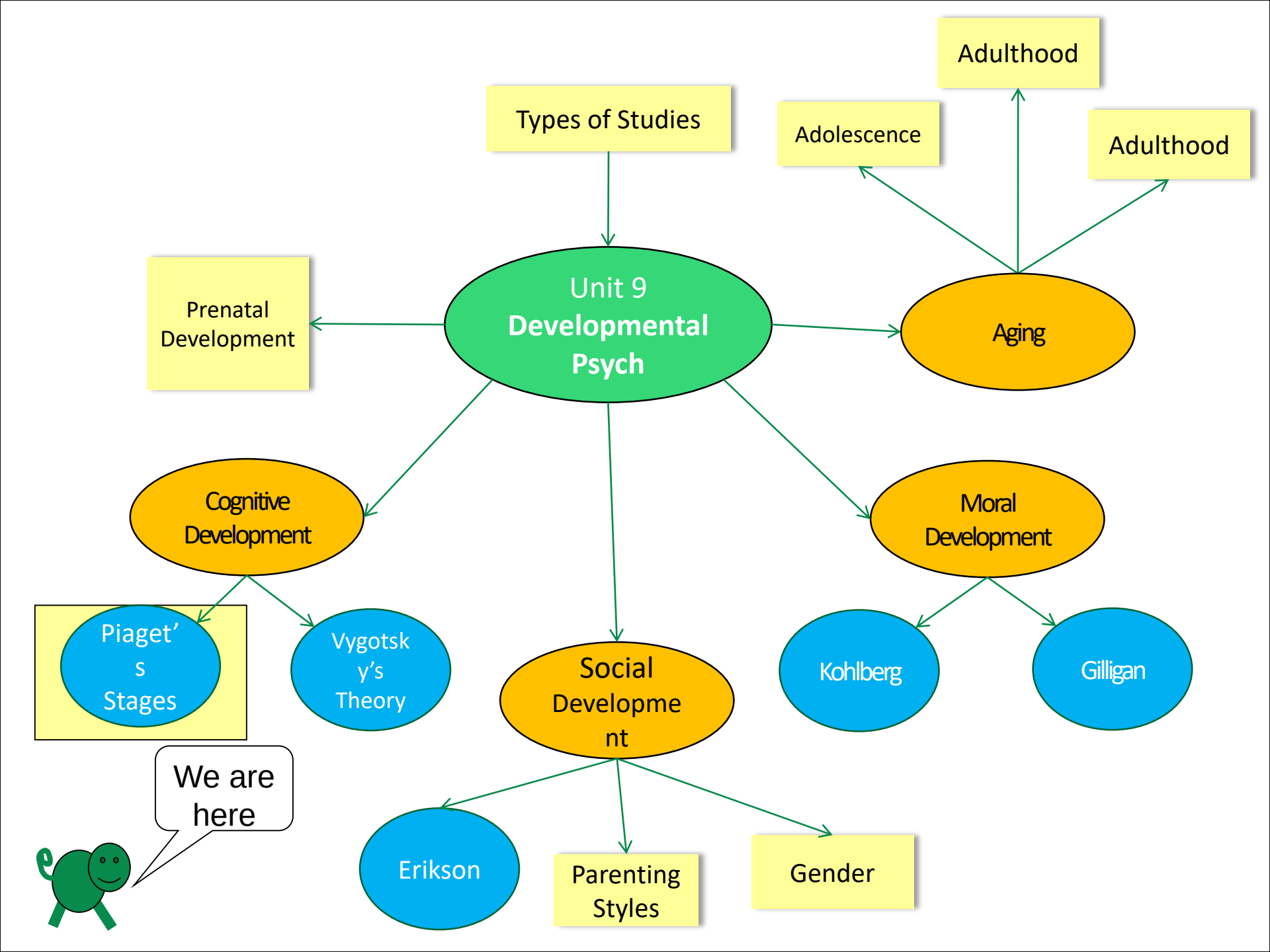
WHS AP Psychology

Unit 9: Developmental Psychology

Essential Task 9-3: Explain the maturation of cognitive abilities according to Piaget with specific attention to object permanence in the sensorimotor stage, magical thinking, theory of mind, and the lack of conservation and reversible thinking in the preoperational stage, overcoming the limitations of the preoperational stage in the concrete operational stage, and the development of abstract reasoning in the formal operational stage.


