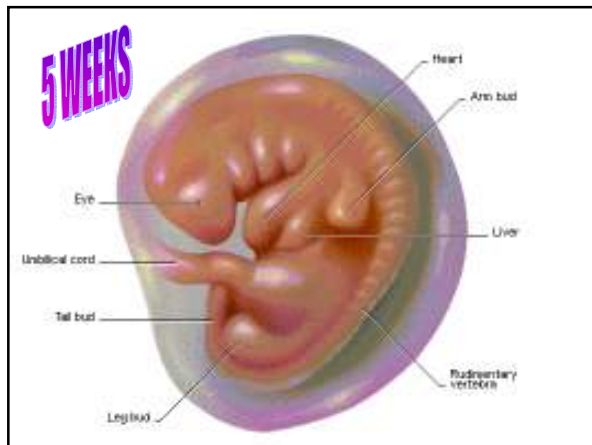
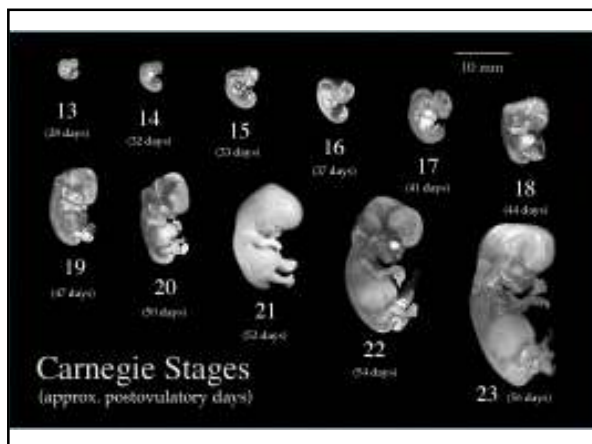


## Prenatal Development...



### Progress Before Birth: **PRENATAL** Development

- 3 phases
  - germinal stage = first 2 weeks
    - conception, implantation, formation of placenta
  - embryonic stage = 2 weeks – 2 months
    - formation of vital organs and systems
  - fetal stage = 2 months – birth
    - bodily growth continues, movement capability begins, brain cells multiply
    - amazing! smelling, hearing, tasting, breathing, kicking, respond to light and touch.



### Environmental Factors and Prenatal Development

- Maternal nutrition
  - Malnutrition linked to infant apathy, irritability, and reduced immune responses
- Maternal drug use
  - Tobacco, alcohol, prescription, and recreational drugs
    - Fetal alcohol syndrome
- Maternal illness
  - Rubella, syphilis, mumps, genital herpes, AIDS, severe influenza
- Prenatal health care: Prevention through guidance



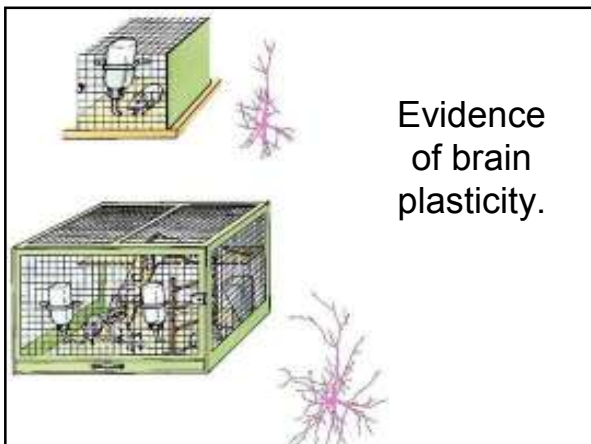
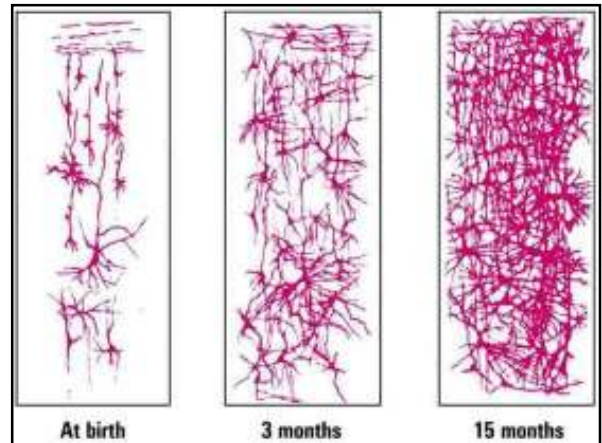
**Figure 11.2**  
 Periods of vulnerability in prenatal development. Generally, structures are most susceptible to damage when they are undergoing rapid development. The red regions of the bars indicate the most sensitive periods for various organs and structures, while the purple regions indicate periods of continued, but lessened, vulnerability. As a whole, sensitivity is greatest in the embryonic stage, but some structures remain vulnerable throughout prenatal development.

