Human Development (Developmental Psychology)

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What is Development?

Development is a sequence of age-related changes that occur as a person progresses from conception to death

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2 Central Issues:

- **How do children change as they develop?**
- **What are the determinants (causes) of these developmental changes**

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Key Issue:

- **Nature-Nurture Controversy:**
  Is development driven by hereditary or environment…..or both?

Nature = Biological Inheritance & Biology

Nurture = Environmental experiences
(e.g., Physical environment, Parenting, Family dynamics, Peer relations, Schooling, Neighborhood quality)

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Development Across the life span

- **Prenatal development** (conception until birth)
- **Infancy** (birth to 2 years)
- **Early childhood** (2 years to 6 years)
- **Middle childhood** (6 years to 12 years)
- **Adolescence** (12 years to 20 years)
- **Young adulthood** (20 years to 40 years)
- **Middle adulthood** (40 years to 65 years)
- **Late adulthood** (65 years and older)

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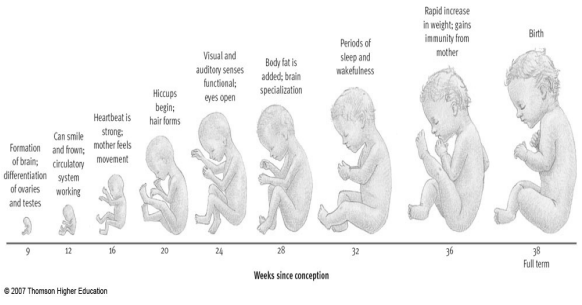
Overview of fetal development



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Basic Principles of Motor Development

- **Cephalocaudal trend**: head-to-foot direction of motor development (e.g., learn to use arms for crawling before legs)
- **Proximodistal trend**: center-outward direction of motor development (e.g., torso develops more quickly than limbs)
- **Developmental Norms –** median age of various behaviors & abilities

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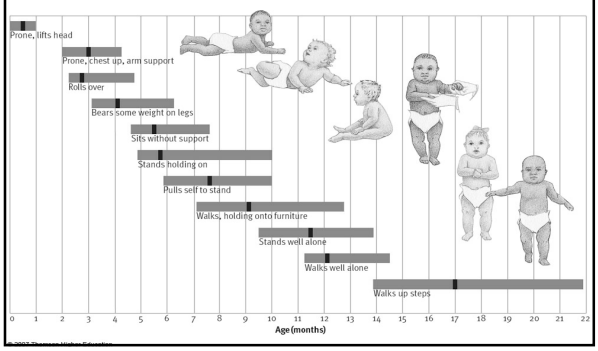
Landmarks in motor development 25%, 50%, and 90% mastery (median alone may be misleading)



Studying Differences in Temperament

- **Cross-sectional design** - comparing groups of participants of differing ages at one point in time
  - Easier, cheaper, and faster to complete
- **Longitudinal design** - observing one group of participants repeatedly over a period of time
  - More sensitive to developmental changes

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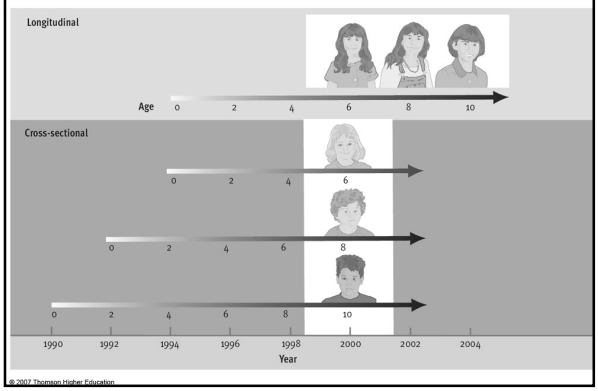
Longitudinal versus cross-sectional research



Studying Differences in Temperament

- **Temperament refers to characteristic mood, activity level, and emotional reactivity**
  - **Often considered to be a precursor to some personality characteristics**

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Differences in Temperament

- **Thomas, Chess, and Birch (1970)**
  - 3 basic temperamental styles
    - **easy – 40%**
    - **slow-to-warm-up – 15%**
    - **difficult – 10%**
    - **mixed – 35%**

(These tended to be stable over time)

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Differences in Temperament

Kagan & Snidman (1991)

- **Inhibited vs. uninhibited temperament**
  - **inhibited – 15 - 20%**
  - **uninhibited – 25 - 30%**
    - stable over time, genetically based

Those with inhibited temperament in second year of life more likely to develop problems with anxiety during adolescence

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Infants' Perceptual Abilities

Some ways or methodologies to study preverbal children:

- **Preference technique**
- **Habituation techniques**

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Why These Techniques Work

- **Babies generally:**
  - **prefer some stimuli over others**
  - **notice new or different things**
  - **Therefore, researchers can infer what differences babies can detect**