Unit 9
Developmental Psych
Types of Studies
Prenatal Development
Aging
Adulthood
Adolescence
Adulthood
Cognitive Development
Moral Development
Piaget's Stages
Vygotsky's Theory
Social Development
Kohlberg
Gilligan
Erikson
Parenting Styles
Gender
We are here

Essential Task 9-3:

Outline

- Piaget's Cognitive Stages
- sensorimotor stage
  - Gaining object permanence
- Preoperational stage
  - magical thinking,
  - Gaining theory of mind
  - lack of conservation
  - Lack of reversible thinking
- Operational stage
  - overcoming the limitations of the preoperational stage
- Formal operational stage
  - development of abstract reasoning

OA (418)

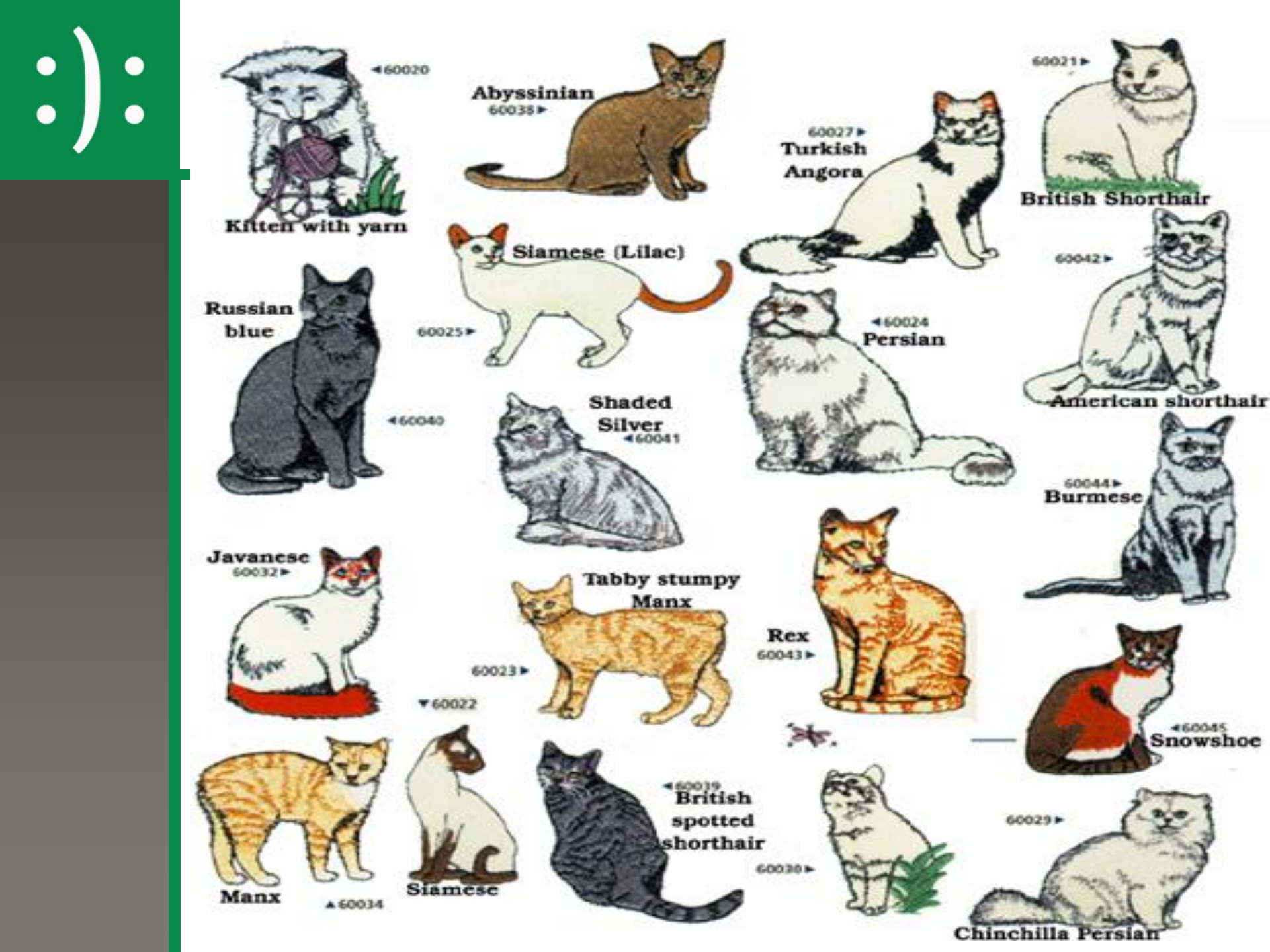
1. What is a schema?
2. Give me an example of a schema
3. what is assimilation in relation to schema?
4. What is accommodation in relation to schema?

