

CHILD PSYCHOLOGY

BY

ARTHUR T. JERSILD, PH.D.

PROFESSOR OF EDUCATION

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

THIRD EDITION

NEW YORK
PRENTICE-HALL, INC.

TO C. L. J.

PREFACE TO THE THIRD EDITION

In this edition I have tried to bring the 1940 version up to date, and I have tried also to remedy certain shortcomings in the old text while preserving qualities that were well received.

The present text takes more adequate account of the interplay between forces in the growing organism and the impact of various aspects of development upon each other. The present edition also draws more attention than did its predecessor to the question as to what a child's overt behavior reveals about his private thoughts and feelings. More consideration is also given to the influence of the cultural environment and the attitudes of others on a child's behavior and adjustment.

More prominence has been given to principles and generalizations, but in this edition, as in the preceding ones, I have cited freely from the research literature in presenting generalizations as well as supporting details. As I mentioned in the preface to the second edition, I do not assume that the students will be required necessarily to memorize the authorship of each bit of evidence that is reported.

The formal organization of the book, although changed in some ways, is much the same as before. As in the earlier editions, the order in which some of the chapters appear is somewhat arbitrary, and it will be feasible, if so desired, to modify this order in reading or assigning the various chapters.

Acknowledgment is due to the psychologists upon whose published works I have drawn, to teachers and parents who have lent me some of their wisdom, to children whom I have had the privilege of knowing and who have responded so generously in connection with my own investigations, and to my son and daughters who have held out to me more knowledge than I have had the capacity to receive. I am deeply indebted to Mrs. Margaret F.

Meigs for help in all the operations connected with the writing of this book, to Dr. Charlotte Del Solar for criticizing portions of the book, to Mrs. Elizabeth Penn for help with the bibliographies, and to Mrs. Muriel M. Dalton for bringing her mind as well as her fingers to bear on the manuscript. I am most grateful to my wife who has shared the author's labor pains for the third time in connection with this book.

A. T. J.

PRENTICE-HALL PSYCHOLOGY SERIES

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70 FIFTH AVENUE, NEW YORK

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THIRD EDITION

First printing.....June, 1947
Second printing.....November, 1947
Third printing.....September, 1948
Fourth printing.....March, 1949
Fifth printing.....January, 1950
Sixth printing.....September, 1950

PRINTED IN THE UNITED STATES OF AMERICA

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CHAPTER I

BEGINNINGS OF BEHAVIOR

Birth means the coming of a new human being who only forty weeks earlier consisted of a single cell. He looks helpless, yet he is capable of the processes necessary for maintaining life. Many of his movements are aimless and undefined, but changes in his behavior come rapidly, even within the first few hours. In the near future his movements will be fashioned into countless skills; he will master the intricacies of language; his mental world will include memories of the past and plans for the future; as a social creature he will be deeply involved in the fortunes of his fellows. Increasingly the characteristics that mark him as a distinct and unique personality will be established.

The contrast between the infant's limitations at birth and his characteristics within only a few months thereafter is striking. But quite as spectacular are the developments shown at birth by the child who forty weeks earlier was a single-celled organism. The following discussion will deal with some of the characteristics of the child before he is born and during the first few days of life.

THE FIRST GREAT HURDLE

Much as we should like to, we cannot peer into the mental life of the newborn child. We can only guess at what his experience of the world might be by watching how he behaves. Although there is a high degree of continuity between development before and after birth, the event of being born obviously calls for many new adjustments. During prenatal life, the infant received nourishment through the umbilical cord; now he must suck and swallow. Before he was born he did not even have to breathe; now he must depend upon his own equipment for respiration as well

as for the regulation of bodily temperature and the elimination of waste. He now is exposed to countless lights and sounds and contacts, whereas earlier he was insulated from the outside world.

No episode in the life span represents a more drastic change than that of being delivered from the womb into the world of men. If an infant were sensitive to all that this change involves, the business of being born would be quite an ordeal. It has been conjectured that the birth process may be so overwhelming to the child that it can produce a profound "psychic" injury. It has also been conjectured that there may persist, long after, an unconscious desire to return to the peace and protection of the mother's womb. It goes without saying that such claims must be taken with a good deal of salt. The person who is being born is, after all, not an imaginative and sensitive adult but an immature child, with an immature nervous system and with immature capacities for sensing and feeling.

