

College Guild

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What's On Your Mind?

Unit 5 of 6

~ Infant and Child Development~

“When you teach a child something, you take away forever his chance of discovering it for himself.”

— Jean Piaget

1. What is something that you weren't taught but discovered on your own? Do you think you remember things you learn on your own better than things you were taught?

Jean Piaget

Jean Piaget was a Swiss psychologist who contributed several integral theories to the field of child development and psychology. Piaget rejected the idea that intelligence is a fixed trait and developed a theory to demonstrate the ways in which we learn and mature in our varied environments. Piaget theorized that children experience four stages of cognitive (dealing with the acquisition of knowledge) development. Piaget's four stages of cognitive development help us understand how young minds develop and expand to understand more of the world around them.

Stage	Age	Characteristics	Goal
Sensorimotor stage	Birth–2 years	Developing the ability to form a mental representation of objects	Object permanence
Preoperational stage	2–7 years	Developing the ability to make one thing stand for something else	Symbolic thinking
Concrete operational stage	7–11 years	Developing an understanding of conservation, and working things out internally	Operational thought
Formal operational stage	11 years and over	Developing abstract thought and the ability to test hypotheses	Abstract thought



Sensorimotor

In the sensorimotor stage, infants rely on their movements and senses¹ to collect knowledge about the environment around them. They also lack *object permanence* — the ability to recognize that an object is still there, even when they can't see it anymore. Think about peek-a-boo: Babies love this game because they lack object permanence. When your hands are in front of your face, they think you are no longer there; when you move your hands and shout “peek-a-boo,” they’re genuinely surprised!

2. What is another way to test object permanence in babies?

Preoperational

Symbolic thinking is a child’s ability to use objects as symbols. One example of this is when children engage in “pretend play.” For instance, a child might pick up a stick and call it a sword or put dirt in a cup and tell you it’s a cupcake.

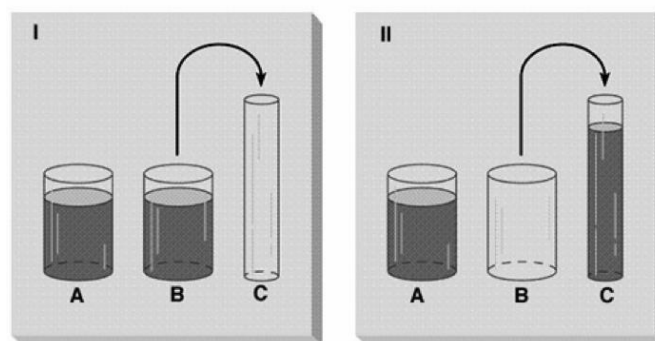
3. Draw a picture of another example of a child using symbolic thinking.

4. How do you use symbolic thinking today?

Concrete Operational

The development of conservation means that we are able to understand that the quantity of something does not change as the appearance changes. For example, Piaget would use water conservation tasks where he would put two identical glasses of water next to each other and ask the child which glass had more (A or B). In part one, the child would be able to recognize that they are the same and state that they are equal. In part two, Piaget would pour the water from glass B to glass C and ask again which had more water. Children that do not yet understand conservation would say that there is more water in C than A because the container is taller. However, the development of conservation abilities allows us to realize that the amount of water does not change just because it is switching containers and that there is still the same amount of water in both.

Piaget's Conservation Task



¹ You may recall from Unit 1 of this course that these senses include taste, touch, sight, sound, smell, balance (vestibular), and movement (proprioception).

5. What is another way you might test to see if a child has developed the ability to recognize conservation?

Formal Operational

To test the presence of abstract thinking, Piaget performed a task in which he would ask children aged 9–11 where they would put a third eye on a face. Researchers today use this task to measure a child's creativity and determine level of development. In Piaget's test, younger children would often say that the third eye would be best on the forehead, located near our other eyes, while older children gave more creative locations such as the back of the hand for the ability to see around corners.

6. What question would you ask children to determine their level of abstract thinking? Where would you put a third eye?

Studying children

The study of child development and psychology not only helps researchers learn more about how children develop, but also contributes to nature vs. nurture discussions. By studying children and babies, we are able to better determine which behaviors are present at birth and which are learned. One example of how we do this is through studies of identical twins who share the same DNA, rather than fraternal twins who are like any two siblings.

7. Before reading ahead, how do you think twin studies might be helpful to the nature vs. nurture question?

Twin studies typically involve twins that have been separated. Because they have the same DNA, scientists can study which behaviors are genetic and which are learned. One famous twin study conducted by Thomas Bouchard in 1979 analyzed the lives of twins that had been separated at birth. The twins were 39 years old. Bouchard found that **both** had married women named Linda, gotten divorced, remarried a woman named Betty, and named their dogs Toy. He also found that one had a son named James Allan and the other named his son James Alan.



8. Would you expect to see so many similarities in a set of separated twins? What other factors might be responsible for the similarities in the Bouchard study?

9. What do the results of the Bouchard study make you think about free will? Does it seem like these twins have it? Explain your answer.