Schemas

Schemas are concepts or organized cluster of knowledge (mental molds) that we use to understand and interpret information

- formed from experiences.

Jean Piaget with a subject


60020
Kitten with yarn
Abyssinian
60035
60027
Turkish
Angora
60021
British Shorthair
Siamese (Lilac)
60025
60042
American shorthair
Russian
blue
60040
60024
Persian
Shaded
Silver
60041
60044
Burmese
Javanese
60032
Tabby stumpy
Manx
60023
60022
Rex
60043
60045
Snowshoe
Manx
60034
Siamese
60039
British
spotted
shorthair
60030
60029
Chinchilla Persian

Assimilation and Accommodation

- The process of assimilation involves incorporating new experiences into our current understanding (schema).

What does Boo call Sully ?

- The process of adjusting a schema and modifying it is called accommodation.

Assimilation and Accomodation

Two-year-old Gabriella has learned the schema for "cow" from her picture books.

Gabriella sees a moose and calls it a "cow." She is trying to assimilate this new animal into an existing schema. Her mother tells her, "No, it's a moose."

Gabriella accommodates her schema for large, shaggy animals and continues to modify that schema to include "mommy moose," "baby moose," and so forth.

Cognitive Development

- Piaget believed that the driving force behind cognitive development is our biological development (maturation)
- As we get older we enter into new cognitive stages.

Sliding a minature slide

Trying to sit in a miniature car

PIAGET'S STAGES OF COGNITIVE DEVELOPMENT

Typical Age Range	Description of Stage	Developmental Phenomena
Birth to nearly 2 years	*Sensorimotor* Experiencing the world through senses and actions (looking, touching, mouthing, and grasping)	• Object permanence • Stranger anxiety • Separation anxiety • Sense of self
2 to about 6 or 7 years	*Preoperational* Representing things with words and images; use intuitive rather than logical reasoning	• Pretend play • Egocentrism • Language development • Mental Reps
About 7 to 11 years	*Concrete operational* Thinking logically about concrete events; grasping concrete analogies and performing arithmetical operations	• Conservation • Mathematical transformations • Classification
About 12 through adulthood	*Formal operational* Abstract reasoning	• Abstract logic • Potential for mature moral reasoning

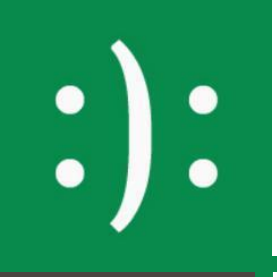
1. Sensorimotor Stage 0-2

- In the sensorimotor stage, babies take in the world by looking, hearing, touching, mouthing, and grasping.
- They are learning to sense
- They are learning to move

Object Permanence

- Object Permanence is THE major cognitive ability gained at this stage.
- It is the realization that an object continues to exist even if you can't see it or touch it. "Peekaboo!"
- Children younger than 6 months of age do not grasp object permanence

At 8 months of age what is out of sight is not out of mind.



Object Permanence

- https://www.youtube.com/watch?v=NjBh9ld_ylo

Other cognitive “power-ups” during the sensorimotor stage.

