

A photograph of three children playing in a sandbox. On the left, a young boy with light skin and short brown hair, wearing a striped t-shirt, is kneeling and pouring sand from a small cup into a white bucket. In the center, another young boy with light skin and short brown hair is also kneeling and playing with the sand. On the right, an older boy with dark skin and short dark hair, wearing a striped t-shirt, is kneeling and looking down at the sand. The bucket has a cartoon cat on it. The background is a wooden fence. The entire image has a warm, orange-brown tint.

Third Edition

Children and Adolescents

Interpretive Essays on Jean Piaget
David Elkind

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INTERPRETIVE ESSAYS ON JEAN PIAGET

THIRD EDITION

DAVID ELKIND

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Children and Adolescents

In loving memory of my parents,
Peter and Bessie

Preface to the Third Edition

It is both a pleasure and a responsibility to introduce still a third edition of *Children and Adolescents*. The pleasure, of course, comes from the continued friendly reception the book has received from a wide variety of audiences. It really is pleasing to know that readers still find the book an interesting introduction to Piaget and the implications of his work for educational and clinical practice. On the other hand, the responsibility comes from having to add to the book in such a way as to bring it a little more up to date while retaining the qualities which accounted for the positive reception of the earlier editions.

Therefore, I have added four new pieces. Article 13, entitled "Work Is Hardly Child's Play," is an attempt to compare Piaget's theory of play with that of Montessori, Freud, and Erikson. This is a needed addition because I have not dealt with Piaget's theory of play before. The aim of the piece, however, is practical as well as theoretical. The equation of work and play in early childhood education has been, to my mind, unfortunate. Particularly in early childhood education, work and play serve different functions and need to be dealt with differently in the classroom. The article suggests what those functions are and how the two forms of activity can be recognized and supported.

A second addition, Article 14, written with Donna Hetzel and John Coe, relates Piagetian theory to British primary education.

The article argues that the informal programs in the British infant schools are a concrete embodiment of Piagetian theory applied to education. I must confess that the piece has been included in part for political purposes. The move toward child-centered education, as described in this piece, has lost much ground since its heyday in the late sixties and early seventies. In the conservative climate of today, it seems worthwhile to re-assert the values of child-centered, informal education.

The other two pieces also deal with education. Article 12, entitled "Beginning Reading: A Stage-Structure Analysis," is a more detailed working out of the theory of beginning reading presented in the earlier editions. It also includes a survey of recent research that supports that theory. I have left the original article on reading, logic, and perception in as well to show the continuity in the development of the ideas. The whole thrust of Piaget's psychology is that learning and understanding take time and involve much relearning and reunderstanding. Perhaps the two pieces, separated by almost a decade, will highlight the progressive restructuring of ideas.

Article 15, entitled "Adolescent Thinking and the Curriculum," reflects the current interest in Piaget's work at the level of secondary education. Oddly enough, perhaps because of the misuse of Piaget in the elementary curriculum movement of the sixties, one hears little of Piaget in contemporary discussions of elementary school curriculum. But at the secondary level it is another story and there is a kind of grass roots interest, particularly by science and math teachers, in the relation of curriculum materials to adolescent mental abilities. The paper outlines some concepts that would seem to be essential for the successful analysis of curriculum materials from a Piagetian perspective.

In making these additions I realize that I have emphasized the education implications and interpretations. This is not meant to slight the clinical implications of Piaget's work, because I believe that they are of great importance. It is just that the clinical impli-

cations are more involved and take longer to work out. Perhaps, if there is a fourth edition, I will be able to balance the scale.

D.E.

Medford, Mass.

November 1980

Preface to the First Edition

Jean Piaget, the Swiss psychologist, has been studying the development of children's thinking for more than fifty years. Only in the last decade, however, has American psychology and education come to recognize that Piaget is in fact one of the giants of developmental psychology. As the late J. Robert Oppenheimer wrote on the occasion of Piaget's seventieth birthday:

It is clear to me that in its scope and in its conceptions [your work] is both a product of our times and the source of great changes coming into being in the way we think of nature and of ourselves as part of nature and ourselves as knowers of it. You have been an inspiration to your colleagues and have brought enlargement to man's understanding and his methods of seeking understanding.