## Newborn/Early Development

- Physical Development
  - Newborns HIGHLY underestimated.
  - Born with reflexes.
- Born with other preferences:
  - Mom's smell
  - Human faces and voices

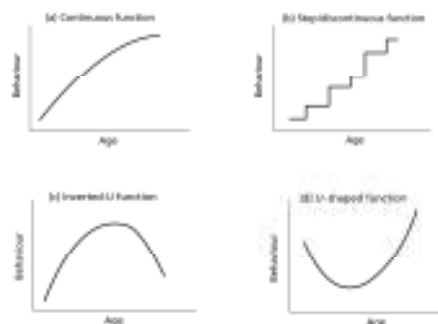


- Yet – still “immature” brain
  - Neurons “bloom” when prenatal.
  - Neural connections “bloom” during infancy.
  - Neural connections also “pruned.”
    - ⌘ Adaptive cerebral cortex becomes more complex and elaborated through the development of neural networks.
    - ⌘ Interconnected neurons are modified by feedback: strengthened to produce a response (output) - to certain input.



Evidence of brain plasticity.

## STAGES of development?



## Variations in Development

- Different children develop at different rates
- The same child will vary in rate of their own development at different times in their life
- Understanding the variance and range of developmental rates is important to developmental psychologists

## Stage theories of development

- Do we develop in stages or not? Are we like oak trees or butterflies in our development?
  - is our development continuous or discontinuous?
- There are a number of various “stage” theorists in study of developmental psychology



## Newborn/Early Development

- Motor Development
- Cognitive Development **JEAN PIAGET**
  - Thinking, knowing, remembering, communicating.
  - Related to physical development: (development of neural networks)

## Cognitive: PIAGET

### Basics

- Use of Schemas.
  - Assimilation: incorporate new experiences into existing framework.
  - Accommodation: Also fit/modify/create schemas to incorporate new experiences.
    - Development occurs in distinct stages – not gradual change.
    - To understand development, understand “errors” children make.

## Stage Theories: Cognitive Development

- Jean Piaget (1920s-1980s)
  - 4 stages and major milestones
    1. Sensorimotor
      - Object permanence
    2. Preoperational
      - Centration, Egocentrism
    3. Concrete Operational
      - Decentration, Reversibility, Conservation
    4. Formal Operational
      - Abstraction

## PIAGET: Stages of Cognitive Development

1. **Sensorimotor** (birth - 2 years)
  - "Children can't think" - know world through motor actions & senses.
  - Experience orderly increase in more complex cognition.
- Around 8 months:
  - Object Permanence: The awareness that objects continue to exist when not perceived.

## Piaget: Stages of Cog. Development

2. **Preoperational Stage** (preschool - 6 years)
  - Advances in memory & more verbal able to "pretend", **Egocentrism START**
  - **Centration**: Focus on just 1 aspect. **Not** yet capable of mental "operations". Irreversibility continues
  - **Not** capable of taking another's point of view.
  - Egocentric: interpret world from perspective of self only.

## Piaget: Stages of Cog. Development

3. **Concrete Operational Stage** (7-11 years)
  - Capable of logical reasoning.
  - Able to take perspective of others.
  - But - no thinking on abstract level.
  - Hierarchical classification
  - I could prove to them that a peanut butter sandwich is better than World Peace

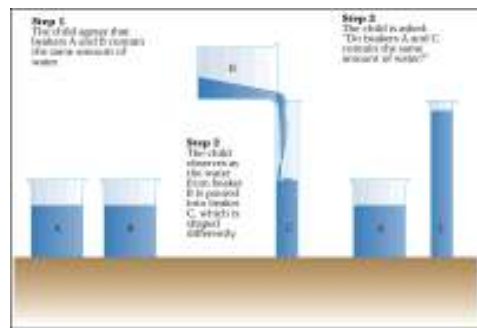


Figure 11.13  
Piaget's conservation task. After watching the transformation shown, a preoperational child will usually answer that the taller beaker contains more water. In contrast, the child in the concrete operations period tends to respond correctly, recognizing that the amount of water in beaker C remains the same as the amount in beaker A.