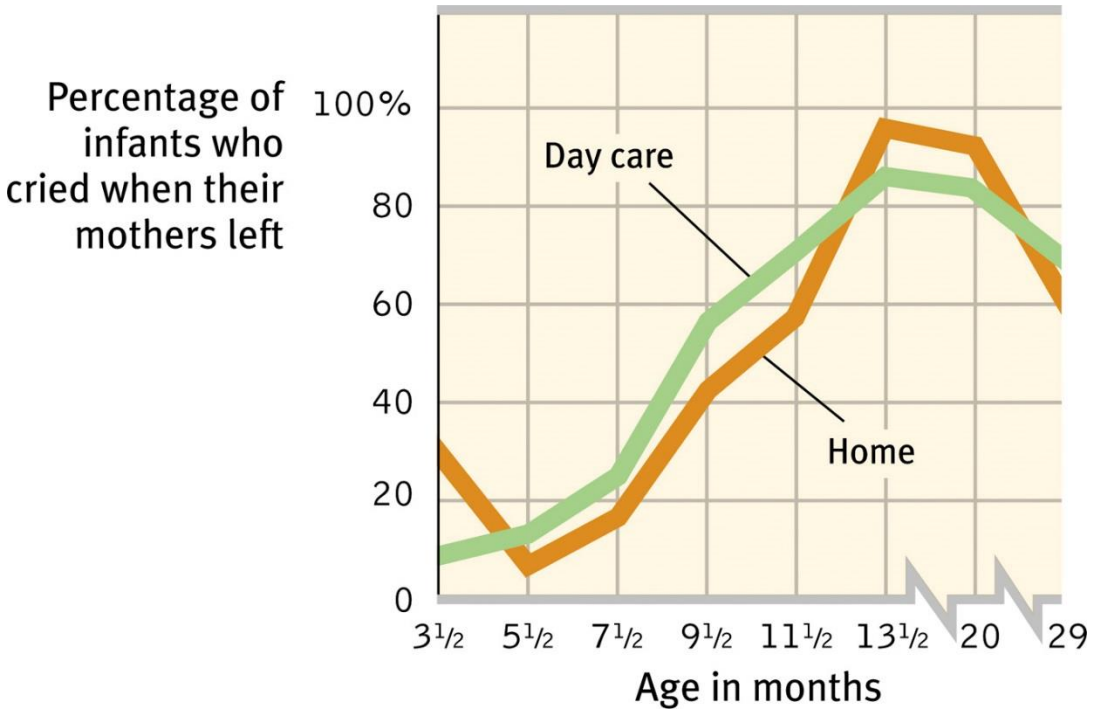
- Sense of Self :one's perception of oneself. (self awareness)
  - 1 year old
  - Mirror test

Stranger anxiety

The fear of strangers that develops at around 8 months. This is the age at which infants form schemas for familiar faces and cannot assimilate a new face.

Separation Anxiety

Separation anxiety—anxiety an infant has when it is separated from the caregiver—peaks at 13 months of age, regardless of whether the children are home or sent to day care.



