

Psychology and human development.

Lecture 4. Infancy Development

1. Readiness to learn.
2. Cognitive development.
3. Personality development.
4. Social development . Attachment.



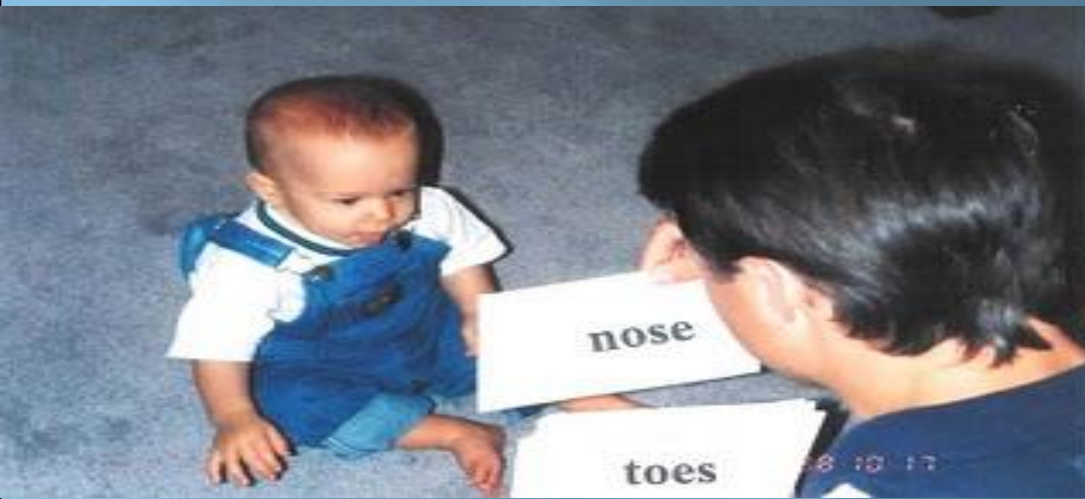
Readiness to learn

Babies cannot learn until their muscles and neural structures are developed enough.

Physical and mental maturation determines the readiness to learn.

Example: for toilet training, the muscles and the brain must be mature enough to learn to control their sphincter muscles (app. 2 years old)

Critical periods are periods of time during which particular behaviors should be ideally learned (for humans: attachment and language acquisition)



Repeat Things Again and Again

Infants need to practice something until they are sure of how it works. That's why it's important to do the same thing over and over again with your baby. Make a game out of repeating things. Besides learning about how things work, your baby will learn what to expect of people and situations.

Read

One of the best ways infants learn to talk is when they are read to or told stories. Make a habit of reading to your baby every day. Starting good reading habits at this young age will help your baby continue to learn new things later on.

MEMORY OF



INFANTS

Years ago child development experts believed that babies didn't know a whole lot and what they did understand wasn't retained for very long. These days professionals in the child development arena will attest to what parents have suspected all along -- that babies are able to understand and retain considerable information and that their memory capacity increases dramatically with age and maturity.

- ▣ In most cases memories of personal experiences in infancy do not last into adulthood
- ▣ Memories of personal experience seem not to become *accurate before age 18 to 24 months*

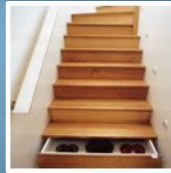
- ▣ The results of one study by Klein & Meltzoff, done in 1999 on 12 month old babies, would seem to indicate that they have the ability to not only process information quickly, but also to retain that information for at least a month. Groups of babies were shown five separate toys and researchers demonstrated unique ways of playing with the objects, being careful not to allow parents to watch the demonstration so that they would not repeat it later. The adults demonstrated the toys to the little ones for a period of only 20 seconds each. The results? Three minutes later, 70% of the babies remembered the special ways to play that they were shown. That percentage dropped to just over 50% at the one week point, and four weeks after the initial meeting, about 50% of the babies still chose to play with the toys in the manner than they had been shown. These results are impressive, especially when you consider that the toys were displayed to them for a timeframe of only 20 seconds. Clearly, babies have the ability to store and recall memories.