## Piaget: Stages of Cog. Development

4. **Formal Operational Stage** (12 - adult)
  - Can think abstractly. Use imagined realities.
  - Engage in moral reasoning.

## Piaget's Stages of Cognitive Development

Typical Age Range	Description of Stage	Developmental Phenomena
Birth to nearly 2 years	<i>Sensorimotor</i> Experiencing the world through senses and actions (looking, touching, mouthing)	•Object permanence •Stranger anxiety
About 2 to 6 years	<i>Preoperational</i> Representing things with words and images but lacking logical reasoning	•Pretend play •Egocentrism •Language development
About 7 to 11 years	<i>Concrete operational</i> Thinking logically about concrete events; grasping concrete analogies and performing arithmetical operations	•Conservation •Mathematical transformations
About 12 through adulthood	<i>Formal operational</i> Abstract reasoning	•Abstract logic •Potential for moral reasoning

## Emotional/Social Development



### Harlow's Monkey Studies

–Wire vs. cloth  
monkeys



## Emotional/Social Development

- Why such upset?
  - For animals – may be “critical period” for forming the attachment with caregiver.
    - imprinting
    - Lorenz
  - Not quite as concrete for humans. Why?

## Easy and Difficult Babies: Differences in Temperament

- Thomas, Chess, and Birch (1970)
  - 3 basic temperamental styles
    - easy – 40%
    - slow-to-warm-up – 15%
    - difficult – 10%
    - mixed – 35%
  - stable over time
- Kagan & Snidman (1991)
  - Inhibited vs. uninhibited temperament
    - Inhibited – 15 – 20%
    - Uninhibited – 25 – 30%
    - Stable over time, genetically based



## Infant Attachment

- Intense emotional bond between infant and caregiver

## Ainsworth - attachment

- 3 attachment styles
  - 1. Securely attached
  - 2. Anxious/ambivalent (resistant)
  - 3. Anxious/avoidant.
- Do these attachment influence people later in life?
  - secure = more confidence, better problem solvers, emotionally healthier, more sociable

## Ainsworth's Strange Situation

- Mother-child dyads were observed in a playroom under four conditions:
  - initial mother-child interaction
  - mother leaves infant alone in playroom
  - friendly stranger enters playroom
  - mother returns and greets child

## Forms of Attachment

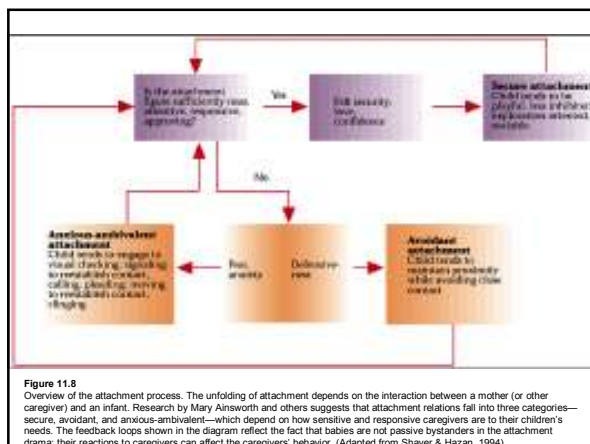
- Securely attached - explores the room when mother is present, becomes upset and explores less when mother is not present, shows pleasure when mother returns
- Avoidantly attached - a form of insecure attachment in which child avoids mother and act coldly to her

## Forms of Attachment

- Anxious resistant attachment - a form of insecure attachment where the child remains close to mother and remains distressed despite her attempts to comfort

## Attachment

- Early attachment influences how we deal with relationships as adults.
  - Secure lovers: happy, trusting, friends, etc.
  - Anxious/ambivalent: obsessed, extreme sexual attraction, jealousy.
  - Anxious/avoidant: fear of intimacy, emotional highs and lows, jealousy.



