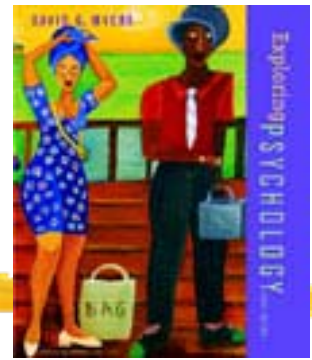


## Chapter 4

# The Developing Person

# Prenatal Development and the Newborn

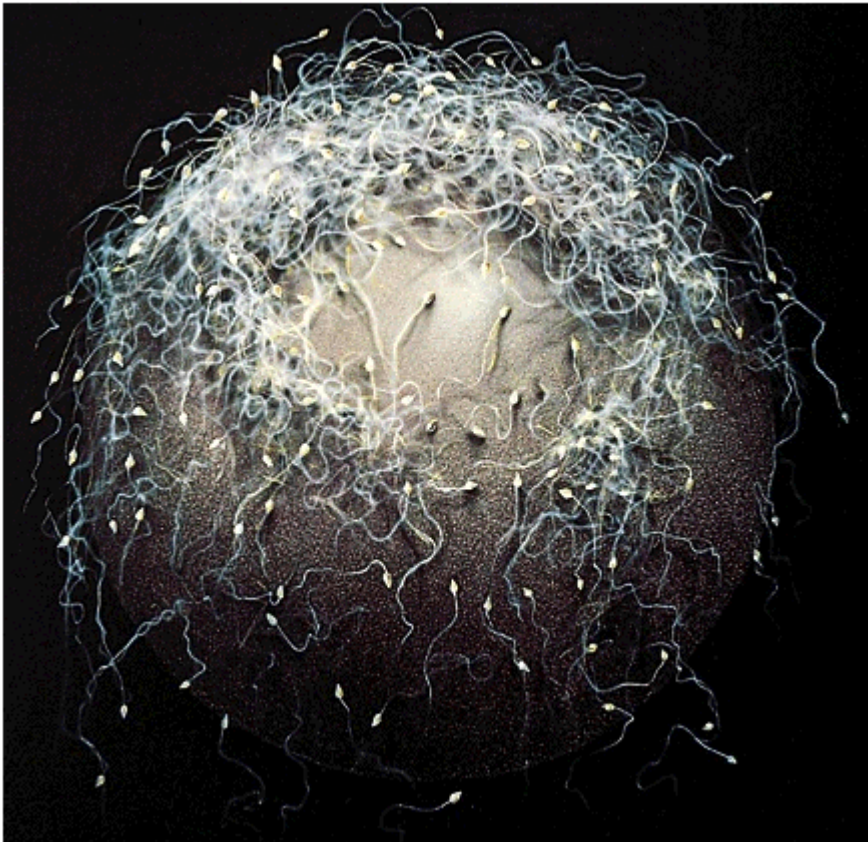
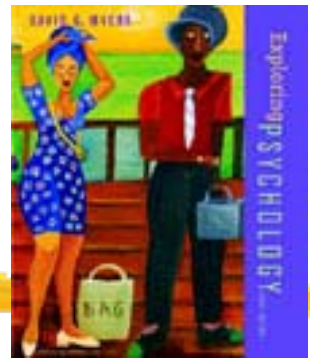


## ■ Developmental Psychology

- a branch of psychology that studies physical, cognitive and social change throughout the life span

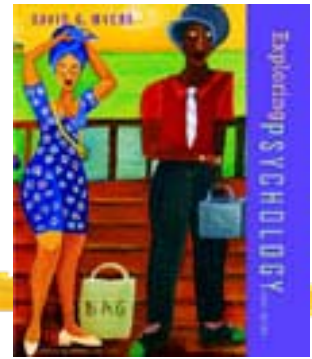


# Prenatal Development and the Newborn



Life is sexually transmitted

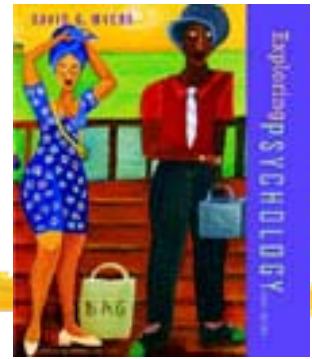
# Prenatal Development and the Newborn



- **Zygote**
  - the fertilized egg
  - enters a 2 week period of rapid cell division
  - develops into an embryo
- **Embryo**
  - the developing human organism from 2 weeks through 2nd month
- **Fetus**
  - the developing human organism from 9 weeks after conception to birth



# Prenatal Development and the Newborn

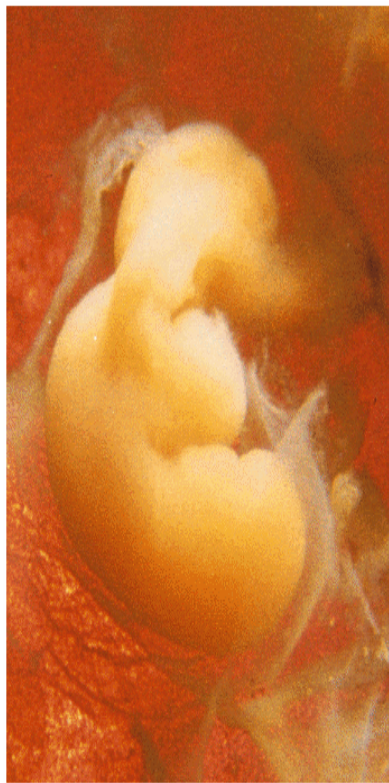


40 days

45 days

2 months

4 months



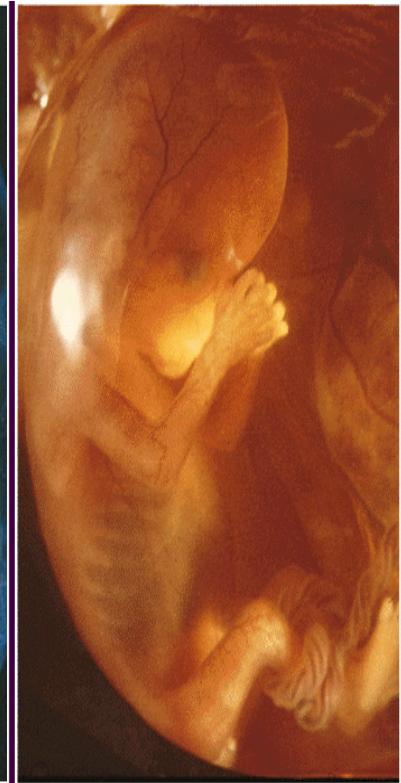
(a)



(b)



(c)



(d)

# Prenatal Development and the Newborn



- Teratogens
  - agents, such as chemicals and viruses, that can reach the embryo or fetus during prenatal development and cause harm
- Fetal Alcohol Syndrome (FAS)
  - physical and cognitive abnormalities in children caused by a pregnant woman's heavy drinking
  - symptoms include facial misproportions

# Prenatal Development and the Newborn

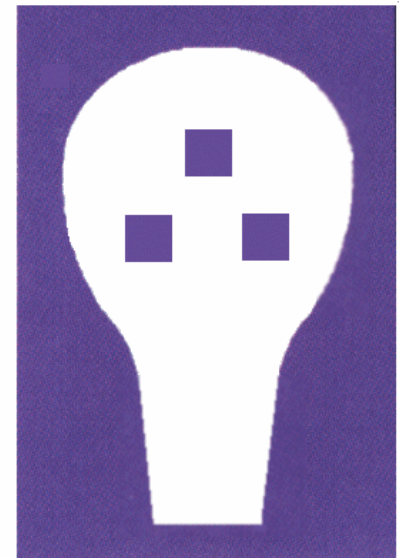
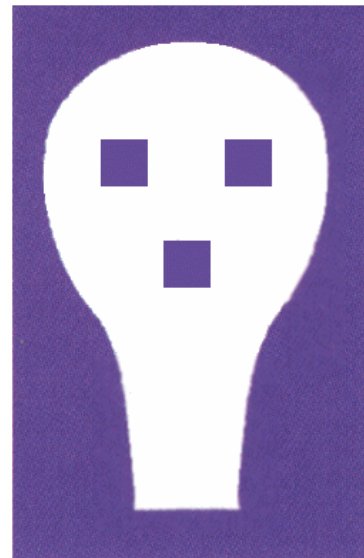