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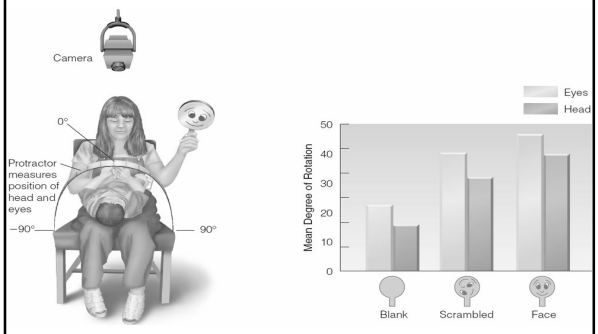

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Infants' Perceptual Abilities

- **Hearing**: Can recognize voices within 1-2 days of birth
- At birth or soon after, infants can:
  - Tell sour, sweet, salty apart
  - Recognize mother's smell
  - Experience pain, soothing touch
- **Vision:**
  - 2-6 months: Can perceive a dropoff
  - But: Newborn vision blurry, lacks detail

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FIGURE 4.10

The visual cliff. By refusing to cross the deep side and showing preference for the shallow surface, this infant demonstrates the ability to perceive depth. *(William Vandivert/Scientific America*

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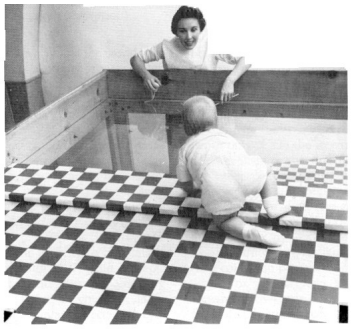

Figure 12.12 A mother calling to her child from across the deep side of the visual cliff. Despite the presence of the glass surface covering the cliff, the child refuses to cross over to the mother. (From Gibson & Walk, 1960. Photograph courtesy of William Vandivert.)

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Continuous vs. Discontinuous Theories of Development

Continuous Theory:

- **development progresses smoothly and gradually from infancy to adulthood.**
- **children are "small adults" who lack experience.**
- **changes are quantitative**

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Discontinuous Theory:

- **development occurs through a series of distinct stages.**
- **each stage is qualitatively different from others.**
- **must proceed through each stage in order.**

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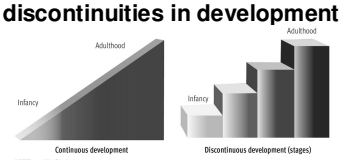
Stage Theories of Development

- **Stage** - a developmental period during which characteristic patterns of behavior are exhibited and certain capacities or abilities are established
- **Stage theories** have three components
  - **Progress through stages in order**
  - **Progress through stages related to age**
  - **Major discontinuities in development**



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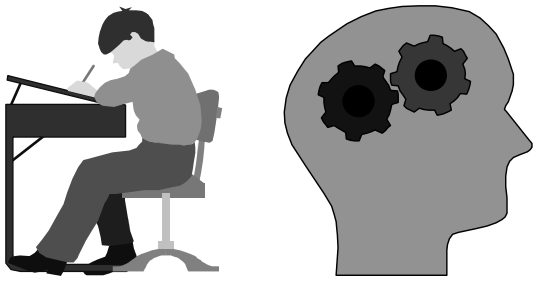
Piaget's Theory of Cognitive Development



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The Development of Thought: Piaget's Work

- **Cognitive development - transitions in youngsters' patterns of thinking, including reasoning, remembering, & problem solving**
- **Children think, organize the world meaningfully - but differently than adults**
- **Thinking changes qualitatively throughout childhood**

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The Development of Thought: Piaget's Work

Scheme: organized pattern of behavior or thinking used to deal with and interact with the world/environment (Examples: sucking; looking; ability to classify objects; grasping)

children actively construct their cognitive world using assimilation and accommodation

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The Development of Thought: Piaget's Work

- **Assimilation involves interpreting new experiences in terms of existing schemes or abilities (e.g., infant tries to suck everything)**
- **Accommodation involves changing or modifying existing schemes or abilities to understand new experiences (learns to shake a rattle)**

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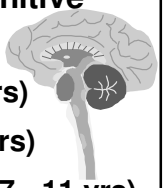
Piaget's Stages of Cognitive Development



Sensorimotor stage (0 - 2 yrs)

Preoperational stage (2 - 7 yrs)

Concrete Operational stage (7 - 11 yrs)

Formal Operations (11 - adulthood)

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Sensorimotor Stage (0-2 yrs)

- **A major integration of sensory input (sight, sound, etc.) with motor behavior**
- **child is moving toward development of symbolic thinking**
- **Related development by end of sensorimotor stage - Language**
- **development of object permanence by about 18 months.**

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Preoperational Stage (2-7 yrs)

- **child begins this stage qualitatively different than he/she was in previous stage - he/she now is capable of symbolic thinking.**
- **Increasing use of language.**
- **Certain properties of thought are reflected in how children handle the conservation problem.**

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Conservation Task

Conservation is the recognition or realization that if nothing is added or taken away, an amount stays the same regardless of alterations in shape or arrangement.

