



Thirteen Lecture

DEVELOPMENT AL PROCESS

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The success of intelligence testing in predicting school achievement had an important effect upon the study of child psychology. It suggested strongly the possibility of plotting a psychological growth curve that resembled physical growth curves that had already been extensively studied. Research in physical growth (especially in height) had shown that such curves were remarkably stable. While they are modifiable to a minor degree by the ordinary vicissitudes of life, such as illness or poor nutrition, the child's over-all physical growth seems to unroll in a generally predetermined way. Furthermore, there are immediately after birth. These include fear, distress, anger, joy, surprise, and others. Each of these emotions are :

- 1) aroused in quite specific situations;
- 2) have specific facial expressions that go with them; and 3) are expressed by specific kinds of behavior. Anger, for example, is aroused by frustration or interference with the child's ongoing behavior; the facial expressions and the behavior that express anger are recognizable even in the young baby. These same emotional expressions are also found in many different cultures, which supports further the belief that they are innate.

The most important question about emotional development is how emotion becomes integrated into cognitive processes. Not only does the expression of different emotions change with age, but there are also changes in the situations that produce emotional reactions.

The infant is angered most frequently by the imposition of such physical routines as dressing and washing. The preschool child can be angered for more subtle reasons, another characteristic of emotional development is that in infancy emotional behavior is directly expressive. Later, emotional behavior becomes more adaptive. Below the age of one year, for example, children's anger appears almost solely in the form of emotional outbursts. By the age of four, however, children can express their anger in the form of a direct attack upon the person or thing that made them angry.

An important aspect of maturity is emotional control. This means the suppression of the more violent displays of emotion, and also the ability to behave in an intelligent and effective way in situations that arouse strong emotional feelings. Such emotional control is not merely a matter of preventing emotional feelings, but of using them to motivate. If one of them is also played, he prefers (i.e., looks more at) the one that matches the sound track. The importance of the sound track is seen if the infant is presented with the same two films but without a sound track at all. Now he gazes at the two different visual presentations about equally.

The visual field is not just a blur; the infant will try to bring the visual field into focus. If the experimenter arranges things so that the infant's rapid sucking on a nipple brings the visual stimulus into focus, the infant will suck the nipple very rapidly, but if rapid sucking puts the object out of focus, the infant's rate of sucking drops.

During early infancy, the baby's exploration cannot be well controlled or systematic, but by the age of five months, the infant can begin to reach for objects and put them in his mouth. A few months later he can begin to search for objects and before the end of the first year can actively explore his environment. When the child begins to walk, his exploration becomes much more extensive.

Motor development. Arnold Gesell and his colleagues and students at Yale University are responsible for much of the knowledge of motor development. They based their descriptions on frame-by-frame analysis of motion pictures of children's motor behavior at various age levels.

Gesell did not, however, limit his investigations to the motor sphere. He included language, adaptive, and personal-social behavior as well. On the basis of his work modern developmental scales were developed. The best known scale is the Bayley Scales of Infant Development, which includes motor, language, adaptive behavior, and social items and permits the assessment of children up to two years of age.

Sensory and perceptual development; the abilities of the newborn child are being investigated. New findings consistently demonstrate his unexpected capacities. For example, the newborn distinguishes between the language sounds (phonemes) that will be important later in learning to comprehend language. Even more surprising, the newborn seems able to perceive shape constancy. If a rectangular shape (like a book) is viewed from a 90 degree angle, the stimulus on the retina is rectangular. If the book is viewed from other angles, the retinal image varies from one trapezoidal shape to another, yet the book is perceived as rectangular. This is called shape constancy.

How do we know if the young infant sees a shape as constant when its orientation changes? When the infant is presented with the same visual, stimulus over and over again, he habituates to its shape and his visual fixations on it become shorter and shorter. This is called habituation. If the stimulus is changed, he fixates on it longer than if the old stimulus were repeated, which means he can distinguish between the old and the new stimulus. Thus, researchers can tell if a baby distinguishes between a face right side up and upside down, or a rectangle seen frontally and a rectangle seen from an angle.

Despite these early accomplishments, the infant is still relatively unskillful. There is a consistent increase in sensory discrimination as the child grows older. Accuracy of color matching, fineness of depth perception, and auditory acuity, for example, all improve with age. Some of an infant's capacities, however, are present early but disappear and then reappear several months later in a more sophisticated form. Whatever capacity the infant demonstrates, it is the rule for him to become more discriminating and accurate with age.

Emotional Development. The best hypothesis is that there are a small number of so called basic emotions that seem to be innate, although they don't all appear individual differences in these physical growth curves that can be identified relatively early in life.

Much of the child developmental research in the 1920's and 1930's was directed toward the study of the developmental process under the basic assumption that it was relatively fixed and predetermined thus, many investigations were designed to describe the sequence of development in all areas of child, psychology-motor development, perceptual development, emotional development, and so forth. There is no longer the faith that the course of development is strongly predetermined, but careful descriptions of developmental sequences are still important data on which theories of child development must be based.

Exploratory Behavior. The recent findings in the behavior of infants have generally found that they have more competence than we used to believe. One of the reasons is that many of the stimulus situations that were presented to the baby were static situations, a circle, or a colored figure, or a simple stimulus. When babies are presented with changing stimuli, and most particularly when they are allowed to explore their environment, visually or meteorically, they seem much more mature and competent.

The infant from birth on is an active exploring person especially when objects in his field of vision move or when the visual stimulus is changing in other ways. The baby visually scans his environment, although not very skillfully at first, and can visually follow a large moving object. Looking and listening are already coordinated to some degree. A sound can capture the infant's attention and provoke eye movements toward it. When a four-month-old is presented with two films of different simple events, played simultaneously side by side while a sound track that effective behavior. Effective behavior of the witness to an accident need not be unsympathetic, but his sympathy should be expressed in the form of prompt first aid and securing medical assistance rather than in loud wailing and weeping.