## ■ Rooting Reflex

- tendency to open mouth, and search for nipple when touched on the cheek

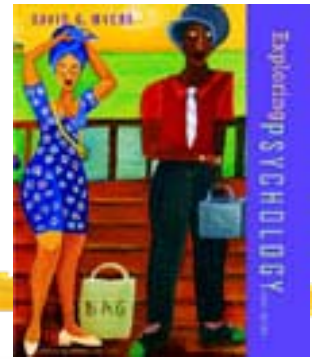
## ■ Preferences

- human voices and faces
  - face like images-->
- smell and sound of mother





# Infancy and Childhood: Physical Development

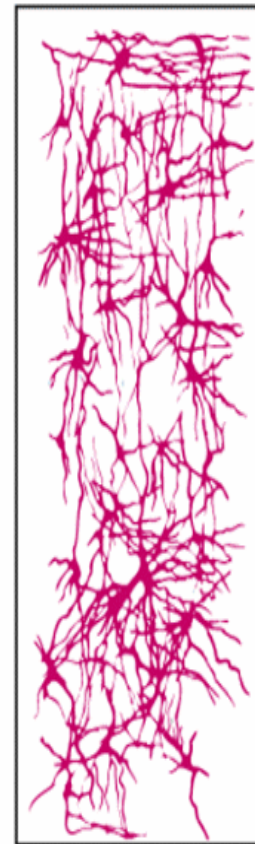


## ■ Maturation

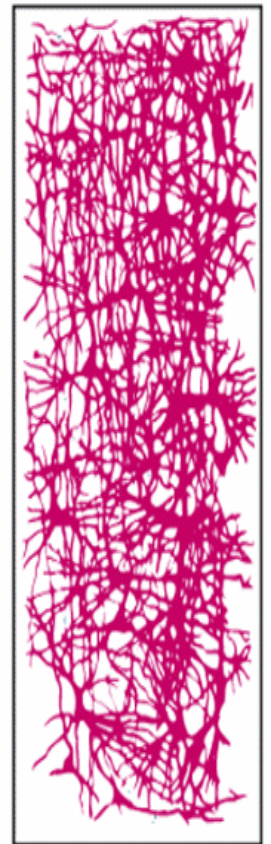
- biological growth processes that enable orderly changes in behavior
- relatively uninfluenced by experience



At birth



3 months

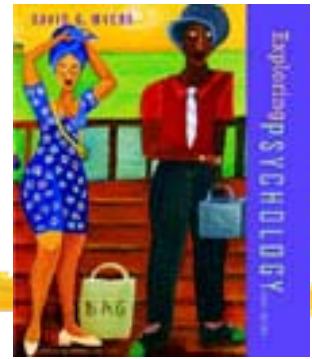


15 months

**Cortical Neurons**



# Infancy and Childhood: Physical Development



- Babies only 3 months old can learn that kicking moves a mobile- and can retain that learning for a month (Rovee-Collier, 1989, 1997).

# Infancy and Childhood: Cognitive Development



- Schema

- a concept or framework that organizes and interprets information

- Assimilation

- interpreting one's new experience in terms of one's existing schemas

# Infancy and Childhood: Cognitive Development



- Accommodation
  - adapting one's current understandings (schemas) to incorporate new information
- Cognition
  - All the mental activities associated with thinking, knowing, remembering, and communicating

# 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)	<ul style="list-style-type: none"><li>•Object permanence</li><li>•Stranger anxiety</li></ul>
About 2 to 6 years	<i>Preoperational</i> Representing things with words and images but lacking logical reasoning	<ul style="list-style-type: none"><li>•Pretend play</li><li>•Egocentrism</li><li>•Language development</li></ul>
About 7 to 11 years	<i>Concrete operational</i> Thinking logically about concrete events; grasping concrete analogies and performing arithmetical operations	<ul style="list-style-type: none"><li>•Conservation</li><li>•Mathematical transformations</li></ul>
About 12 through adulthood	<i>Formal operational</i> Abstract reasoning	<ul style="list-style-type: none"><li>•Abstract logic</li><li>•Potential for moral reasoning</li></ul>



# Infancy and Childhood: Cognitive Development



- Object Permanence
  - the awareness that things continue to exist even when not perceived



# Infancy and Childhood: Cognitive Development



## ■ Conservation

- the principle that properties such as mass, volume, and number remain the same despite changes in the forms of objects



# Infancy and Childhood: Cognitive Development



- **Egocentrism**

- the inability of the preoperational child to take another's point of view

- **Theory of Mind**

- people's ideas about their own and others' mental states - about their feelings, perceptions, and thoughts and the behavior these might predict

- **Autism**

- a disorder that appears in childhood
- Marked by deficient communication, social interaction and understanding of others' states of mind



# Social Development



- Stranger Anxiety
  - fear of strangers that infants commonly display
  - beginning by about 8 months of age
- Attachment
  - an emotional tie with another person
  - shown in young children by their seeking closeness to the caregiver and showing distress on separation

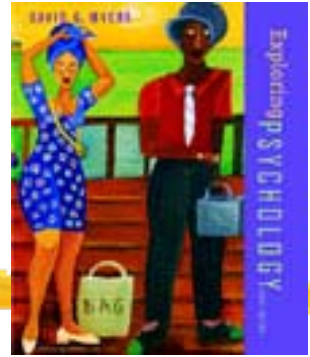


# Social Development



- Harlow's Surrogate Mother Experiments
  - Monkeys preferred contact with the comfortable cloth mother, even while feeding from the nourishing wire mother

# Social Development



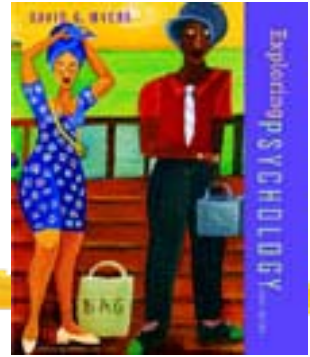
- Critical Period

- an optimal period shortly after birth when an organism's exposure to certain stimuli or experiences produces proper development

- Imprinting

- the process by which certain animals form attachments during a critical period very early in life

# Social Development

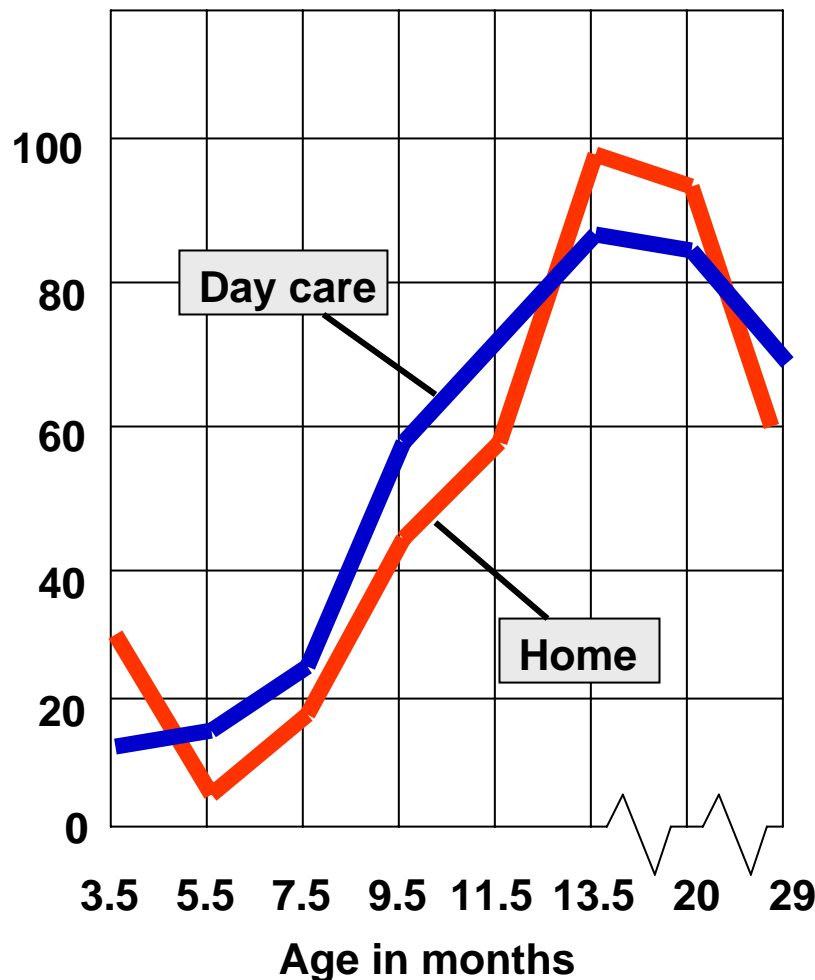


- Monkeys raised by artificial mothers were terror-stricken when placed in strange situations without their surrogate mothers

# Social Development



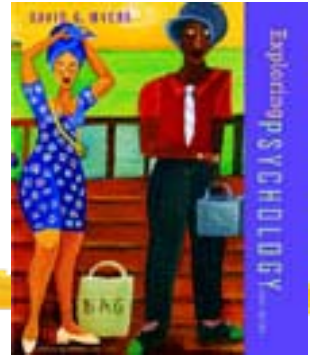
Percentage of infants who cried when their mothers left



- Groups of infants left by their mothers in a unfamiliar room (from Kagan, 1976)

