

Preoperational Period

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The preoperational period is part of Jean Piaget's four stages of cognitive development (Lally & Valentine-French, 2019). Piaget was a cognitive psychology, who in 1936 created a model to explain how children understand the world and develop cognitively. While other contemporary theorists believed that intelligence was a fixed trait, Piaget believed that cognitive development was a process that occurred in distinct stages, and that maturation brings about changes and growth in development, rather than training (Lally & Valentine-French, 2019). Piaget posited that each stage occurred at a specific time and in a specific sequential order, such every child goes through each stage in the same order. The order of Piaget's stages of cognitive development are as follows: sensorimotor stage (birth to age 2), preoperational stage (age 2 to 7), concrete operational stage (age 7 to 11), and formal operational stage (11 to early adulthood).

By the time children enter the preoperational stage, they are able to use their senses to interact with objects physically. They have begun to develop schemas, or mental representations of different objects or people in their environments (Lally & Valentine-French, 2019). These schemas allow children to understand object permanence, which is understanding that an object still exists even if they cannot see it. Conceptualizing object permanence marks the transition into the preoperational stage (Lally & Valentine-French, 2019).

The preoperational stage is characterized by the growth of symbolic and representational thinking (Lally & Valentine-French, 2019). Language development increases during this period and facilitates the beginning of abstract thinking. Children begin to have the ability to understand

how one thing, such as a word or an object, can be used to represent something else. This is exhibited in child imaginative play (Lally & Valentine-French, 2019). For example, a child may play with a toy car and understand that it represents a real car, or the child may use toy dolls to represent his or her parents. While language and abstract thinking are expanding during this period, the cognitive processes of children in this stage are limited. Children in the preoperational stage have difficulty with logical thinking, taking the perspective of others, and manipulating information in their mind (Lally & Valentine-French, 2019; Holbrook, 1992). The term Piaget used to define children's inability to take on others' perspective is called egocentrism (Lally & Valentine-French, 2019). Several studies have been conducted to evaluate egocentric thinking in children.

Piaget conducted a study in which he asked children to look at a table with a model of a mountain and were asked to determine what the model would look to someone else sitting at different places around the table. Piaget found that the majority of the children answered the questions from their own perspectives, such that they were unable to imagine what the model would look like from a different perspective (Lally & Valentine-French, 2019). In another study, created by Wimmer and Perner (1983) a video of two girls (named Sally and Anne) are shown to children. The video shows Sally taking a marble and putting it into her basket. She then leaves then room, and Anne takes the marble out of Sally's basket and puts it into her own basket. Sally returns, and the children are asked where Sally will look for her marble. The researchers found that many children under the age of 4 were unable to recognize that Sally will look in her own basket, indicating that they were unable to take on the perspective of Sally (Lally & Valentine-French, 2019).

Another concept that children have difficulty with is conservation (Holbrook, 1992). Conservation is understanding that the quantity of an object stays the same, even if its appearance change. In a study on understanding children's conception of conservation, equal amounts of a liquid were poured into identical cups. One of the liquids was then poured into a taller cup and children were asked to identify which cup held the most liquid. Despite knowing that the liquids were of equal amounts, children often chose the cup that was taller (Holbrook, 1992). Piaget outlined several characteristics of preoperational thought that contributed to the difficulties the children faced. One characteristic is known as centration, or the tendency for a child to only focus on one aspect, such as the height of the water (Holbrook, 1992). Another concept is irreversibility, or a child's inability to mentally conceptualize reversing a physical action, such as pouring the water to its original glass. Additionally, Piaget indicated that preoperational thinking is often concrete and perceptually bounded, such that a child reaches conclusions based on based on how things look, and that a child's perceptual cues overrule his or her logical cues (Holbrook, 1992). The concept of conservation, as well as changes in these thinking patterns, are generally not achieved until the concrete operational stage.

Further Readings:

Holbrook, J. E. (1992). Bringing piaget's preoperational thought to the minds of adults: A classroom demonstration. *Teaching of Psychology*, 19(3), 169-170.

Lally, M. & Valentine-French, S. (2019). *Lifespan Development: A psychological Perspective* (2nd ed.). Creative Commons Attribution.

<http://dept.clcillinois.edu/psy/LifespanDevelopment.pdf>

Piaget, J. (2000). Piaget's theory. In K. Lee (Ed.), *Childhood cognitive development: The essential readings; childhood cognitive development: The essential readings* (pp. 33-47, Chapter xii, 340 Pages) Blackwell Publishing, Malden.