THE WORLD SURROUNDING THE NEWBORN CHILD

The event of birth does not mean simply that a new bundle of life in human form has arrived. Back of the child are his ancestors. The roots of his inheritance extend into past generations. What we now see, and much that we cannot foresee in his later development, are determined by his heredity. Within the child himself resides also a powerful impulse to grow. Surrounding him are the forces of the culture into which he has been born and the immediate environment in which he is to live. From the moment of his coming this environment will influence the shaping of his habits and the molding of his character.

In the environment that surrounds him is much that is obvious to the eye but also much that cannot be seen. There is the visible cradle in which he lies. There is also an invisible environment consisting of the thoughts and feelings, the attitudes, desires, hopes, and expectations of members of his family. If all is well, this composite of thoughts and feelings will offer the child a com-

fortable berth. His mother will be drawn to him with feelings of pride in her role as one who has brought forth a child, and she will feel a strong impulse to protect him. His father will be drawn to him with sentiments that no man can know until he has had the experience of being a father. Also, if all is well, older brothers and sisters will be prepared to welcome him, even though they may be somewhat disturbed by the events surrounding his birth and perplexed as to what it will mean in their own lives to have a new member in the household.

On the other hand, this environment may not be so hospitable. For one cause or another, the child may be unwanted by one or both parents. He may come as an intruder in the relations between his father and mother or in the relations between his parents and other children in the family. He may be born into a whirlpool of conflicting emotions. If so, the impact of such conflicting emotions will sooner or later be felt in his own life.

The attitudes of his elders may quickly be translated into practical acts. These attitudes may determine whether they adopt, for example, a policy of picking him up when he frets and cries or of leaving him to "cry it out" for long periods at a time.

Apart from the question as to whether the child's coming is completely welcome or viewed with some misgivings, there will be tremendous variations between one family situation and another in the feelings and motives that come into play. The child may be accepted for what he is, for his own sake, or he may serve an ulterior purpose, such as gratifying parental ambition, or serving as a means of continuing the family name, or fulfilling a sense of duty, and the like. Again, there will be wide differences even between adoring mothers. Simply in the practical details of everyday care of the child, one mother may be motherly, self-assured, another may be uncertain of her own skills and judgment; one may handle the youngster in a relaxed and smooth way, another may be more tense and abrupt.

Although there are differences such as the foregoing, and count-

less others, in the setting into which the child is born, the child is not entirely at the mercy of conditions as they are. From the beginning he is not merely a creature of his environment; he helps to create his environment. In his very weakness there is strength, for his helplessness draws others to him. Through his appearance and all his ways he commands attention, makes impressions, and, without so intending, influences the attitudes of his elders whatever they may have thought or felt beforehand. So, a father who was secretly convinced that he could not love a second child as much as the first may discover that it is quite a different story when the new youngster begins to put in his licks. A woman who vowed that she could never become "crazy" about a baby may find when the baby comes that he has completely taken her over. The tide may, of course, run in the other direction if a parent has nurtured a glorified image of a baby-to-be and then finds that the real baby is quite somebody else, or if the parents have looked forward to the child's coming through a haze of sentimentality and are not ready to make all the practical readjustments that the presence of a new baby demands.

EARLY BEHAVIOR MANIFESTATIONS

Behavior begins long before the child is born, well in advance of the time when the mother first detects movements of the child at about four and a half months after conception. By the end of the second month of fetal life the child can be recognized as human in form. Well before this, bodily activity has begun.¹ By the end of the third week the heart has begun to beat. By the end of the twenty-fifth week the child "is equipped with practically all the activities basic to postnatal existence, though most, if not all, require further maturation" (29, p. 27).

Movements involving muscles other than those of the internal organs also appear quite early in the life of the fetus. In a study by Hooker (29) it was observed that a fetus at about eight and a

¹ For a review of studies dealing with fetal behavior see L. Carmichael (12).

half weeks reacted when stroked with a hair in the region of the mouth.

During the third month of fetal life, and increasingly thereafter, responses that involve the transmission of nerve impulses from one part of the body to another have been observed.