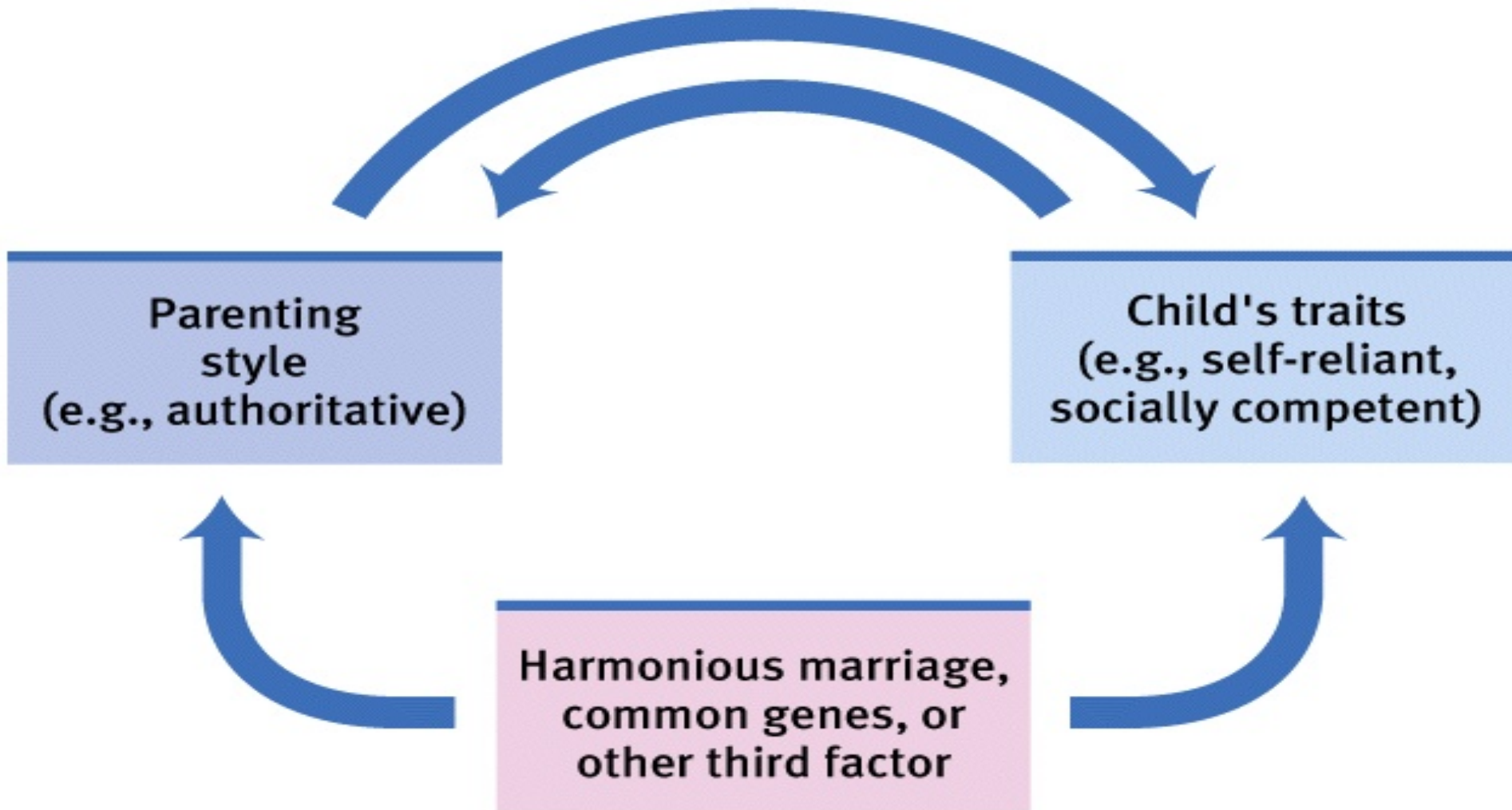


# Social Development



- **Basic Trust** (Erik Erikson)
  - a sense that the world is predictable and trustworthy
  - said to be formed during infancy by appropriate experiences with responsive caregivers

# Social Development- Child-Rearing Practices



# Adolescence



- Adolescence

- the transition period from childhood to adulthood
- extending from puberty to independence

- Puberty

- the period of sexual maturation
- when a person becomes capable of reproduction

# Adolescence



- **Primary Sex Characteristics**

- body structures that make sexual reproduction possible
  - ovaries- female
  - testes- male
  - external genitalia

- **Secondary Sex Characteristics**

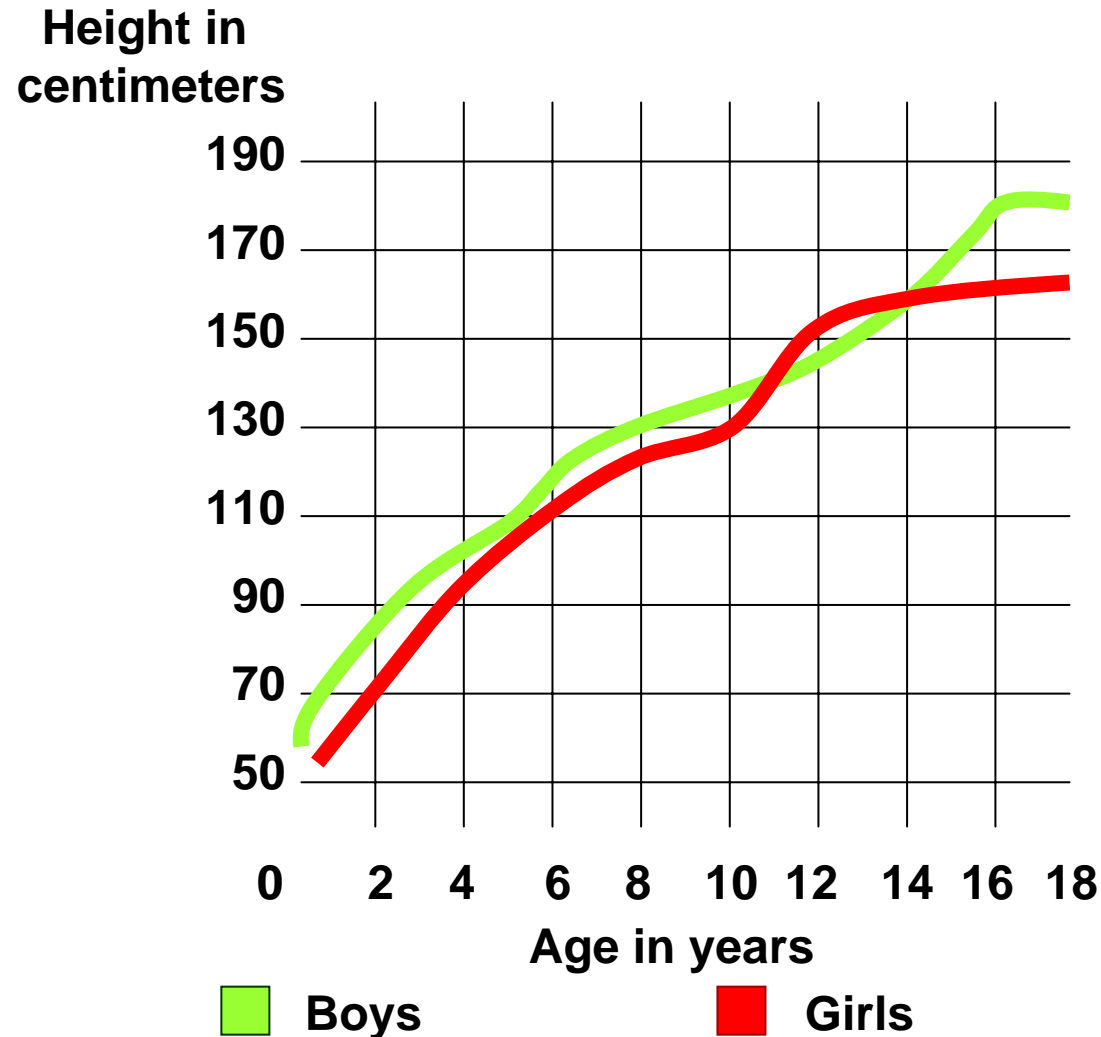
- nonreproductive sexual characteristics
  - female- breast and hips
  - male- voice quality and body hair