Piaget used the conservation task and how kids handle it to compare the pre-operational and concrete operational stages

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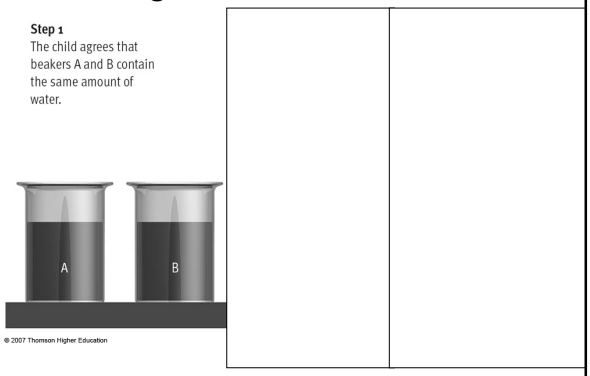
Piaget's conservation task



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Characteristics of Thought: Pre-Operational vs. Concrete Operational Stages

Pre-Operational	Concrete Operational
• centered	▫ de-centered
• static	▫ not static
• lacks reversibility	▫ Capable of reversibility
• egocentric	▫ less egocentric

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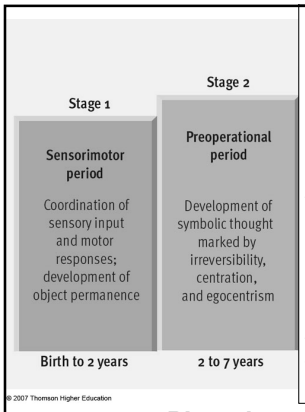

Centration is the tendency to focus on just one feature of a problem, neglecting other important aspects

Static focuses on the final state of things and ignores the transition

Irreversibility is the inability to envision reversing an action

Egocentrism in thinking is characterized by a limited ability to share another person's viewpoint

Piaget's stage theory

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Concrete Operational Stage (7-11)

- **Now has the ability to verbalize, visualize, and mentally manipulate objects**
  - **Understands reversibility, conservation**
- **Can perform elementary logical tasks (math, problem solving), but…**
- **Difficulty with true abstract thinking**
  - **Example: Hypothetical questions**

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Formal Operational Stage (11 and up)

- Thinking is characterized by greater flexibility than during middle childhood.
- ability to use logic, reasoning, and hypotheses in problem solving.
- able to think abstractly & thinks out solutions.
- Decline in egocentricity
- Not everyone reaches formal operations??
- And, some may have it in more familiar situations but not in others.

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Evaluating Piaget

- Landmark contributions to how children think and how it changes over time
- **Challenges:**
  - Piaget tended to under-estimate children's cognitive abilities (e.g., object permanence)
  - Doesn't say much about individual differences
  - Underestimated influence of culture on cognitive development

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Devel. During Preschool Yrs (3 - 6 yrs)

- time of rapid change
- by age 6, speech is almost completely mature

Physical Development

- increased control over small muscles (fine motor skills) - movements requiring precision and dexterity) and large muscles (gross motor skills)
- handedness still not completely determined for all

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Language Development/Acquisition

Preverbal Period

- **regularity in Infant babbling**
- **indistinguishable babbling – hearing versus deaf infants in first 6 months.**
- **Prior to 6 months, babbles contain sounds of virtually all languages.**
- **After 6 months experience appears to play a larger role.**

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First Words

- occurs about 1 year (maybe 10 to 13 mos.)
- first words - one or two syllables - consonant-vowel (e.g., da da; ma ma)
- about 50 words before putting them together.
- The meaning of a whole sentence or phrase seems to be contained in single words....hence the term:

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Holophrastic Speech - one-word speech.

A single word functioning as an entire sentence or phrase does for an adult.