Sensorimotor Stage: Criticisms

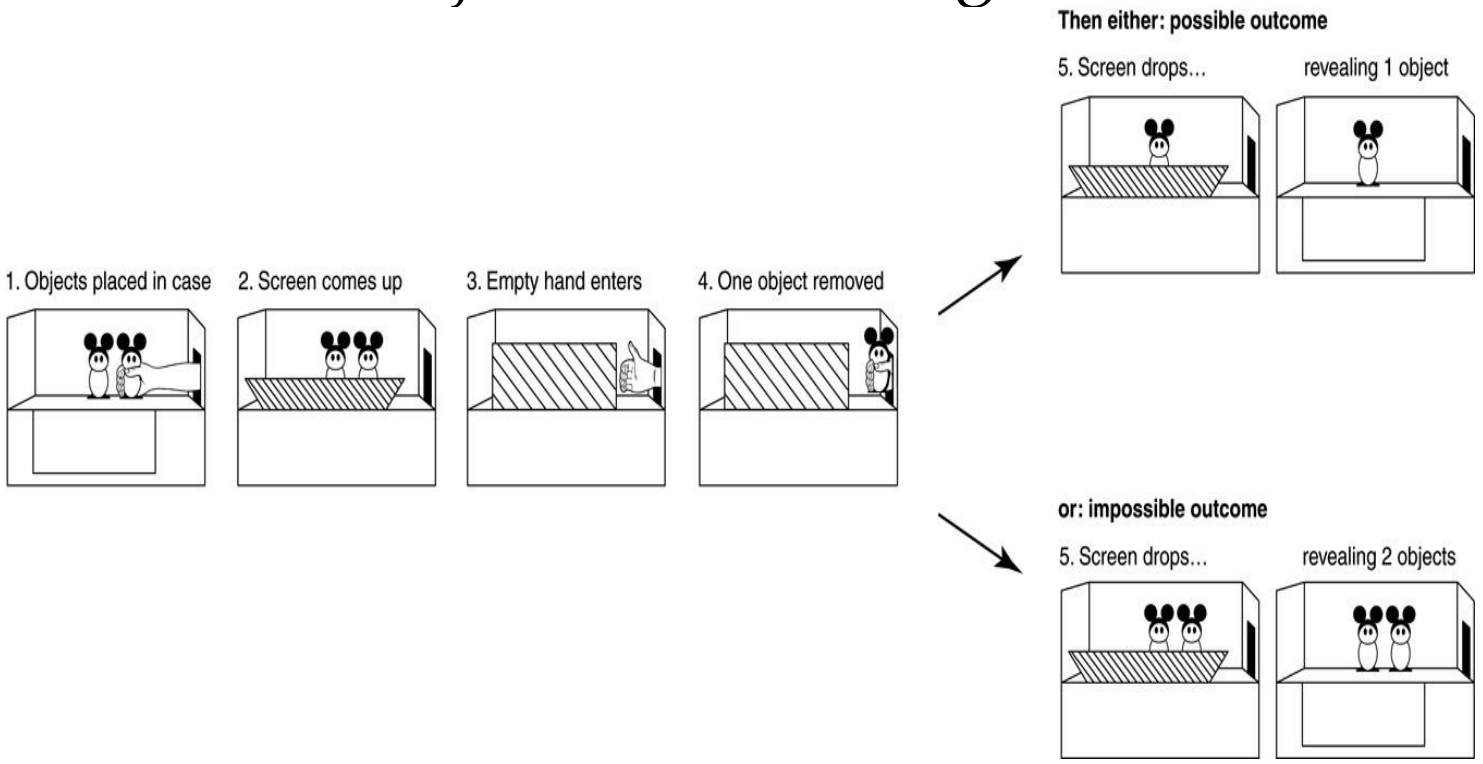
Piaget believed children in the sensorimotor stage could not think —they do not have any abstract concepts or ideas.

However, recent research shows that children in the sensorimotor stage can think and count!

1. Children understand the basic laws of physics. They are amazed at how a ball can stop in midair or disappear.

Sensorimotor Stage: Criticisms

2. Children can also count. Wynn (1992, 2000) showed that children stared longer at the wrong number of objects than the right ones.

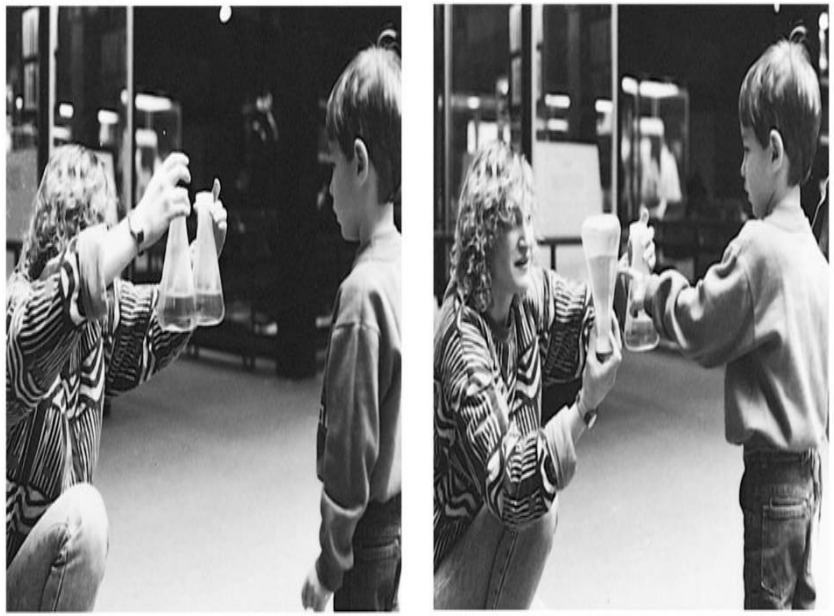


2. Preoperational Stage (2 -6 or 7)

- Children think in terms of language and being to engage in make believe (pretend) play (Tea Parties & Cops and Robbers)
- Language Development is due to Mental Representation – is the ability to create an internal cognitive symbol that represents external reality (language)

- Children are unable to grasp Conservation, the understanding that certain physical properties of an object remain unchanged despite the changes in its appearance

Problems in Preoperational Stage



The child points to the left flask as having more liquid when in fact the two flasks contain the same amount of liquid. The inability to use a mental *operation* and understanding conservation of liquid amounts is lacking at this stage.