- **Menarche (meh-NAR-key)**

- first menstrual period

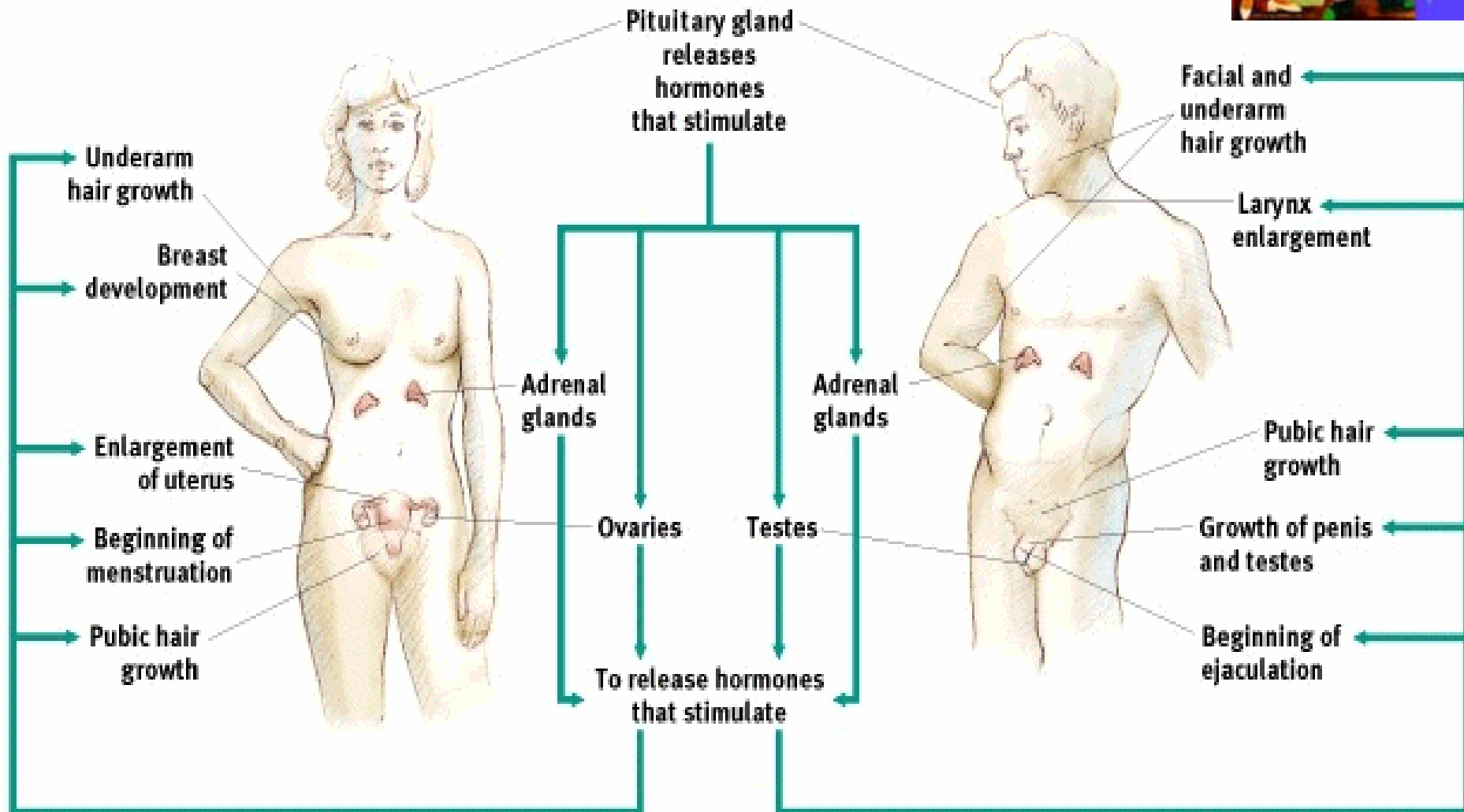


# Adolescence



- Throughout childhood, boys and girls are similar in height. At puberty, girls surge ahead briefly, but then boys overtake them at about age 14.

# Body Changes at Puberty



# Erikson's Stages of Psychosocial Development



**Approximate  
age**

**Stage**

**Description of Task**

**Infancy  
(1st year)**

**Trust vs. mistrust**

**If needs are dependably met, infants develop a sense of basic trust.**

**Toddler  
(2nd year)**

**Autonomy vs. shame  
and doubt**

**Toddlers learn to exercise will and do things for themselves, or they doubt their abilities.**

**Preschooler  
(3-5 years)**

**Initiative vs. guilt**

**Preschoolers learn to initiate tasks and carry out plans, or they feel guilty about efforts to be independent.**

**Elementary  
(6 years-  
puberty)**

**Competence vs.  
inferiority**

**Children learn the pleasure of applying themselves to tasks, or they feel inferior.**

# Erikson's Stages of Psychosocial Development



**Approximate  
age**

**Stage**

**Description of Task**

**Adolescence  
(teens into  
20's)**

**Identity vs. role  
confusion**

**Teenagers work at refining a sense of self by testing roles and then integrating them to form a single identity, or they become confused about who they are.**

**Young Adult  
(20's to early  
40's)**

**Intimacy vs.  
isolation**

**Young adults struggle to form close relationships and to gain the capacity for intimate love, or they feel socially isolated.**

**Middle Adult  
(40's to 60's)**

**Generativity vs.  
stagnation**

**The middle-aged discover a sense of contributing to the world, usually through family and work, or they may feel a lack of purpose.**

**Late Adult  
(late 60's and  
up)**

**Integrity vs.  
despair**

**When reflecting on his or her life, the older adult may feel a sense of satisfaction or failure.**

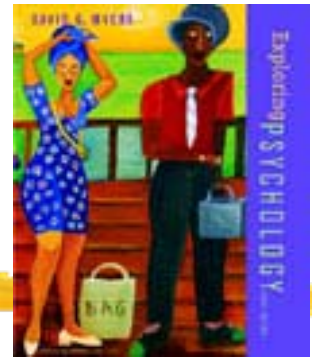


# Adolescence- Social Development

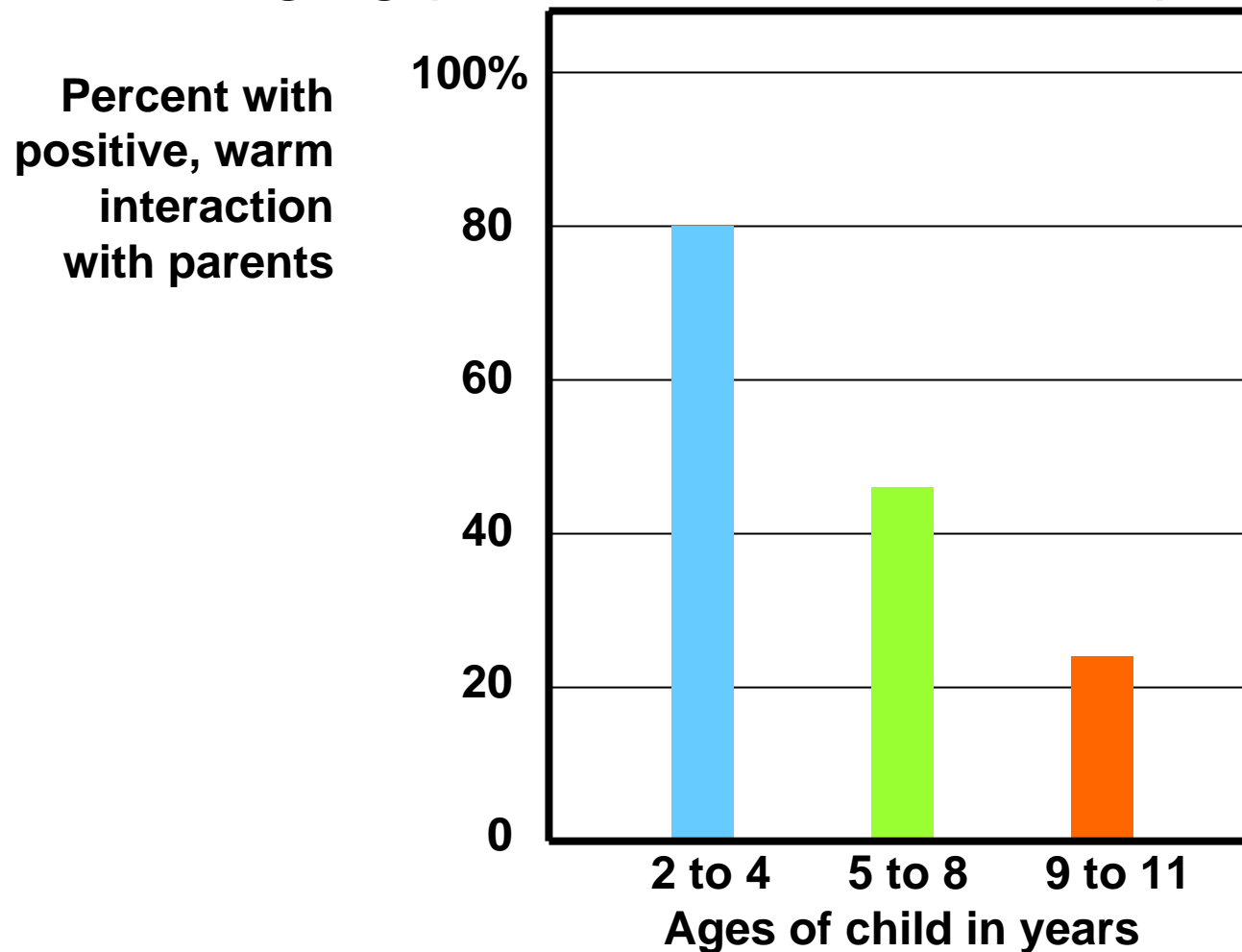


- Identity
  - one's sense of self
  - the adolescent's task is to solidify a sense of self by testing and integrating various roles
- Intimacy
  - the ability to form close, loving relationships
  - a primary developmental task in late adolescence and early adulthood

