

COGNITIVE DEVELOPMENT OF CHILDREN

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Summary

In this article a main emphasis is that the child's cognitive development is dependent both upon the child's nature and the nurturant experiences in the child's life. In these nurturant experiences, the primary caregiver, usually the mother, is the central figure in the child's social world. The primary caregiver's capacity to think about and have feelings for the child becomes a "container" for the infant's psyche or inner mental world. As an aspect of this inner mental world, the cognitive component of the child's inner mental world develops in response to the continuing attachment relationship between caregiver and child. A major point in this article is that the attachment relationship is crucial for the child's cognitive development because this relationship generates emotional reactions in both caregiver and child, and that emotional interchange and cognitive growth in the child are connected and interrelated.

These emotional interchanges between child and adult caretaker are important because they stimulate brain sympathetic activity in the child, which triggers a series of cascading events. Such events stimulate the production of billions of dendrites, axons, and synapses in all regions of the brain. As a result, the child's cognitive growth and resultant cognitive capacities are directly proportional to the number of multiple connections that are made by neurons. The infant and child's brain develops in stages. In reviewing the work of Jean Piaget, the *six sensorimotor substages* of cognitive development are described and correlated to changes in the child's ongoing attachment relationship with primary caregivers (usually mother and father) and other important attachment figures in the child's life.

1. Introduction

Cognitive development in children is directly correlated with aspects of both nature and nurture in the lives of human beings. Nature is the genetic, biological component of individuals; nurture is what is offered to children by caregivers and includes the support that children experience from their environment, their outside reality, which is everything that they are not. The caregiver, most frequently the mother, is by far the most important central figure of the child's world. In fact, overwhelming data presented by John Bowlby demonstrate that without adequate care children tend to not thrive physically, emotionally, and cognitively. As the infant's body *in utero* is at one with its mother's, after birth its psyche remains at one with hers. The caregiver's psyche functions as the container for the infant's psyche; that is, the caregiver's psyche is for the infant's psyche what the mother's uterus had been for the infant's body.

Margaret Mahler describes a developmental phase, beginning at about five to six months, where infants begin to look more alert and more goal-directed in their actions with their mothers. Mahler conceptualized this infant "hatching" as the infant's "psychological birth." This second birth ushers in the separation-individuation process that extends from about five to six months until about three years of age.

Disruption of the caregivers' capacity to contain children is a major element that contributes to a deviation of children's psyche from normal development. In fact, it is through this very containing capacity of caregivers that bonding occurs; this bond is the foundation for all optimum potential psychic development within children.

The cognitive component of the mind also develops as an integral aspect of the psychic bond with caregivers. At birth, the capacities for thinking, feeling, imagination, memorization, etc. are the universal givens of mental life, but in order for the mind to develop, food is required. Adequate nutrition for the body is also food for the mind. This food is essential because of the rate at which human brains develop in the first two years of life, when dendrites, axons, and synapses form to build the brain's wiring, setting the stage for what the individual will become.

Paralleling the biological process, the mind needs food if it is to develop into an independent and healthy psyche. Food for the mind is extracted from whatever children come in contact with through the five sensory modalities. This food is what the senses capture from the outside world: the smell of the caregiver, the sound of her voice, the sight of her body, the taste of her milk, the feel of her touch. This multi-sensory input lays the foundation for cognitive development.

The child absorbs it like a sponge and day after day begins to piece together in its mind the components of the outside world, forming from the images, sounds, tastes, smells, and touch, its internal representation of outside reality, which will later generate thought. This process of sedimentation can be accomplished by virtue of the capacity for memory with which every child is born, by which pieces of reality are retained, later to be retrieved. This is a slow process that nevertheless requires a great amount of activity in the brain.

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Biographical Sketch

Erminia Scarcella, M.D., is a psychiatrist and a psychoanalyst in private practice in Washington, D.C. She graduated in 1970 from the medical school of the State University of Rome, Italy, and she also graduated in 1973 in neurology and psychiatry in Rome, Italy. Later, after migrating to the United States, she completed a psychiatric residency program in Washington, D.C. She also underwent Jungian psychoanalytic training in Italy [AIPA], and she is a certified psychoanalyst in the United States. She is president of the Washington Society for Jungian Psychology [WSJP], Washington, D.C., president of the American Society of Psychoanalytic Physicians, Washington, D.C. chapter, and chairperson of the psychiatric section of the Medical Society of Washington, D.C. She is an assistant clinical professor of psychiatry and behavioral science at George Washington University, Washington, D.C. She has worked full-time for many years at different hospitals in Italy and in the United States.