The developments that take place before birth illustrate strikingly what might be called "the forehandedness of development." The capacity for many functions is established well in advance of the time when normally there is a need to use these functions. The mechanisms for sucking and for breathing, for example, are relatively well developed several months before a full-term baby would be called upon to suck or to breathe. One result of this forehandedness is that even though babies normally are born about 280 days after conception, it is possible for a child to survive after having spent only about 180 days in the mother's body. Claims have even been made that younger fetuses have survived.

This tendency to anticipate future activities and future needs appears also in developments that occur after birth.

DIRECTION OF EARLY DEVELOPMENT

It has been noted that development before birth tends to proceed in a *cephalo-caudal* direction (60)—that is, growth and differentiation progress from the head to the tail region. During the earlier stages of growth, development in the head region is far in advance of development in the posterior part of the body. This does not mean, of course, that development is complete at one end before it begins at the other. Illustrating this trend in development on the physical side is the fact that the head is well developed before the legs assume their final form and that the arms are budding before leg buds appear. Analogous to this, after the child is born, is the fact that a child can make good use of his arms and hands in reaching and grasping before he can use his legs in standing and walking.

In the development of segments of the body, there is a parallel

to this cephalo-caudal trend in the body as a whole. Development is in a *proximo-distal* direction: the structures that lie nearest the main axis of the body mature earlier than those that are more remote. Again, after birth, we see a behavior trend analogous to this in the fact, for example, that control of gross movements of the arm and forearm comes earlier than control of the wrist and fingers.

ACTIVITY BEFORE BIRTH

Activity of the unborn child rises to a peak at about the eighth to the ninth month (59). Much of the movement of the unborn child seems to be in response to internal conditions, but it is possible also sometimes to provoke movement by external means. One observer noted, for example, that a kick and other movements were exhibited by a child thirty-one days before birth when the sides of the bathtub in which the mother was lying were struck with a metal rod (19). During late stages of pregnancy, mothers have also reported that a musical concert may lead to increased fetal activity.

In one study (71, 72), apparatus consisting of rubber sacs was attached to the mother's abdomen and connected with tambours that activated recording pens. Various sounds—such as those made by a bell, a buzzer, and a wooden knocker with a sound block placed over the location of the fetal head—were produced. Response to stimulation of this sort was noted (that is, movement in excess of what normally occurred) at about the thirty-first week of intra-uterine life.

Conditions in the daily life of the mother may likewise precipitate greater than normal amounts of fetal activity (70). In the case of two mothers, for example, more fetal movement occurred during periods of severe emotion than during moments of calm. Many mothers who were questioned reported that they experienced more feeling of fetal activity when they were fatigued than when they were rested (although, as is pointed out in the study,

this may be due to greater sensitivity on the mother's part). Changes were also noted in the fetal heart rate. In some instances, the rate was found to be higher after the mother had climbed a flight of stairs than some minutes later, and higher after she had smoked a cigarette than just before or some time later; however, such an increase did not appear in all cases, and there were large individual variations.²

Individual differences in amount of fetal activity and in the changes in activity occur as pregnancy advances. The fact that fetal movements have been found to vary under different circumstances and that they perhaps may be influenced, to some extent, both by the general condition of the mother and by the mother's response to external stimuli, opens quite a field for speculation and research concerning the possible influence of the prenatal environment on the later behavior and personality of the child. In view of all the factors that influence behavior before and after birth, and in view of the protection with which nature surrounds the unborn child, it no doubt would be difficult to find conclusive evidence in such a line of study.

In an investigation of twelve infants who were under observation both before and after birth, preliminary findings (58) suggested that the amount of activity exhibited by the child before he is born might foreshadow, to some degree, the rate of his development as compared with that of other children during the first few months of postnatal life. However, the likelihood that the amount of prenatal activity might give a prediction of later rate of growth was not borne out by further study (57), (47).

ORGANIZATION OF BEHAVIOR

Apart from the question as to the observable characteristics of the behavior of the child at birth, there is the question as to the process or sequence through which the behavior comes into being

² Studies have also been made to find whether the unborn child is able to "learn" (54, 71), but results have been inconclusive.