

Jean piagets theory

Science



Throughout history, many people have made many contributions to the school of psychology. One individual is that of Jean Piaget and his theories on the cognitive development stages. Jean Piaget was born in Neuchatel, Switzerland, where he studied at the university and received a doctorate in biology at the age of 22. Following college he became very interested in psychology and began to research and studies of the subject. With his research Piaget created a broad theoretical system for the development of cognitive abilities.

His work, in this way, was much like that of Sigmund Freud, but Piaget emphasized the ways that children think and acquire knowledge. Piaget referred to his theory as genetic epistemology. This is defined as the study of the acquisition, modification, and growth of abstract ideas and the abilities as on the basis of an inherited or biological substrate, an intelligent functioning that makes the growth of abstract thought possible. (Ginsburg 5) Piaget derived his theories from directly observing children and by questioning them about their thinking.

He was less interested in whether the children answered correctly than how they arrived at their answers. Piaget viewed intelligence as an extension of biological adaptation that has a logical structure. One of the central points of his theories was that of epigenesis. This is that growth and development occur in a series of stages, each of which is built on the successful mastery of the previous stage. (Furth 33) Piaget described four major stages leading to the capacity for adult thought.

Each stage is a prerequisite for the following stage, but the rate at which different children move through different stages varies with their heredity

and environment. Piaget's four stages are the sensorimotor stage, the stage of preoperational thought, the stage of concrete operations and the stage of formal operations. The first stage that Piaget felt all children go through was the sensorimotor stage. This stage occurs between birth and two years of age.

This is the stage when Infants begin to learn through sensory observation, and they gain control of their motor functions through activity, exploration and manipulation of the environment. (Furth 29) From birth, biology and experience work together to produce learned behavior. As infants become more mobile, one action is built upon another action, forming new and more complex actions. Infants' spatial, visual, and tactile worlds expand during this period in which children actively interact with their environment and use previously learned behaviors.

The critical achievement of this period is the development of object permanence. This is the indication that a child has the ability to understand that objects have an existence independent of the child's involvement with them. Infants learn to differentiate themselves from the world and are able to maintain a mental image of an object, even when it is not present and visible. (Rotman 40) At about 18 months, infants begin to develop mental symbols and to use words. This process is called symbolization. Infants are able to create a visual or mental image of an object to stand for or signify the real object.

The attainment of object permanence marks the transition from the sensorimotor stage to the preoperational stage. During the stage of preoperational thought, children use language and symbols more extensively

than in the sensorimotor stage. Children learn without the use of reasoning, therefore are unable to think logically or deductively. Children are able to name the object but they are unable to categorize or class these objects. Preoperational thought is midway between socialized adult thought and the completely autistic freudian unconscious. (Furth 57) Events are also not linked by logic.

In this stage, children begin to use language and drawings in more elaborate ways. From once using one word utterances they begin to use two word phrases, which make up a single noun and verb. Children in this developmental stage are egocentric. They see themselves as the center of the universe, therefore they are unable to take the role of another person. In addition , children use animistic thinking which is the tendency to endow events and objects with lifelike attributes. The stage of concrete operations is so named because in this period children operate and act on the concrete, real, and perceivable world of objects and events.

Egocentric thought is replaced by operational thought, which involves dealing with a wide array of information outside the child. Therefore, children can now see things from someone else's perspective. Children in this stage begin to use limited logical thought and processes and are able to order and group things in classes on the basis of common characteristics. The child is able to reason and to follow rules and regulations. They are able to regulate themselves , and they begin to develop a moral sense and a code of values.

Conservation is the ability to recognize that, although the shape of objects may change, the mass and amount stay the same. For example, if you put the same amount of liquid in two containers the child may think there is

more in the taller cylinder. Children also begin to understand reversibility, which is the capacity to understand the relationship between things. They begin to realize that one thing can turn into another and back again. The most important sign that children are still in the preoperational stage is that they have not achieved conservation or reversibility.

Dealing with the future and its possibilities occurs in the formal operational stage. The formal operation stage deals with the ages of eleven through the end of adolescence. This stage is characterized by the ability to think abstractly, to reason deductively, and to define concepts. It also is shown by adolescents' interest in a variety of issues including philosophy, religion, ethics, and politics. Another main part of this stage is that of Hypothetic deductive thinking. This is the highest organization of cognition and enables people to make a hypothesis or proposition and to test it against reality.

Deductive reasoning moves from the general to the particular and is a more complicated process than inductive reasoning, which moves from particular to general. (Rotman 44) This step also brings about self-conscious behavior because of the ability to reflect on their own and other people's thoughts. As adolescents attempt to master new cognitive tasks, they may return to egocentric thought, but on a higher level than in the past. Not all adolescents enter the stage at the same time or to the same degree. Depending on individual capacity some may not reach the stage at all and may remain in concrete operational mode throughout life.

Despite the psychiatric applications Piaget's theories have been applied more widely in the area of education. Piaget's concepts have been used to resolve educational problems, such as assessing intellectual development,
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scholastic aptitude, grade placement, and reading readiness. Innovative early school programs, such as Head Start can be traced to Piaget's believe that experience plays a major role in human thought. Throughout his writings Piaget emphasized that the greater richness, complexity, and the diversity of the environment, the greater the likelihood that high levels of mental functioning are achieved.