many years will find few fresh ideas. Unfortunately Dr. Parker oversimplifies the answers to highly complex problems. The greatest contribution of the book may be to acquaint persons unfamiliar with the nature, impact and demands of individual differences with the pervasiveness of this fact. Worthy of note are Dr. Parker's statements emphasizing the key role of the teacher in the learning process. Also, not to be overlooked, is his contention that a crucial deterrent to instructional improvement is the teacher's lack of functional knowledge of the nature of the learning process, especially in the realm of cognition.

Learning: A Survey of Psychological Interpretations presents a summary of systematic interpretations of learning in light of their importance "both in the science of psychology and in the application of psychology to education." In this brief treatment of an extensive field, Dr. Hill's comments have been wisely restricted to selected representative theorists. The volume fulfills two dimensions. First, it presents a description of major theoretical positions past and present, and second, analyzes and interprets these positions as a basis for conceptualizing about the future.

The initial chapter describing the nature and function of theories, and defining key terms is well designed and encourages further reading. The author states that in attempting to classify psychological interpretations of learning, he finds the familiar division into connectionist and cognitive theories still the most useful one. He explains the difference between learning in the laboratory and learning in the school, commenting on the limitations of generalizing about complex behavior situations from controlled laboratory studies of simple behavior.

Although clear distinction is made between connectionist and cognitive positions, theoretical positions are identified and discussed in such a fashion that the reader gains a feeling of theoretical evolution. As a position becomes more adequately understood, and its limitations recognized, it may become modified or replaced with a more adequate theoretical framework. The reviewer considers this an asset of the volume by Hill.

The author begins his discussion with contiguity theories of Watson and Guthrie, proceeding to reinforcement theory as developed by Thorndike and interpreted by Skinner and Miller. These interpretations are developed so as to set a stage for examination of cognitive interpretations of learning such as Lewin's system and Tolman's purposive behaviorism.

Dr. Hill devotes an entire chapter to discussion of the work of Clark L. Hull by way of presenting a major formal connectionist theory. He reflects that Hull has "probably had more effect on the psychology of learning than any other theorist in the past thirty years" (p. 129).

The book concludes by noting the unfinished nature of learning theory, the recent developments on many fronts, and the hope for a better, all pervasive theory of learning. The book achieves its purpose of presenting major theoretical positions and setting forth the practicality of theorizing. The volume is well planned for educators and is a good introductory survey of contemporary learning theory for basic reading. It is refreshing to commend this book for its emphasis on the practicality of theorizing for teachers, as well as social scientists.

The Cognitive Processes, a collection
of selected excerpts from some 50 psychologists, is an outstanding contribution to psychological and educational literature. Contemporary educational psychology has long needed a systematic reporting of significant research on the cognitive processes, a topic clearly central to human learning. In preparing the compendium, the editors recognize, as did Hill, "the dilemma that what is most adequately developed in psychology is least relevant in practice" (p. v). (Laboratory studies of simple behavior patterns are not always adequate for generalizing to complex behavior situations such as persist in the classroom.)

The organization of the book is carefully done.

Part One, dealing with a general arousal theory of motivation, is central to the neo-behavioristic and cognitive processes proposed by psychologists like Hebb and Osgood, presented in Part Two. Non-associative approaches to cognition comprise Part Three, while the computer model and computer simulation of cognitive processes are presented in Part Four. In Part Five the generality of cognitive theory is demonstrated in the context of personality and motivation. Part Six deals with development and cognition in children (p. vii-viii).

Selections within the sections are appropriately chosen to reflect key developments in the various aspects of theorizing. Editorial introductions to the parts of the book, though brief, are adequate to introduce the readings. If there is a weakness of this book, it is the limited editorial analysis of the papers.

Teachers of young children should be particularly interested in Part Six. Articles in this section report studies of problem-solving processes, children's language development as related to the development of cognitive functioning, and children's probability learning.

Readers expecting a "how-to-do-it in the classroom" implementation will be disappointed. This volume presents theoretical constructs which research-minded teachers will find helpful in understanding and explaining human behavior.

Students and researchers of the learning process and of curriculum development should be familiar with this significant publication. Both Parker and Hill have clearly pointed to the educator's need to be cognizant of theories and experimentation in the cognitive domain. The Cognitive Processes is contemporary, well organized and possessed of far-reaching implications.

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Editorial—Goodwin

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