# Adolescence- Social Development



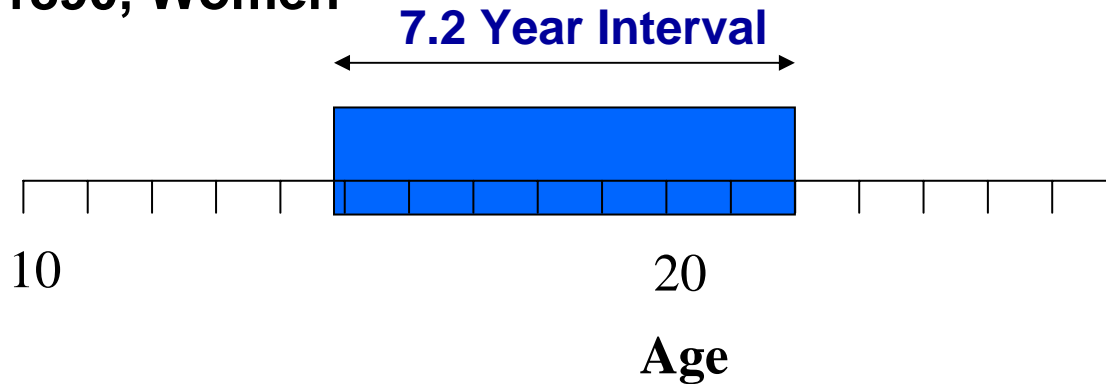
- The changing parent-child relationship



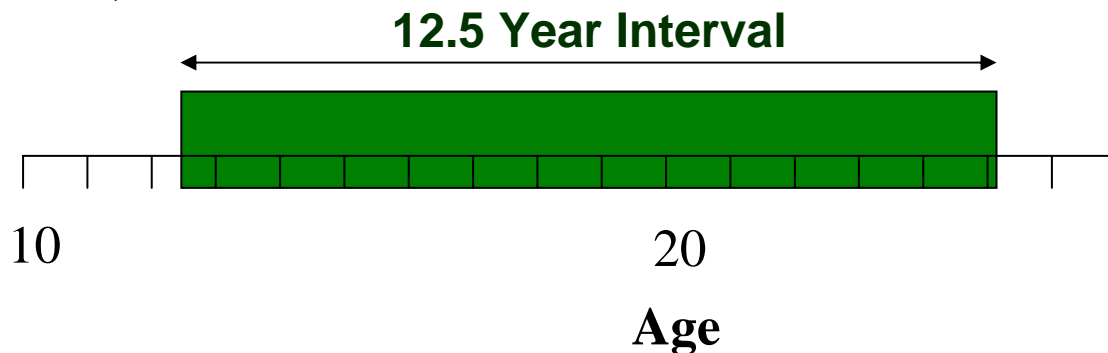
# Adolescence



**1890, Women**

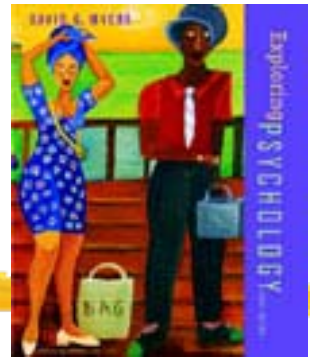


**1995, Women**



- In the 1890's the average interval between a woman's menarche and marriage was about 7 years; now it is over 12 years.

# Adulthood- Physical Development



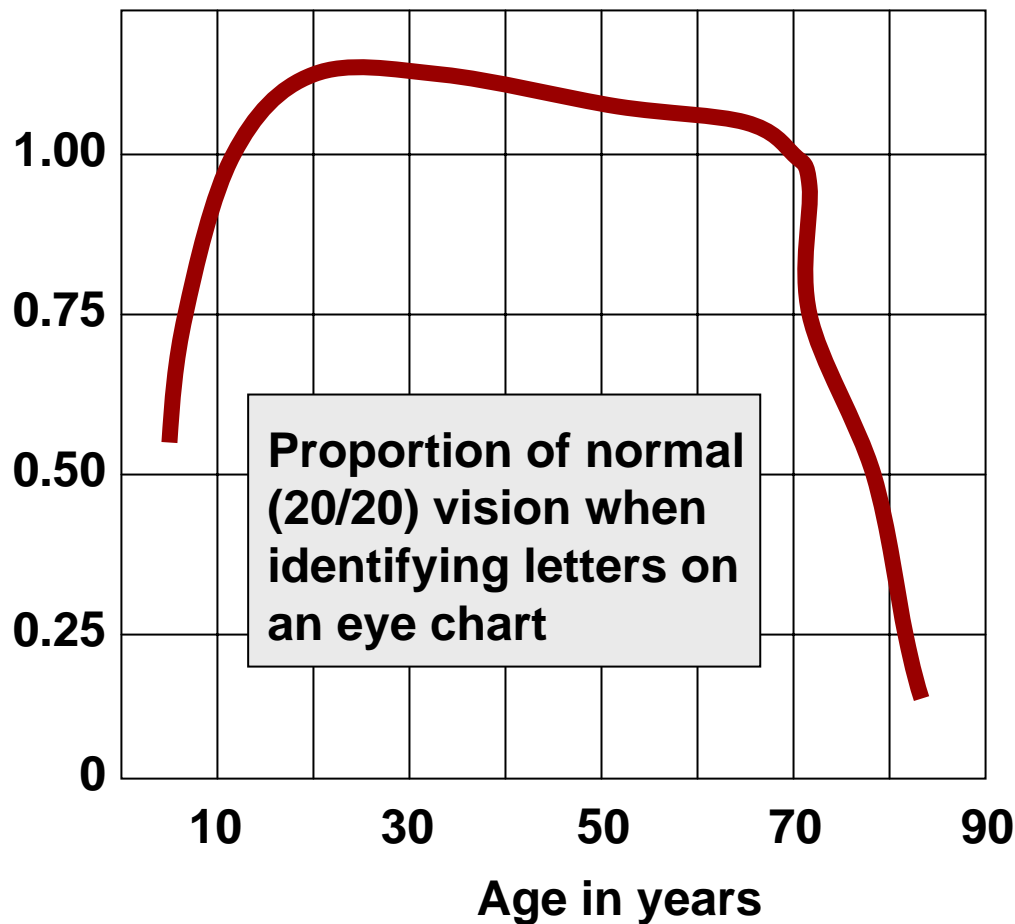
- Menopause
  - the time of natural cessation of menstruation
  - also refers to the biological changes a woman experiences as her ability to reproduce declines
- Alzheimer's Disease
  - a progressive and irreversible brain disorder
  - characterized by a gradual deterioration of memory, reasoning, language, and finally, physical functioning