Memory processes



encoding

- The process of putting into our memory's system



storage

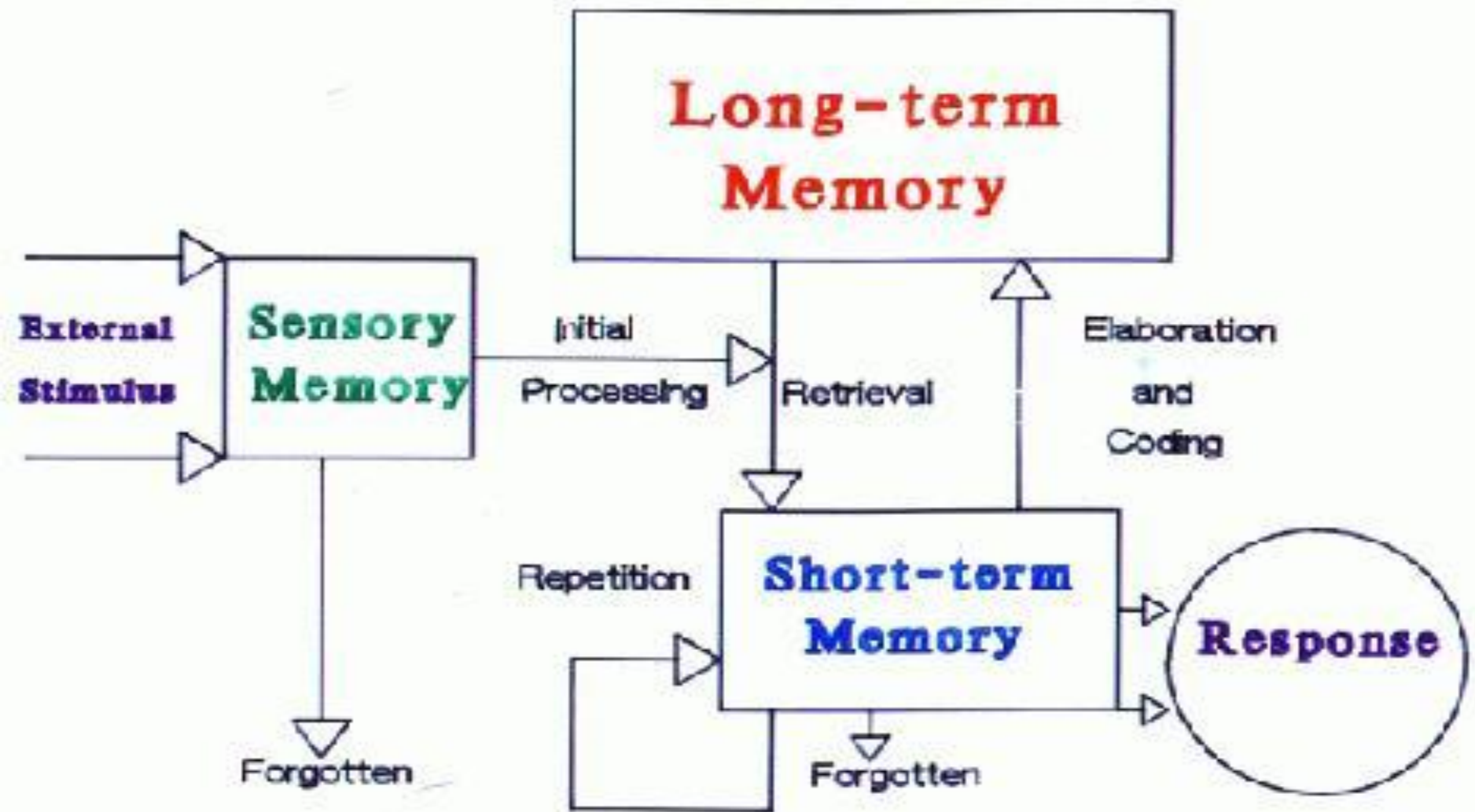
- The process of retaining info in our memory system for some lame of time



retrieval

- Pulling info out of the memory system

Stages of memory storage



The Study of Cognitive Development (was intensively studied for over 60 years)

Piaget's Beliefs:



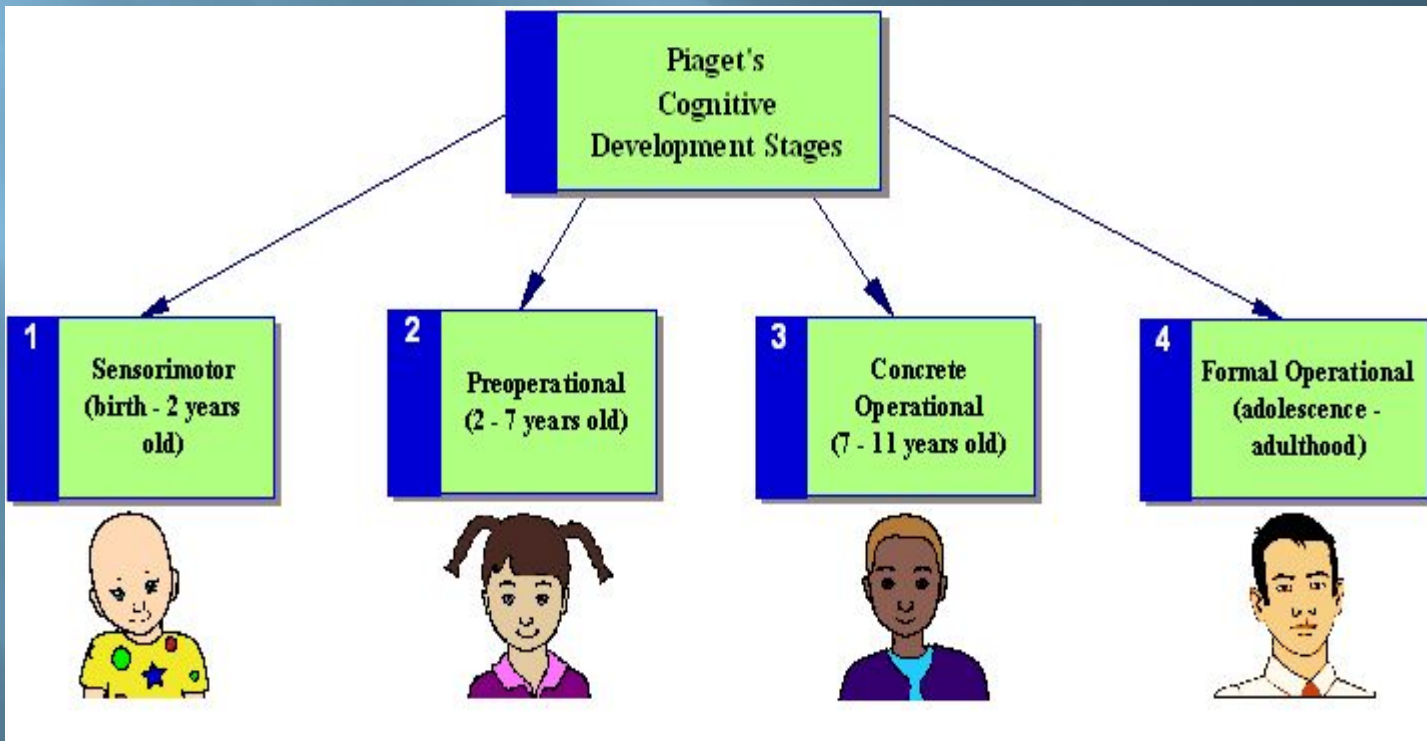
1. It occurs in a child because the developing mental structures were challenged by events that he observes in the environment.
2. In order to overcome a problem, the child develops schemes.
3. A scheme is a unit of knowledge of the world.
 - ▣ (a newborn has reflexive schemes for grasping, sucking, swallowing)
4. Schemes adapt and change
 - ▣ Assimilation
 - ▣ Accommodation

Key Elements of Piaget's Theory

Action = Knowledge

Four universal stages in fixed order

Development = physical maturation *and* exposure to relevant experiences



Two fundamental processes.

Assimilation: the process by which the child integrates new stimulus events into already existing schemes. (a new breed of dog into the existing scheme of dog).



Accommodation: the process of creating a new scheme or changing an existing scheme to make room for a new stimulus event or experience (accommodates a cat by creating the new scheme of cat)

Sensorimotor period (0-2)

The main goals are to learn

- 1) To coordinate sensory experiences with motor activities (looking tasting, touching, and hearing with sucking, reaching, and grasping)
- 2) Object permanence – the ability to realize that objects continue to exist even though they can no longer see them (they will search for a missing object and begin to use images)



A Closer Look

- **First month of life** : Various inborn reflexes at center of a baby's physical and cognitive life determine nature of infant's interactions with world.
- **1 to 4 months of age** : Beginning of coordination of what were separate actions into single, integrated activities / Activities that engage baby's interests are repeated simply for sake of continuing to experience it
- **4 to 8 months of age** : Child begins to act upon outside world . Infants now seek to repeat enjoyable events in their environments that are produced through chance activities.
- **8 months to 12 months** : Beginning of *goal-directed behavior*
Several schemes are combined and coordinated to generate single act to solve problem (object permanence)
- **12 to 18 months**: Development of schemes regarding deliberate variation of actions that bring desirable consequences
Carrying out miniature experiments to observe consequences
- **18 months to 2 years** : Capacity for mental representation or symbolic thought
 - Mental representation – Understanding causality
 - Ability to pretend – Deferred imitation

Object Permanence

Before Object Permanence



After Object Permanence



What is infant intelligence?

Table 2-7

SAMPLE ITEMS FROM THE BAYLEY SCALES OF INFANT DEVELOPMENT

Age	Mental Scale	Motor Scale
2 months	Turns head to sound Reacts to disappearance of face	Holds head erect/steady for 15 seconds Sits with support
6 months	Lifts cup by handle Looks at pictures in book	Sits alone for 30 seconds Grasps foot with hands
12 months	Builds tower of 2 cubes Turns pages of book	Walks with help Grasps pencil in middle
17-19 months	Imitates crayon stroke Identifies objects in photo	Stands alone on right foot Walks up stairs with help
23-25 months	Matches pictures Imitates a 2-word sentence	Laces 3 beads Jumps distance of 4 inches
38-42 months	Names 4 colors Uses past tense Identifies gender	Copies circle Hops twice on 1 foot Walks down stairs, alternating feet

(Source: Bayley, N. 1993. *Bayley Scales of Infant Development* [BSID-11] 2nd ed., San Antonio, TX: The Psychological Corporation.)

