

Cognitive Changes

The cognitive world of the preschool child is creative, free, and fanciful. Preschool children's imaginations work overtime, and their mental grasp of the world improves. Our coverage of cognitive development in early childhood focuses on three theories: Piaget's, Vygotsky's, and information processing.

Piaget's Preoperational Stage

Remember that during Piaget's first stage of development, the sensorimotor stage, the infant becomes increasingly able to organize and coordinate sensations and perceptions with physical movements and actions. The **preoperational stage**, which lasts from approximately age 2 to 7, is the second stage in Piaget's theory. In this stage, children begin to represent the world with words, images, and drawings. They form stable concepts and begin to reason. At the same time, the young child's cognitive world is dominated by egocentrism and magical beliefs.

Because Piaget called this stage "preoperational," it might sound like an unimportant waiting period. Not so. However, the label *preoperational* emphasizes that the child does not yet perform **operations**, which are reversible mental actions that allow children to do mentally what before they could do only physically. Mentally adding and subtracting numbers are examples of operations. *Preoperational thought* is the beginning of the ability to reconstruct in thought what has been established in behavior. This stage can be divided into two substages: the symbolic function substage and the intuitive thought substage.

The Symbolic Function Substage

The **symbolic function substage** is the first substage of preoperational thought, occurring roughly between the ages of 2 and 4. In this substage, the young child gains the ability to mentally represent an object that is not present. This ability vastly expands the child's mental world (Lillard & Kavanaugh, 2014). In this substage, children use scribble designs to represent people, houses, cars, clouds, and so on; they begin to use language more effectively and engage in pretend play. However, although young children make distinct progress during this substage, their thinking still has important limitations, two of which are egocentrism and animism.

Egocentrism is the inability to distinguish between one's own perspective and someone else's perspective. The following telephone conversation between 4-year-old Marie, who is at home, and her father, who is at work, typifies Marie's egocentric thought:

Father: Marie, is Mommy there?

Marie silently nods.

Father: Marie, may I speak to Mommy?

Marie nods again, silently.

Marie's response is egocentric in that she fails to consider her father's perspective before replying. A nonegocentric thinker would have responded verbally.

Jean Piaget and Barbel Inhelder (1969) initially studied young children's egocentrism by devising the three mountains task (see Figure 3). The child walks around the model of the mountains and becomes familiar with what the mountains look like from different perspectives, and she can see that there are different objects on the mountains. The child is then seated on one side of the table on which the mountains are placed. The experimenter moves a doll to different locations around the table, and at each location asks the child to select from a series of photos the one that most accurately reflects the view that the doll is seeing. Children in the preoperational stage often pick their own view rather than the doll's view. Preschool children frequently show the ability to take another's perspective on some tasks but not others.

preoperational stage Piaget's second stage, lasting from about 2 to 7 years of age, during which children begin to represent the world with words, images, and drawings, and symbolic thought goes beyond simple connections of sensory information and physical action; stable concepts are formed, mental reasoning emerges, egocentrism is present, and magical beliefs are constructed.

operations In Piaget's theory, these are internalized, reversible sets of actions that allow children to do mentally what they formerly did physically.

symbolic function substage Piaget's first substage of preoperational thought, in which the child gains the ability to mentally represent an object that is not present (between about 2 and 4 years of age).

egocentrism The inability to distinguish between one's own perspective and someone else's (salient feature of the first substage of preoperational thought).