# Adulthood- Physical Development



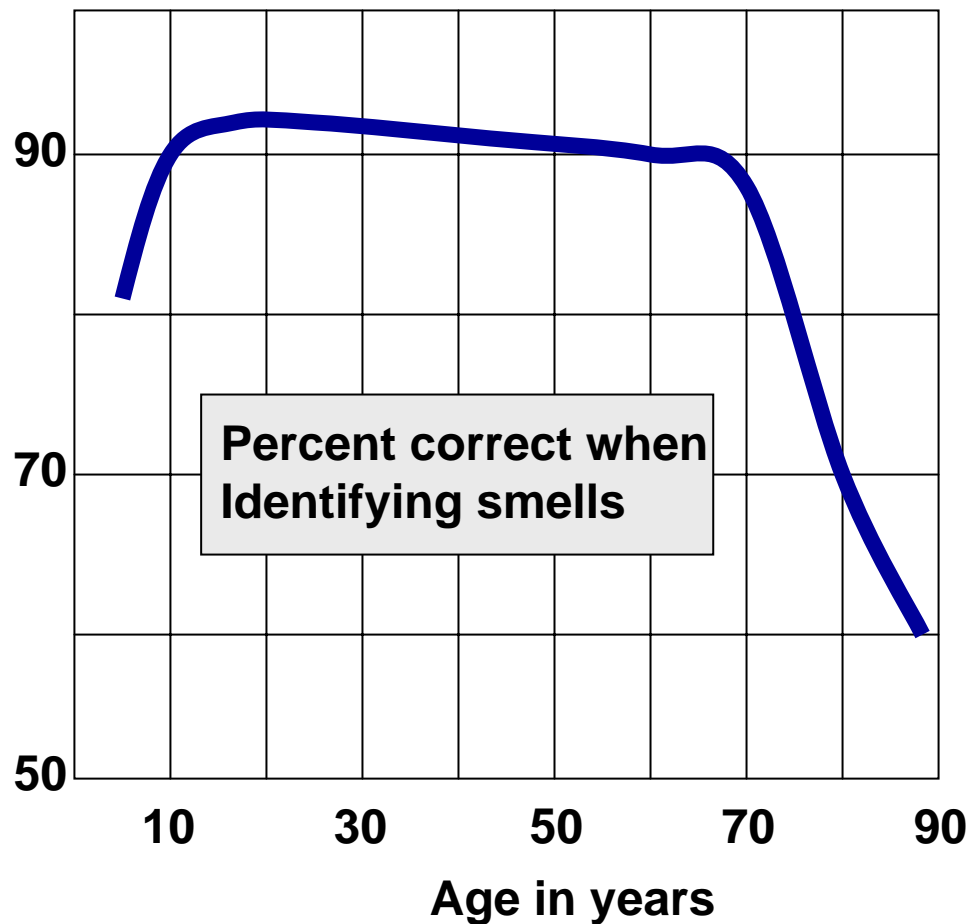
## ■ The Aging Senses



# Adulthood- Physical Development



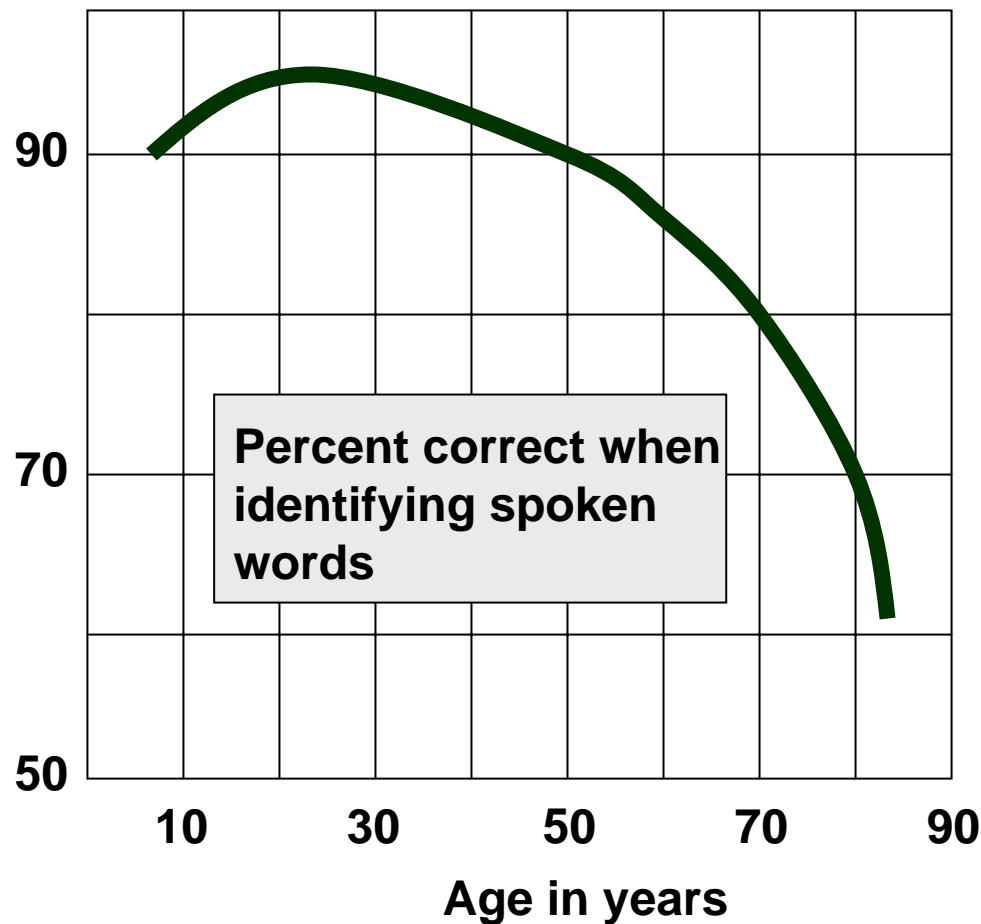
## ■ The Aging Senses



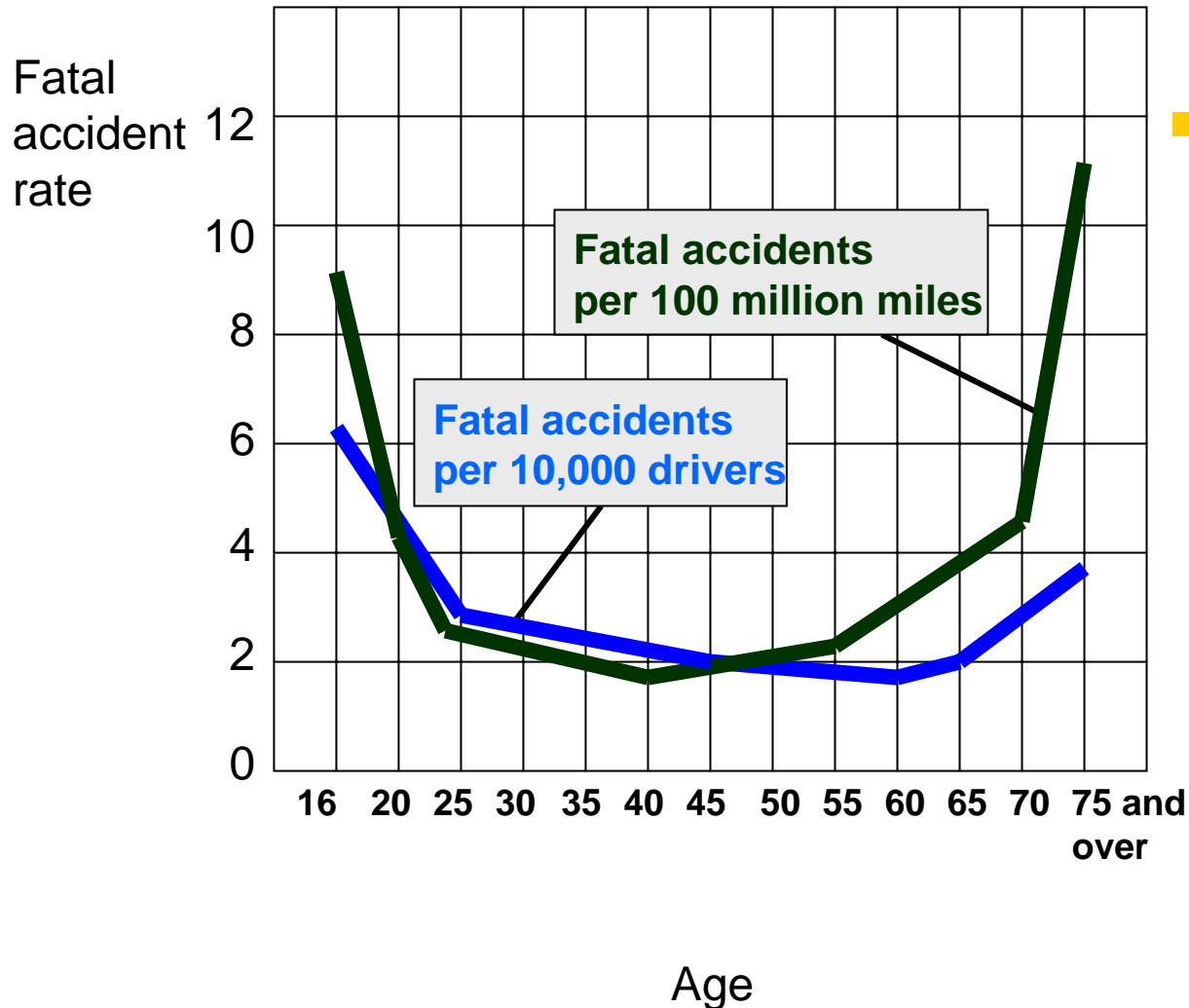
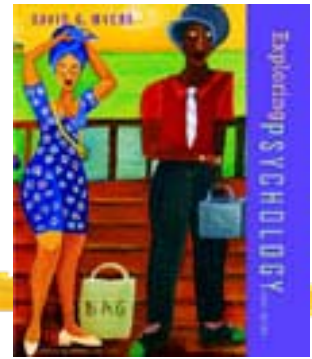
# Adulthood- Physical Development