Personality Development

Temperament :

- *Appear as early as the first days of life*
- *Show sex and ethnic differences*
- *Activity level rhythmicity
approach adaptability intensity
attention span quality of mood*

Infants temperament influences the way others will act towards them.



Emotional Development

Expression: joy, fear, sadness, anger, surprise were identified in 5-9 months old.

Perception: neonates look at mothers more when they are sad than when they are happy or in sadness.



Birth order and personality

- **First children** tend to be high achievers and more intelligent, helpful, competitive and with higher self-esteem than later born children;
- **The only children** have more of a sense of control and more of self-orientation than children with siblings.
- **Later born children** tend to be more friendly, social, and outgoing, which helps to increase their popularity among peers.

Some of the differences among first-born and later born are due to parental behaviors. First-born have more time to interact with parents.

SOCIAL DEVELOPMENT

Synchrony and Attachment



- Everyone has a NEED to feel an emotional connection to other people.
- An infant is unable to communicate verbally (warmth? security? comfort? food? drink?), so parents have to decipher the infant's facial expressions and sounds.
- By spending time watching and playing with a baby, parents develop understanding of their moods and needs
- They become engaged in developing synchrony.

Synchrony

Coordinated activity where the parent and infant watch, copy and respond to each other.

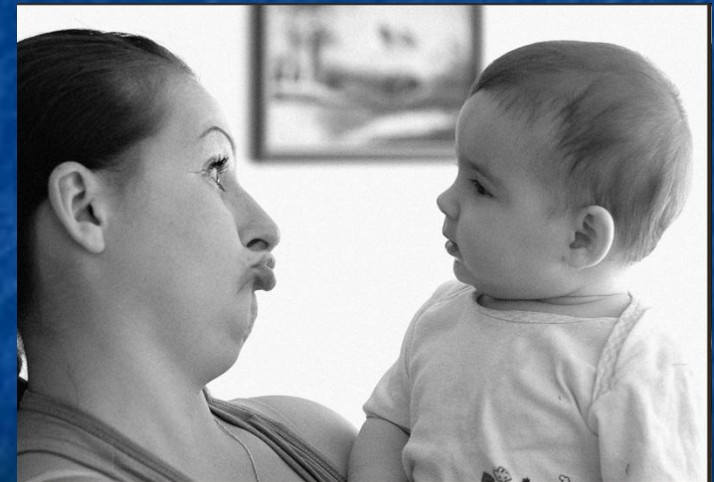
In Synchronous play

The child learns to 'take turns' with the parent and learns the basic skills of social interaction.

(Bremner, 1988)

Attachment

An enduring emotional connection between people that produces a desire or continual contact as well as feelings of distress during separation. (Berger, 2001)



Attachment is demonstrated by

Proximity-seeking
behaviors

(keeping an infant within reach all the time, cuddling, stroking, when putting him in a cot, the child clings to parent and cries)

Contact-maintaining
behaviors

(regaining proximity to the parent, seeking to touch and be touched)

Conclusion: this interplay leads to the development of good attachment relationship.

4 phases in attachment development.

- Asocial phase – responds to all sounds and objects that are interesting. It is actually a period before attachment is formed.
- The indiscriminate attachment phase □ prefer humans to objects, by holding, smiling at them.
- The specific attachment phase □ at about 6/7 months, infants become attached to one specific person □ mother. They become distressed when the mother leaves the room. They fear strangers (stranger anxiety). They demonstrate this by crying when smb unfamiliar approaches them.
- The multiple attachment phase – at 10/11 months of age the baby forms attachments to people other than mother, for example, father, brothers or sisters and others regularly seen.

The importance of attachment

1. *Vital in the development of a child's self-concept and his ability to interact with others.*
2. *It grows stronger with each reunion after being separated.*
3. *Children raised in abusive and neglectful environments tend to become abusive themselves.*
4. *Children with secure attachments to their parents are more mature and approach life with trust.*

Seminar questions

1. What determines infants' readiness to learn?
2. What do infants need to learn better and faster?
3. How good is their memory? Give research evidence.
4. What is the difference and similarity between assimilation and accommodation?
5. Which are the main cognitive goals of sensorimotor period according to Piaget theory?
6. How good are infants in expression and perception of emotions?
7. When and how does infants' temperament develop?
8. What is attachment and its role in social development?
9. Which behaviors are involved in attachment formation?
10. How is attachment demonstrated in 4 phases?