Study design

In order for developmental psychologists to develop theories, they need to perform psychological studies on children. Studying children is especially difficult in psychology because they cannot offer consent to being studied and rely on their parents to look out for their well-being. Additionally, for the studies with babies, researchers constantly have to come up with ways to interpret their moods and attitudes in the absence of words. Let's go through some examples of how psychologists have to be creative in study design.



Infants prefer to pay attention to new and stimulating things. Therefore, when they become familiar with something, they often lose interest and begin to seek out new information. This process of decreased interest upon more exposure is called "habituation." When studying babies, researchers study their habituation with something called "looking time." Since a baby cannot tell us when they are bored with a stimulus, we rely on their eyes. By starting a stopwatch the second a baby sees a new stimulus and stopping it the second they stop looking, we are able to determine the exact amount of time it took that baby to get bored with a certain stimulus.

10. How would you feel if a baby were staring at you? What would you do?

11. How might we record the following emotions in babies?

A. Hunger B. Distress C. Joy

Did you know that we are all born with only two fears?

12. Before reading ahead, write down what you think the two fears are.

At birth, we are only afraid of loud noises and falling. Psychologists have studied both of these using creative methods. Notably, the complex "visual cliff" experiment created an imaginative simulation of falling that would not put babies in danger, yet allowed researchers to observe significant results.

The visual cliff has plexiglass over the top of a drop off. Researchers put the baby on the far checkered side and then ask the mother to stand on the other side and call the baby. The fear of falling is demonstrated in the baby's reluctance to cross the glass because it looks like a steep drop. Even with the mother coaxing the baby over to the other side, the baby's instinctive fear of falling overrides the trust they have in the mother and they do not cross.

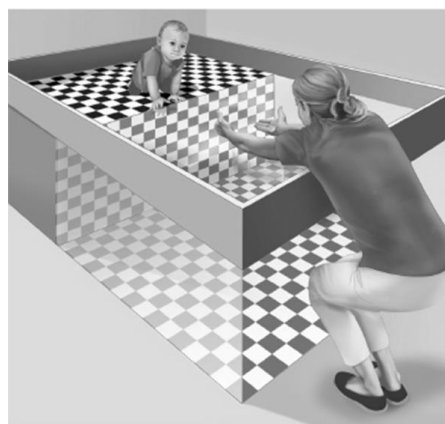


Figure 5.21
Myers/DeWall, *Psychology in Everyday Life*, 4e.
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13. Come up with and draw an experiment that you would use to test the other fear we are born with: loud noises.

14. Why do you think these two fears are the most important?

15. Do you think these experiments on fears are abusive? Do you expect there to be any long-term effects on the babies in these experiments?

Erik Erickson

German psychologist Erik Erickson developed a theory of eight stages of development, consisting of psychosocial crises that we each go through during the development of our personalities. Erickson believes that facing each of these crises leads a person to develop either good or bad personality traits.

Stage	Crisis	Learned value	Description	Age
1	Trust vs. Mistrust	Hope	Infant looks to primary caregiver for stability and care	0–18 months
2	Autonomy vs. Shame	Will	Develops a sense of independence and control over physical skills	18 months–3 years old
3	Initiative vs. Guilt	Purpose	Asserts their needs more often	3–5
4	Industry vs. Inferiority	Competency	Peer group becomes more influential and important for the development of self-esteem	5–12
5	Identity vs. Role Confusion	Fidelity	Exploration of personal values and goals takes place while adolescent navigates through personal identity and sense of self	12–18
6	Intimacy vs. Isolation	Love	Shares emotions and life more intimately with people outside of the family	18–40
7	Generativity vs. Stagnation	Care	Has the need to create things that will outlast self, often making positive changes that will benefit others	40–65

8	Ego Integrity vs. Despair	Wisdom	Contemplates accomplishments and develops integrity	65+
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For example, a child in Erickson’s stage three will develop initiative, ambition, and a desire to explore their surroundings. However, if they are stifled by overbearing parents, they could develop guilt instead.

16. What is an example of a time when you navigated the crisis associated with your age group?

17. Which one of these stages do you think is the most important in shaping an individual’s personality?

18. Choose one of Erickson’s stages and write a story about an individual navigating the presented crisis. Describe the situation leading up to the crisis and the aftermath.

“Healthy children will not fear life if their elders have integrity enough not to fear death.” — Erik Erickson

19. Why do some people fear death?

20. Write a poem about one of the crises or values.

Glossary:

Proprioception: awareness of joint position and movement, including limb velocity, load on a limb, and limb limits

Resources

<https://www.smithsonianmag.com/science-nature/brief-history-twin-studies-180958281/>

<https://www.simplypsychology.org/piaget.html>

<https://www.healthline.com/health/piaget-stages-of-development#stages>

<https://www.simplypsychology.org/formal-operational.html>

<https://www.jove.com/science-education/10068/habituation-studying-infants-before-they-can-talk>

Remember: First names only & please let us know if your address changes