## ■ The Aging Senses



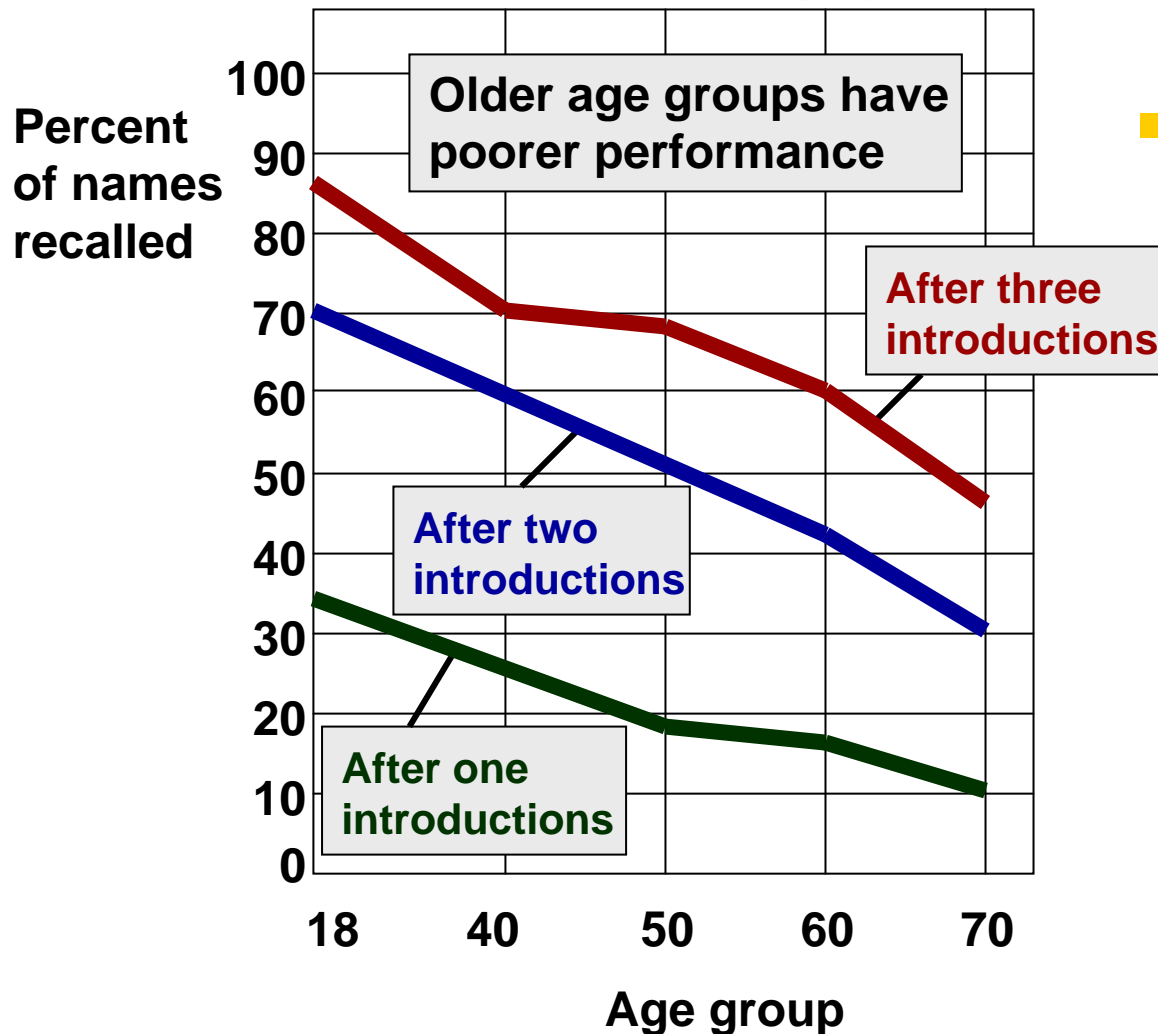
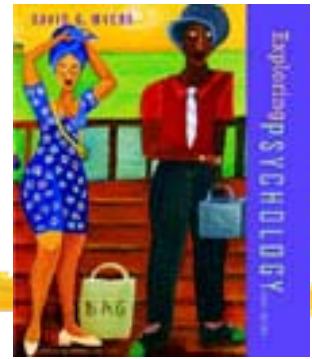
# Adulthood- Physical Development



- Slowing reactions contribute to increased accident risks among those 75 and older

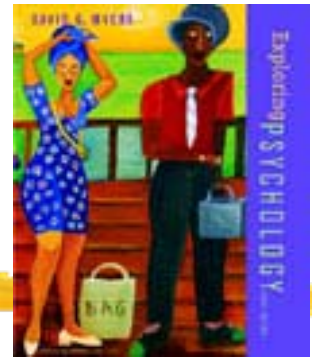


# Adulthood- Cognitive Development

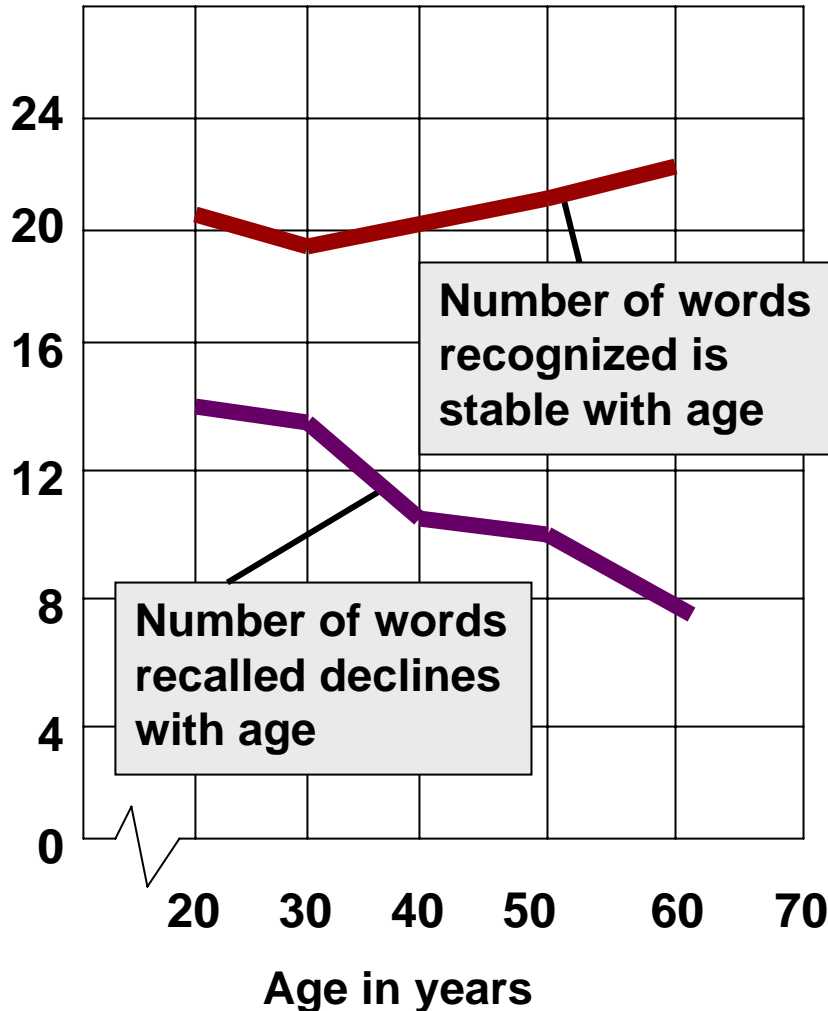


- Recalling new names introduced once, twice or three times is easier for younger adults than for older ones (Crook & West, 1990)

# Adulthood- Cognitive Development



Number  
Of words  
remembered



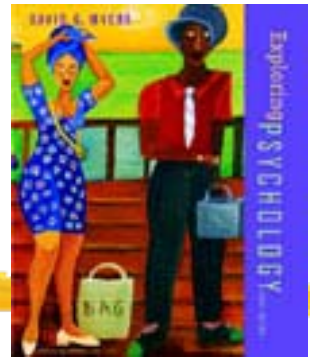
- In a study by Schonfield & Robertson (1966), the ability to recall new information declined during early and middle adulthood, but the ability to recognize new information did not

# Adulthood- Cognitive Development



- Cross-Sectional Study
  - a study in which people of different ages are compared with one another
- Longitudinal Study
  - a study in which the same people are restudied and retested over a long period of time

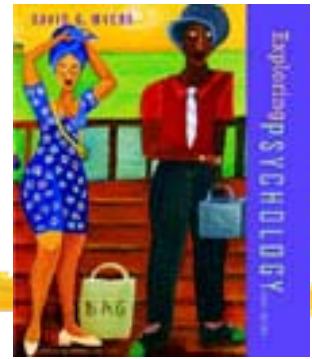
# Adulthood- Cognitive Development



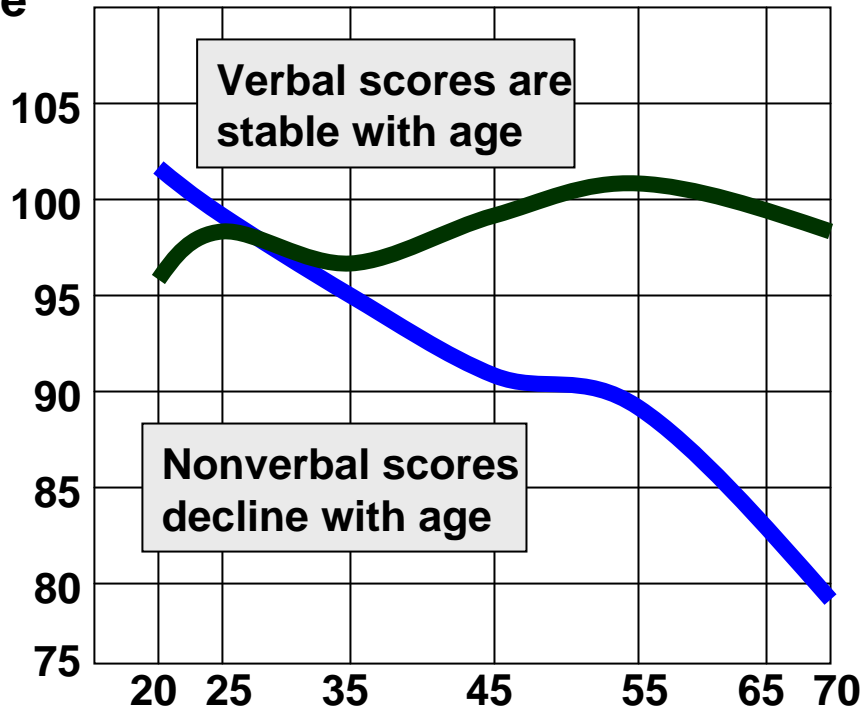
- Crystallized Intelligence
  - one's accumulated knowledge and verbal skills
  - tends to increase with age
- Fluid Intelligence
  - one's ability to reason speedily and abstractly
  - tends to decrease during late adulthood