## Early Emotional Development: Attachment

- Developing secure attachment
  - **Bonding at birth?** Imprinting is crucial
  - **Divorce?** Basic conclusion: kids from divorced families sometimes have more problems.
  - **Daycare?** Basic conclusion: good day care has no negative effects on children.
  - **Cultural factors?**

### Application of psychology: Parenting

- Parent and infant attachment
  - the securely-attached infant will:
    - enjoy physical contact with parents and others
    - be comfortable in exploring different environments
    - be likely to be more intelligent than not-securely attached infants
    - be more psychologically healthy as a child
    - be more responsive to its environment

### Application of psychology: Parenting

- The insecurely-attached infant will:
  - cling excessively to the parent
  - become extremely upset when the parent leaves the child or a stranger appears in the child's environment
  - be less likely to freely explore its environment and, hence, be somewhat less intelligent than its securely-attached counterpart

### Application of psychology: Parenting

- Parenting and discipline styles
  - authoritarian parenting
  - permissive parenting
  - authoritative parenting
- Bi-directional effects in childrearing
  - parents' behavior affects children's behavior
  - children's behavior affects parent's behavior



### Application of psychology: Parenting

- The myth of the perfect parent
  - there are no perfect parents
  - the most difficult job you will ever have and the job for which you are least prepared
  - children are resilient
  - honest, heart-felt commitment expressed in loving behavior is a good start to being a good parent



ATTITUDES WHEEL

Spin the wheel  
for a new  
Personality

### Social Development

The changing nature of  
relationships with  
others over the life  
span

### Stage Theories of Development: Personality

- Stage theories, three components
  - Progress through stages in order
  - Progress through stages related to age
  - Major discontinuities in development
- Erik Erikson (1963)
  - Eight stages spanning the life span
  - Psychosocial crises determining balance between opposing polarities in personality

### Erikson's Psychosocial Theory

- Eight Stages
- Go through one stage by one stage
- Develop positive ego identity
- Positive solution vs. negative counterpart
- Identity formation forms gradually
- Role diffusion vs. identity diffusion

### Erikson's Psychosocial Theory

- Stage 1 :** Infancy-- Achieving trust vs. mistrust
- Stage 2 :** Early Childhood-- Achieving autonomy vs. shame and doubt
- Stage 3 :** Play age-- Achieving initiative vs. guilt
- Stage 4 :** School age--Achieving industry vs. inferiority
- Stage 5 :** Adolescence-- Achieving identity vs. identity diffusion
- Stage 6 :** Young adult-- Achieving intimacy vs. isolation
- Stage 7 :** Middle Adulthood-- Generativity vs. Self-Absorption
- Stage 8 :** Mature age-- Achieving ego integrity vs. disgust and despair

### Erikson's Psychosocial Theory

#### **Stage 1 : Trust Versus Mistrust (infant years)**

*A sense of trust requires a feeling of physical comfort and minimal amount of fear and apprehension about the future.*

#### **Stage 2: Autonomy Versus Shame and Doubt (toddler years)**

*After gaining trust in their caregivers, infants begin to discover that their behavior is their own.*

Trust???

#### **Stage 3 : Initiative Versus Guilt (preschool years)**

*As preschool children encounter a widening social world, they are challenged more than they were as infants.*

*The task is to develop active, purposeful behavior to cope with these challenges.*



### Erikson's Psychosocial Theory

#### **Stage 4: Industry Versus Inferiority (primary school years)**

*Children's initiative (beginning in the former stage) brings them into contact with a wealth of new experiences, and they direct their energy toward mastering knowledge and intellectual skills.*

#### **Stage 5: Identity Versus Role (Identity) Confusion (high school years)**

*Adolescents are faced with finding out who they are all about, and where they are going in life.*

## Erikson's Psychosocial Theory

### Stage 6: Intimacy Versus Isolation (early adulthood)

*At this time, individuals face the developmental task of forming intimate relationships with others.*

### Stage 7: Generativity Versus Stagnation (middle adulthood)

*A chief concern is to assist the younger generation in developing and leading useful lives- this is what Erikson meant by Generativity.*

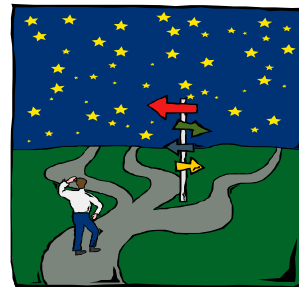
### Stage 8: Integrity Versus Despair (late adulthood)

*This involves reflecting on the past and either piecing together a positive review or concluding that one's life has not been well spent.*



## How is Identity Formed?

To form an identity adolescents must maintain a connection with their past, establish stable future goals, and maintain adequate interpersonal relationships in the present.