- Lack
  - Conservation
  - Perceptually bound
  - Irreversibility
  - https://www.youtube.com/watch?v=N0mpQcTheE8

Development of Mental Representations!

- DeLoache (1987) showed that children as young as 3 years of age are able to use metal operations.
- When shown a model of a dog's hiding place behind the couch, a 2½-year-old could not locate the stuffed dog in an actual room, but the 3-year-old did.
- Hence language development and pretend play

Preoperational Stage

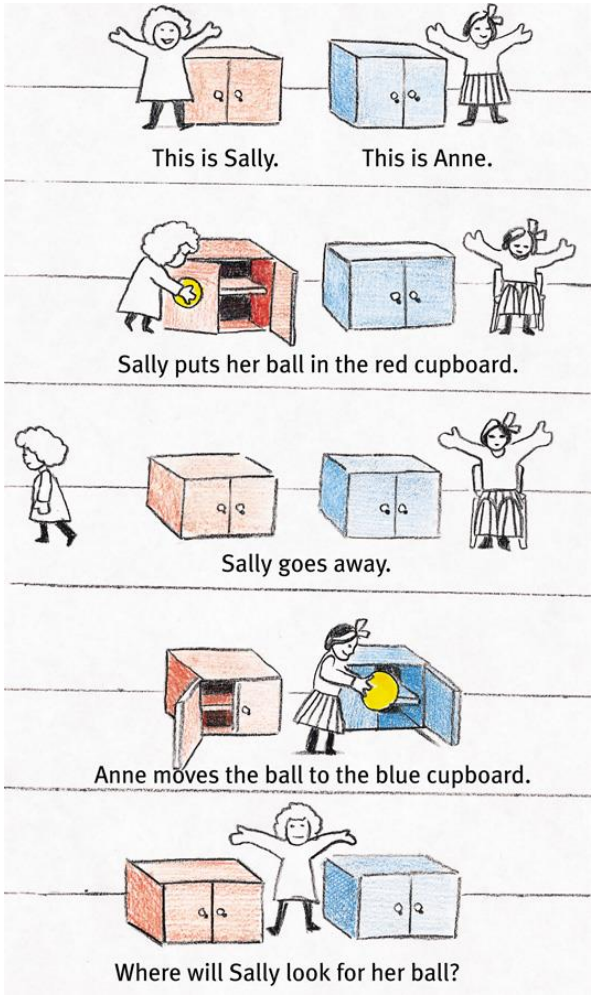
Piaget suggested that from 2 years old to about 6-7 years old, children are in the preoperational stage—too young to perform mental operations (reasoning and logic). Hence, they were illogical

2. Preoperational Stage (2 -6 or 7)

- Egocentrism is the tendency to view the world in your own perspective without recognizing others may have different view points.
  - Its not their fault, they are cognitively limited
- Animism – belief that objects that are inanimate (not living) have feelings, thoughts, and have the mental characteristics and qualities of living things.
  - "Clouds are mad today"
  - "The sun is following us"
- Literal thinking

Development of a Theory of Mind

Preschoolers, although still egocentric, develop the ability to understand another's mental state when they begin forming a theory of mind—The ability to understand that others have beliefs, desires, intentions, and perspectives that are different from one's own.



NOT PIAGET! But still important!

- Egocentrism and the development of self-awareness continues throughout adolescents.
  - What are teenagers preoccupied with? Self Identity! (look at your hair, clothes, folders, backpacks – they are all expressions of your identity)
  - They are also rebellious and they like to argue – expressing your opinions!

- Imaginary audience
  - egocentric state where an individual imagines and believes that multitudes of people are enthusiastically listening to or watching him or her
- Personal Fables
  - belief among teenagers that their story is unique from anyone else's, that no one could possibly understand them

3. Concrete Operational Stage

Children perform mental operations and begin logical reasoning! Reasoning is limited to concrete reality

- Classify, organize, categorize (Collections: Pokemon; beanie babies; baseball cards)
- However, children are unable to make abstract reasoning
- Children in this stage are also able to transform mathematical functions. So, if 4 + 8 = 12, then a transformation, 12 – 4 = 8, is also easily doable.