# Adulthood- Cognitive Development



Intelligence  
(IQ) score



- Verbal intelligence scores hold steady with age, while nonverbal intelligence scores decline (adapted from Kaufman & others, 1989)

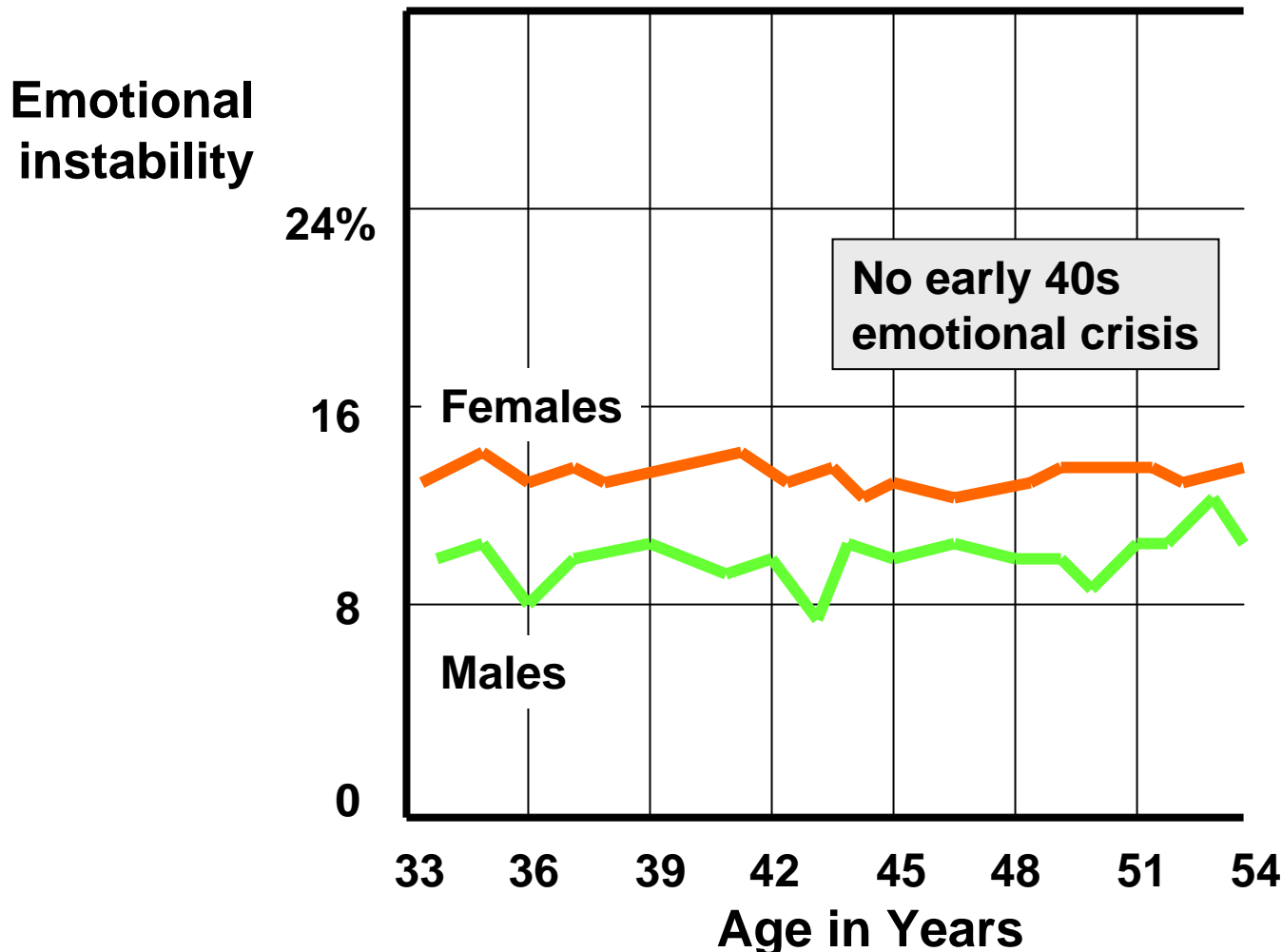
■ Verbal scores  
■ Nonverbal scores

Age group

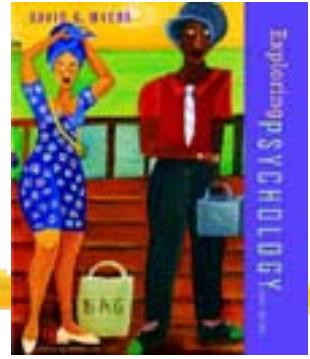
# Adulthood- Social Development



## ■ Early-forties midlife crisis?

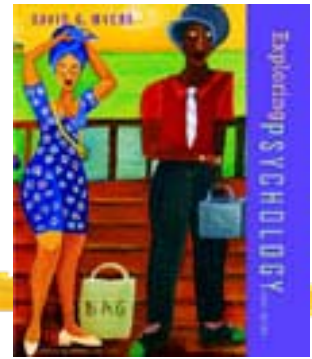


# Adulthood- Social Changes

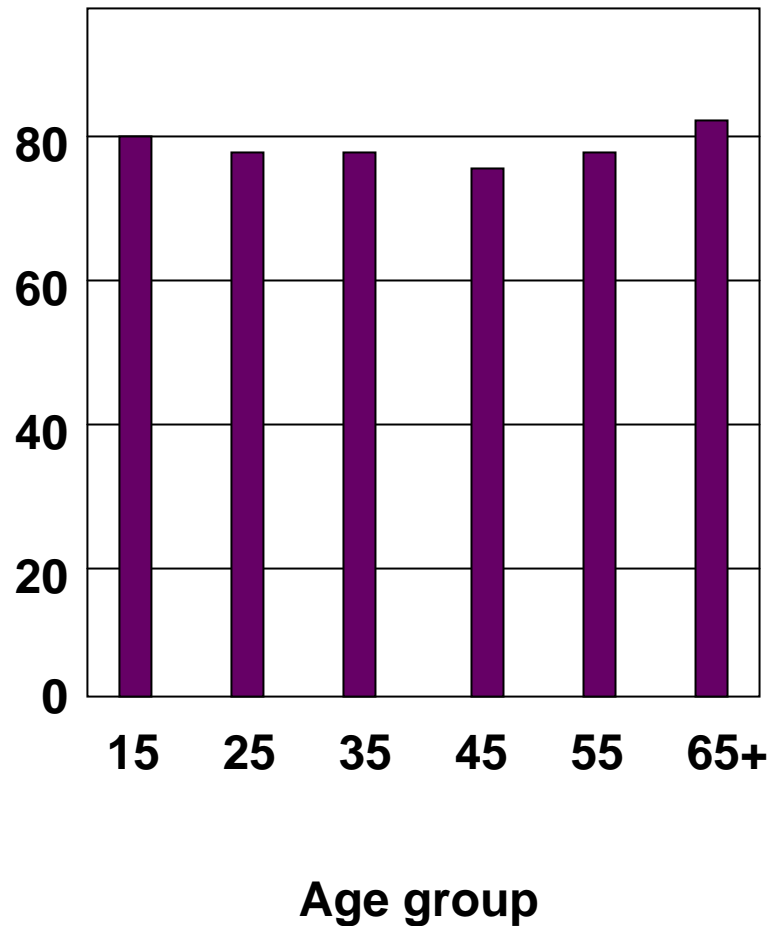


- Social Clock
  - the culturally preferred timing of social events
    - marriage
    - parenthood
    - retirement

# Adulthood- Social Changes



Percentage  
“satisfied”  
with life  
as a whole



- Multinational surveys show that age differences in life satisfaction are trivial (Inglehart, 1990)