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Stage I Language

- around 2 yrs of age
- starts putting two words together (nouns, adjectives, verbs used frequently)
- articles, prepositions, conjunctions infrequent
- Thus speech is characterized as:

  telegraphic speech
- By about 2 1/2 yrs 3 and 4 word phrases
- paying attention to word order

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Stage II Speech/Language

- about 2 1/2 - 3 yrs of age
- begin making sentences and grammar more precise
- starts adding prepostions, conjunctions, articles

Overregularize

1. Past tense of irregular verbs
2. Past tense of regular verbs
3. "regression" with irregular verbs

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Overregularization (continued)

- goed, throwed, runned
- actually this "regression" represents progress!!.....Child's awareness of rules

Further refinements are made:

- active/passive voice, negatives, etc.
- by about 4 years, child speaking relatively competently
- emergent literacy (beginnings of pre-reading skills)
- pre-writing skills begin - letter reversals

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Socioemotional Development

- peers become increasingly important
- conflicts with peers become teaching tools
- prosocial skills develop through parenting and modeling (Parents & teacher)

Play - kids meet peers for first time, usually through play

- type of play parallels cognitive devel.
- -- Classic study by Parten (1932)

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Parten (1932) - 6 types of Play based on degree of social involvement

1. **unoccupied play - watches others; aimless**
2. **solitary play - occurs alone**
3. **onlooker play - observes others playing - asks questions, comments, etc.**
4. **parallel play - play side-by-side but not "with"**

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5. **associative play - sharing, turn-taking, interest in what others are doing; common activity.**
6. **cooperative play - joining efforts toward common goal; assume different roles.**

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Parallel Play dominates activities of 2 & 3 y.o. & persists as primary form through early childhood

Associative Play First seen in 3rd year & increases in freq. during period to levels comparable to parallel play.

Cooperative Play Emerges during 3rd & 4th years & slowly increases thereafter.

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Development During Elementary Years

Physical development

- slows
- girls begin rapid growth late 4th or early 5th grade
- arms/legs outgrow trunk (gangly)
- temporary loss of coordination/strength
- males 12/18 months behind girls in development
- male growth spurt begins at approximately 11 years of age

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Parenting Styles

- **Many hours spent with parents**
- **Diana Baumrind (1991, 1993) believes that parents interact with their children in one of four basic ways.**

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Parenting Styles

Authoritarian

- Parents are controlling and punitive
- "My way or the highway"
- May have lack of initiative, poor communication skills, lack social competence

Neglectful (Permissive)

- Few expectations and limits
- Parents are uninvolved & can be neglectful
- Correlated with less competence socially and may show poor self-control

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Parenting Styles

Indulgent (Permissive)

- Parents are involved, maybe overly involved, but place few limits
- Wants child to have all that they did not have
- don't want to "stifle" child; hates to tell "no"
- Correlated with poor social competence, lack of respect for others, expect to get their own way; poor self-control

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Parenting Styles

Authoritative

- Parents encourage independence with limits
- warm yet demanding
- Set limits and consistently enforce limits & expect their standards met
- Correlated with social competence, social responsibility, and self-control

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Parenting Styles

Style	Parental Behavior	Common Outcome in Children
Authoritarian	Restrict and punish. Orders not to be questioned. Little verbal exchange.	Anxiety about social comparison, lack of initiative, poor communication skills.
Authoritative	Encourage independence within limits. Extensive verbal give-and-take. Warmth, nurturance.	Social competence, self-reliance, social responsibility.
Neglectful	Little involvement in the child's life. Unaware of what the child is doing.	Anxiety about social comparison, lack of initiative, poor communication skills.
Indulgent	Involved with the child but without placing demands. Highly permissive.	Anxiety about social comparison, lack of initiative, poor communication skills.

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Devel. During Elementary Yrs (cont.)

Social

- **self-concept and self-esteem are critical**
- **increased use of social comparison**
- **Teachers should focus their praise on effort, not ability.**

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- **peer group consists of same-gender children**
- **notion of friendship becomes more mature**
- **peers become emotional supports and activity mates, models of behavior**

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Devel. During Middle and High School

Physical development

- **puberty!!**
- **Many changes – both physically AND mentally**

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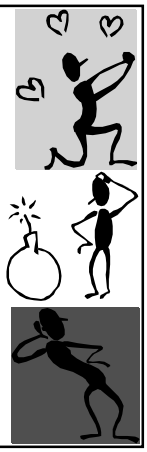
Socioemotional development

- love/hate relationship with teachers
- identity search
- reflective thought
- pressure to conform
- pressures of adolescent life
- peer group is key



WORKING WITH ADOLESCENTS

1. **Want to be treated as adults - offer responsibility up to their capabilities**
2. **Don't stop praising, criticizing, and encouraging, but be careful of the context (covert as opposed to overt)**
3. **Still need explicit standards and limits for performance and evaluation - but let them help develop the rules and standards**

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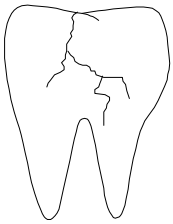
4. **Avoid labeling and encourage exploration of roles.**
5. **Be tolerant of teens' needs for peer contact and conformity.**



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End of Development

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