In concrete operational stage, given concrete materials, 6- to 7-year-olds successfully grasp conservation problems and mentally pour liquids back and forth into glasses of different shapes conserving their quantities.

4. Formal Operational Stage

Around age 12, our reasoning ability expands from concrete thinking to abstract thinking. We can now use symbols and imagined realities to systematically reason. Piaget called this formal operational thinking.

- Problem solving involves reflective strategies
- Hypothetical situations
- According to Piaget, not everybody will reached this stage.

Formal Operational Stage

Rudiments of such thinking begin earlier (age 7) than what Piaget suggested, since 7-year-olds can solve the problem below (Suppes, 1982).

If John is in school, Mary is in school. John is in school. What can you say about Mary?

Reflecting on Piaget's Theory

Piaget's stage theory has been influential globally, validating a number of ideas regarding growth and development in many cultures and societies. However, today's researchers believe the following:

1. Development is a continuous process not stages.
2. The social environment has great influence in development
3. Children express their mental abilities, operations, abstract thought at an earlier age. (cognitively more complex than previously thought)
4. Formal logic is a smaller part of cognition.

Where would Piaget's theory fall under in these debates?

Issue	Details
Nature/Nurture	How do genetic inheritance (*our nature*) and experience (*the nurture we receive*) influence our behavior?
Stability/Change	Do our early personality traits persist through life, or do we become different persons as we age.
Continuity/Stages	Is developmental a gradual, continuous process or a sequence of separate stages?

O.A.2

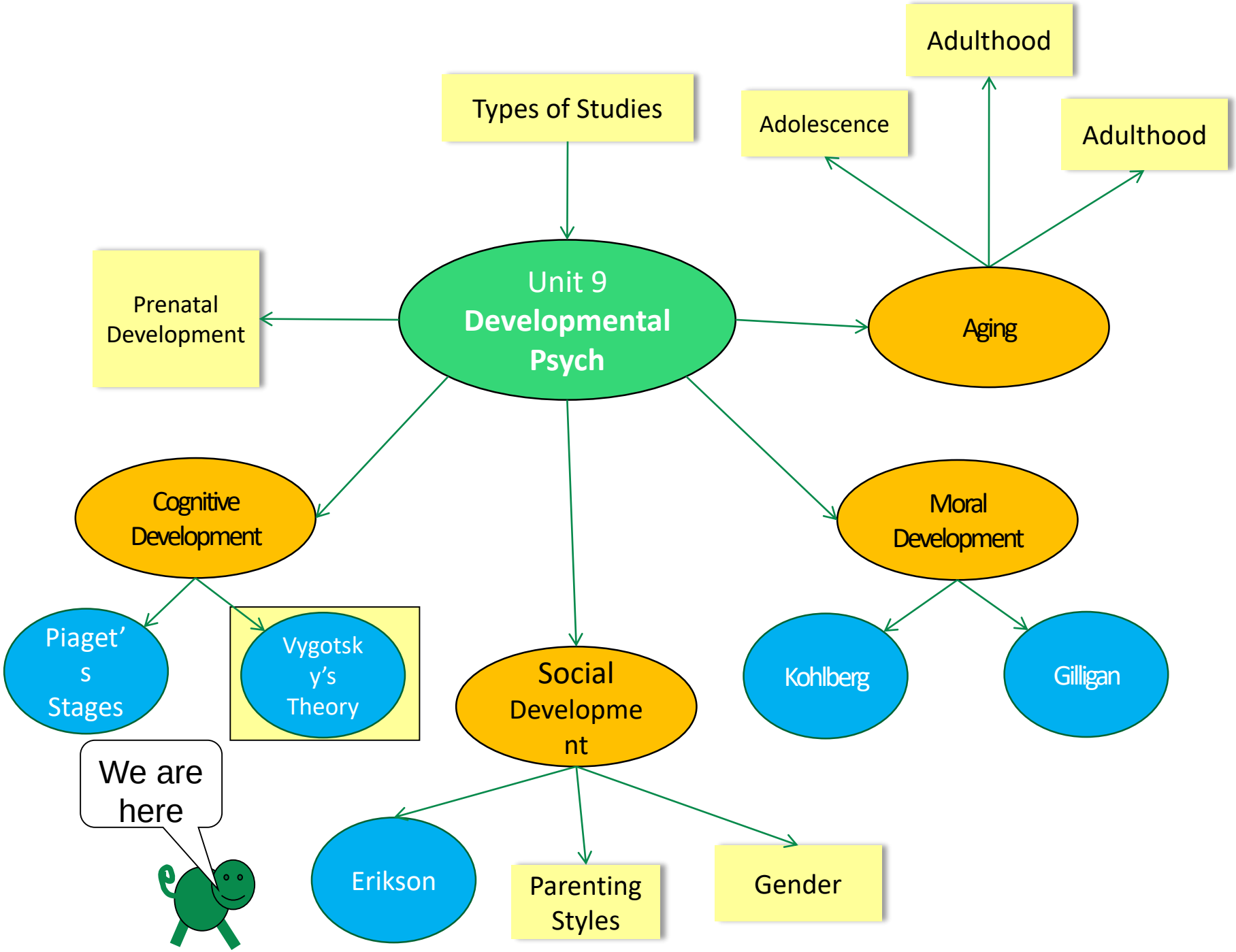
How would children in each of Piaget's stages play with the board game Monopoly?