## The Search for Identity

- Premier challenge of adolescence – forming a sense of identity
  - 4 identity statuses (Marcia, 1966, 1988)
    - Foreclosure
    - Moratorium
    - Identity Diffusion
    - Identity Achievement

		Crisis	
		Present	Absent
Commitment	Present	Identity achievement (successful achievement of a sense of identity)	Identity foreclosure (unquestioning adoption of parental or societal values)
	Absent	Identity moratorium (active struggling for a sense of identity)	Identity diffusion (absence of struggle for identity, with no obvious concern about it)

**Figure 11.21**

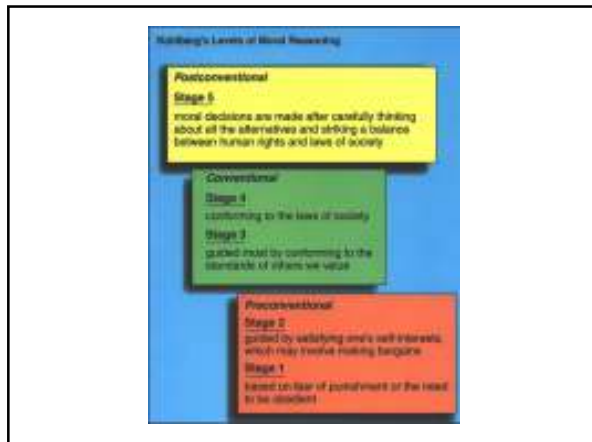
Marcia's four identity statuses. According to Marcia (1980), the occurrence of an identity crisis and the development of personal commitments can combine into four possible identity statuses, as shown in this diagram.

## The Development of Moral Reasoning

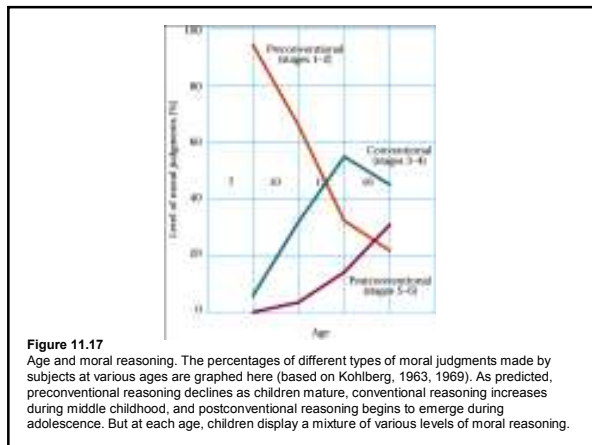
- Kohlberg (1976)
  - Reasoning as opposed to behavior
    - Moral dilemmas
      - Measured nature and progression of moral reasoning
  - 3 levels, each with 2 sublevels EACH
    - Preconventional
    - Conventional
    - Postconventional

## Kohlberg, cont.

- (1) Preconventional Moral Reasoning
  - (1a) Punishment Orientation
  - (1b) Instrumental Hedonism
- (2) Conventional Moral Reasoning
  - (2a) Good girl/good boy Orientation
  - (2b) Law and Order Orientation
- (3) Postconventional Moral Reasoning
  - (3a) Social Contract Orientation
  - (3b) Universal Principled Orientation



# Pass out Kohlberg Handout



## LEVEL I

### Preconventional moral reasoning

Main idea: *Moral thought and act based on reward or punishment*

- **Stage 1-- Punishment orientation**
  - Avoid negative consequences
  - E.g. I am afraid of being put in jail so I dare not steal
- **Stage 2-- Instrumental hedonism orientation**
  - Moral thought and act based on payback and future gain
  - E.g. in Heinz story, participants thought that “if he saved his wife, think how grateful she would be. She’s treat him like a king forever.”

## LEVEL II

### Conventional moral reasoning

Main idea: *the desire to conform to the social convention*

- **Stage 3-- Good girl-good boy orientation**
  - Moral act and thought are motivated by winning others’ approval
- **Stage 4-- Law and order orientation**
  - Unquestioningly obey rules because that is what others have said is correct

## LEVEL III

### Postconventional moral reasoning

Main idea: *moral acts and reasoning based on adherence to universal principles. Spirit NOT letter of the law.*

- **Stage 5-- Social contract orientation**
  - The person believes that individual actions should serve the greater good
  - They believe in extenuating circumstances
- **Stage 6-- Universal principled reasoning**
  - Moral acts and thoughts based on the person’s abstract moral principles
  - They believe in universal principles of justice that are valid beyond existing laws

## Causes of aging

- Aging is partly a biological process but is a psychological process as well
- Staying engaged in life's activities and refusing to accept myths about aging are two keys to happy aging
- Aging as a biological process may be genetically solved toward the end of your lifetime