The impact of Piaget's thinking upon present-day child psychology and education is becoming increasingly evident. He is the subject or partial subject of a growing number of books (three in the last year) and articles (30 in 1956; 80 in 1961; and 193 in 1966) in psychology, and is leaving an equally powerful impress on education. At the 1969 annual meeting of the National Educational Research Association in Chicago, eleven of the sessions dealt directly or indirectly with Piaget's research and theory. Piaget is, moreover, in very great demand as a lecturer in this country despite the fact that he speaks only French and must travel with an interpreter. Although he curtails his travel for reasons of health and because it interferes with his work, Piaget nonetheless man-

aged, in 1967, to lecture at the University of Montreal, as well as at Clark University in February, to address the American Orthopsychiatry Association, and to give three talks at New York University in March, and to lecture at the universities of Minnesota and Michigan in the fall.

Piaget's international reputation is also growing at a rapid rate and his books have been translated into at least seven different languages. He has even become an issue in the Sino-Soviet split, for while Piaget is *persona grata* in the communist countries of Eastern Europe, and has lectured in Warsaw, Prague, and Moscow, he is called "the bourgeois psychologist Piaget" by the Chinese Communists. A rough index of the growth of Piaget's international fame is the list of his honorary degrees. Harvard gave Piaget his first honorary degree in 1936. In the forties he received three degrees (from the Sorbonne, Rio de Janeiro, and Brussels) while in the fifties he received four (from the Universities of Chicago, McGill, Warsaw, and Manchester). In the past decade he received six (from the Universities of Oslo, Cambridge, Brandeis, Montreal, Aix Marseille, and Pennsylvania). In 1952 he was also made Professor of Child Psychology at the Sorbonne, the first non-Frenchman to be given a chair at that University since Desiderius Erasmus in 1530!

How can we account for the recent surge of interest by American psychology, and particularly American education, in Piaget after the many years during which he worked in relative obscurity? The answer is obviously a complex one, but it most certainly involves the crisis in education which occurred in the mid-nineteen fifties. The crisis was a product of many different factors including the negative reaction to the "life adjustment" program of progressive education; the lack of teachers and facilities for the deluge of "war babies" which suddenly inundated the schools; the demand of an increasingly technological society for highly trained personnel; and the launching of Sputnik by the USSR in 1957 which made competitive America aware of the fact that its major ad-

versary had drawn ahead in the race for technological achievements and innovation.

Even before Sputnik, however, a spate of books appeared that were highly critical of the educational establishment. Among these were Arthur Bestor's *Educational Wastelands*, Robert Hutchins's *The Conflict in Education*, Albert Lynd's *Quackery in the Public Schools*, and Paul Woodring's *Let's Talk Sense About Our Schools*. All of these books appeared in 1953 and they were followed by many more of the same genre. The brunt of the criticism contained in these attacks was that progressive education's concern with adjustment and educational professionalism had gone far beyond the mandate given to the schools. According to Arthur Bestor, the goal of education was not the personal adjustment of pupils, but rather "The deliberate cultivation of the ability to think." What was needed, the critics said, was to take educational planning out of the hands of the professional educators and to put it under the control of the scholars and scientists who knew their subjects at first hand.

As a consequence of this criticism and abetted by financial support of government agencies such as the National Science Fund and the U.S. Office of Education, centers for the study of curriculum were established at major universities across the nation. In many cases these centers were under the direction of a university professor who had proven himself a talented teacher and who was concerned with making his subject accessible and meaningful to children. Robert Karplus, the physicist who heads the Science Curriculum Improvement Study at the University of California at Berkeley, and Max Beberman, the mathematician who heads the University of Illinois Mathematics Project (and who is the major exponent of the "new math") are among the most prominent of the new breed of curriculum planners.

It is in the context of this search for what is now called "The New Curricula" that the surge of interest in Piaget must be understood. When the curriculum planners turned to psychology for

guidance as to how the child acquires mathematical, scientific, and social science concepts they found little of value to them. Psychologists concerned with the learning process had, in order to study the process experimentally, turned to lower organisms, most notably the rat. Those psychologists who were concerned with children were, on the other hand, influenced by Freud and were primarily interested in personality and the effects of child-rearing practices upon child growth and development. To a large segment of the psychological community words such as "thinking" were ruled out as mythological, pre-scientific terms. For the new curriculum planners, who saw the goal of education as teaching children how to think, American psychology had very little to offer.