1. Sensorimotor
2. Preoperational
3. Operational
4. Formal operational

WHS AP Psychology

Unit 9: Developmental Psychology

Essential Task 9-4:Explain the maturation of cognitive abilities according to Vygotsky with specific attention to zones of proximal development and compare this viewpoint to Piaget.


Adulthood
Types of Studies
Adolescence
Adulthood
Prenatal Development
Unit 9 Developmental Psych
Aging
Cognitive Development
Moral Development
Piaget's Stages
Vygotsky's Theory
Social Development
Kohlberg
Gilligan
We are here
Erikson
Parenting Styles
Gender

Vygotsky Continued

- Lev Vygotsky disagreed with Piaget
  - Development did not occur alone or in stages. Everything is social (Nurture) and gradual growth (Continuity).
- Vygotsky saw cognitive development as depending more on interactions with people & tools in the child's world.
  - The way parent speaks to their child becomes the "inner voice" of the child.

Essential Task 9-4:

Outline

- Lev Vygotsky's *sociocultural theory* of cognitive development
  - Children's thinking develops through dialogues with more capable people
  - Emphasized the importance of social interaction to "make meaning"
  - Emphasized the role of language in cognitive development

The Big Ideas…

- Vygotsky developed the theory of the ***Zone of proximal development*** (ZPD)
  - The distance between where a learner is at developmentally on their own & where a learner could be with the help of a ***more knowledgeable other***.
  - A ***more knowledgeable other*** can be an adult or a peer, helping a learner in this way is to ***scaffold*** their learning.
  - Scaffolding framework or temporary support one can give children to solve a problems or form principles.

Examples of Guided Participation

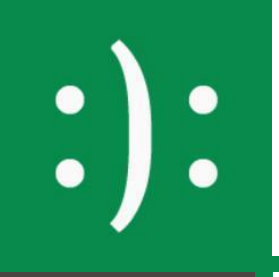
- Think back to your days of driver's ed. and driving around with your parents and your temporary driver's license.
  - In what ways did your parent or driving instructor provide guided participation for you?

Vygotsky and Schools

- Emphasized social learning
  - We can often complete harder tasks with someone else than we could alone.
    - Collaborative learning, group presentations, group work
- Zone of Proximal Development
  - The teacher considers how much scaffolding to give a student to help them learn.
- A push for “authentic learning”.
  - Learning is tied to the context it is in.

Motivation & Vygotsky

- This view emphasizes how people's identities are formed by their participation in a group
  - Students can be motivated to learn by participating in communities where learning is valued
  - Ex: Children want to learn to read & write to become members of the "literary club", to be able to participate and interact with the written world



Vygotsky's Words…

- "It is through others that we become ourselves"
  - All learning is social
- "What a child can do in co-operation today he can do alone tomorrow"
  - Guided participation, ZPD, scaffolding

Where would Vygotky's theory fall under in these debates?

Issue	Details
Nature/Nurture	How do genetic inheritance (*our nature*) and experience (*the nurture we receive*) influence our behavior?
Stability/Change	Do our early personality traits persist through life, or do we become different persons as we age.
Continuity/Stages	Is developmental a gradual, continuous process or a sequence of separate stages?