There was thus a tremendous need for information about children's thinking which would serve as guidelines for curriculum reform and which could not be satisfied by American psychology. As Lee Cronbach (professor of psychology at Stanford University and author of a standard text in educational psychology) said in 1964, "the learning theory that has been the preoccupation of the American psychologist since the days of Thorndike—SR theory—seems not to have had much impact on the curriculum work that has been going on." Fortunately, one of Piaget's later books, *The Child's Conception of Number* was translated in 1952 and this book together with the labors of psychologists such as Jerome Bruner at Harvard and the late David Rapaport at the Austen Riggs Foundation in Stockbridge, Massachusetts, helped to bring the scope of Piaget's contribution to the attention of American psychologists and educators.

As the significance of Piaget's work for psychology and education came to be recognized in this country, his books were translated at an increasing rate and many are now available in English. In 1963, John Flavell's scholarly and comprehensive summary and evaluation of Piaget's work and theory "The Developmental Psychology of Jean Piaget" provided a much needed introduction to Piaget's work for American psychologists. The ensuing years have seen the publication of a number of briefer summaries of Piaget's

work among which Hans Furth's "Piaget and knowledge" (40) * and Ginsburg and Oppen's "Piaget's theory of intellectual development" (42) are the most notable. Such summaries are required because Piaget is often difficult reading, even in English translation.

There is still a need, or so it seems to me, for a less technical introduction to Piaget that would be appropriate to students of education. The essays in the present book are directed to this audience. My aim in these essays is not simply to summarize Piaget but rather to interpret the implications of Piaget's work for those who are, or will be, teaching children. I have tried, as best I could, to illustrate in non-technical language the basic findings and concepts of Piaget without, I hope, distorting his views. The book, it should be said, is not meant as a text on Piaget, but rather as supplementary reading for courses in educational psychology and child development.

So many people have influenced and encouraged me that it is impossible to acknowledge them all. Foremost among those to whom I am indebted is the late David Rapaport, who first introduced me to Piaget and who encouraged my first research on Piagetian themes. John Flavell, Hans Furth, Irving I. Siegel, William E. Martin, Alberta Siegel, William C. Halpin, and Patricia Feeley are among the many friends, colleagues, and editors whose support and confidence sustained me through those many periods when I was sure that all I was saying was gibberish. I want to thank, too, my secretary, Loretta Forbes Schafer, for the care and speed with which she typed the manuscript. Most of all, of course, I am indebted to the "Patron." His courage and steadfastness in the face of a prevailing *Zeitgeist* condescending toward his methods, suspicious of his results, and hostile toward his theorizing have been an example to all of his students of that independence of mind and commitment to truth which is the motive force behind all genuine scientific progress.

* The numbers in parenthesis here and throughout the text refer to entries in the bibliography at the end of the book.

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Children and Adolescents

It is probably fair to say that the work of Jean Piaget has revolutionized our ways of thinking about the mental growth of children. We now recognize that children not only have fewer ideas than adults, but also that the ideas which they do have are different in kind from those held by grown-ups. Much of the content of children's thinking that has been uncovered by Piaget's researches is described in the following chapters. This introductory chapter gives a brief précis of six basic Piagetian concepts and presuppositions that provide a framework for his empirical discoveries.

Introduction: Six Basic Piagetian Concepts

CONSERVATION

"Always changing, always the same" is an expression which nicely captures the spirit of Piaget's notion of conservation. The child, to an even greater extent than the adult, is daily confronted with change. As he grows, and as his world expands beyond the home to school and community, the child repeatedly encounters new experiences and new challenges to his intellectual innocence. He is, moreover, himself a growing being so that he is progressively viewing the world from new heights and with increased sensitivity and acuity.

The ability and zest for coping with change rests, however, upon a foundation of stability. The faded, tattered blankets and dolls so cherished by children are but one manifestation of the need for constancy or conservation amidst a world in transition. And, more generally, it is the secure person who can most tolerate change while the insecure person shrinks back from new experience. Personal security in turn is based upon the assurance that something—and for the child this something is parental love and acceptance—will remain constant. A child in the presence of his