

## Research strategies and themes

IIE 366: Developmental  
Psychology  
Greg Francis  
Lecture 02

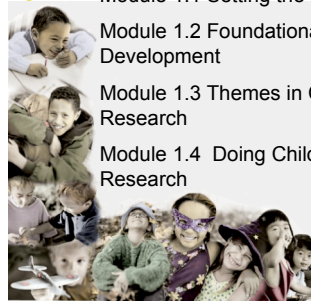
## Chapter 1: The Science of Child Development

Module 1.1 Setting the Stage

Module 1.2 Foundational Theories of Child Development

Module 1.3 Themes in Child-Development Research

Module 1.4 Doing Child Development Research



Children and Their Development, 4/e by Robert Kail

### 1.1 Setting the Stage

Historical Views of Children and  
Childhood

Origins of a New Science

It's been a slow process.

### 1.1 Historical Views of Children and Childhood

- Philosophers have long speculated on the nature of childhood
- Plato argued children were born with innate knowledge, while Aristotle saw knowledge as rooted in experience
- Contrasting views were again seen during the Enlightenment, with Locke asserting an infant is a "blank slate" while Rousseau believed children were born with an innate sense of justice and morality
- In many cultures, children were seen as miniature adults

### 1.1 Origins of a New Science

- Reformers made the well-being of children a national concern during Industrial Revolution
- Darwin's ideas started interest in the origins of human behavior in children as well as changes in behavior over time
- Detailed, systematic observations of individual children—baby biographies—kept
- Child-development research used to promote healthy development

### 1.2 Foundational Theories of Child Development

The Biological Perspective

The Psychodynamic Perspective

The Learning Perspective

The Cognitive-Developmental Perspective

The Contextual Perspective

## 1.2 Foundational Theories of Child Development

- The different perspectives are not always in conflict
  - and they often depend on each other
- But the perspectives do emphasize different topics to study
  - And they make different predictions about how to best influence child development
- None of the perspectives are “correct” in a meaningful sense
  - They are more a matter of focus and emphasis

## 1.2 The Biological Perspective

- Development is determined primarily by biological forces
- In maturational theory, development reflects the natural unfolding of a pre-arranged biological plan
  - Experience matters very little
- In ethological theory, many behaviors are viewed as adaptive because they have survival value
  - Based on ideas from evolution theory
  - Events in the environment trigger responses and development from the person (critical period)

## 1.2 The Psychodynamic Perspective

- Development is determined by how a child resolves conflicts at different ages
- Freud's components to personality—id, ego, and superego

## 1.2 The Psychodynamic Perspective

- Erikson's stages of psychosocial development are defined by a unique challenge

Age	Stage of Development	Developmental Task
Infancy	Trust vs. Mistrust (hope)	Attachment & Bonding
Early Childhood	Autonomy vs. Shame & Doubt	Potty training & Self-maintenance
Early School	Initiative vs. Guilt	Academic success, sibling, etc's, making friends
School Age	Industry vs. Inferiority	Social competence, friendship network
Adolescence	Identity vs. Role Confusion	Loyalty & friendship
Young Adulthood	Intimacy vs. Isolation	Falling in love, maintaining a relationship
Maturity	Generativity vs. Stagnation	Having & Nurturing children
Old Age	Integrity vs. Despair	Imparting Wisdom to others

Insuring developmental success depends on success right from the start.

## 1.2 The Learning Perspective

- Early learning theories emphasized the importance of experience in development
- This work grew out of Pavlov's animal studies on learning

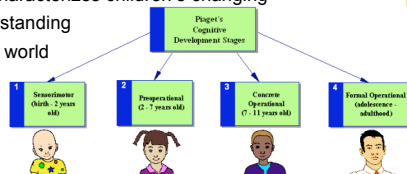


## 1.2 The Learning Perspective

- Early learning theories emphasized the importance of experience in development
- B.F. Skinner studied *operant conditioning* (reinforcement and punishment)
- Other learning theorists suggested that children can learn by observing others (imitation or observational learning)
- According to Bandura's *social cognitive* theory, children use what they see to understand the world around them

## 1.2 The Cognitive-Developmental Perspective

- Development reflects children's efforts to understand the world
- Jean Piaget developed a four-stage sequence that characterizes children's changing understanding of the world



## 1.2 The Contextual Perspective

- Development is determined by immediate and more distant environments, which typically influence each other
- Lev Vygotsky believed that adults convey to children the beliefs, customs, and skills of their culture

## 1.2 The Contextual Perspective

- Much development is a type of apprenticeship where adults guide children to learn new knowledge and skills



## 1.3 Themes in Child-Development Research

Early Development is Related to Later Development but Not Perfectly

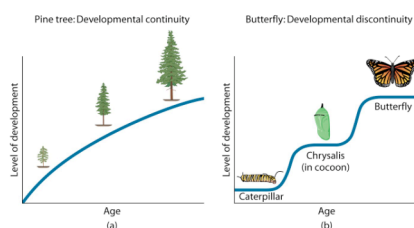
Development is Always Jointly Influenced by Heredity and Environment

Children Influence Their Own Development

Development in Different Domains is Connected

## 1.3 Early Development is Related to Later Development...

- Known as the *continuity-discontinuity* issue

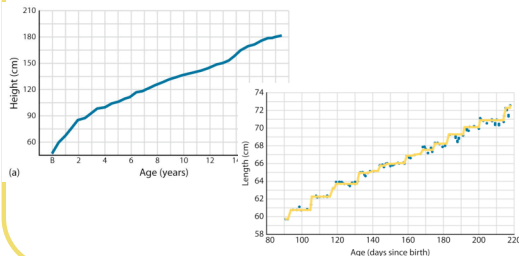


## 1.3 Early Development is Related to Later Development...

- Known as the *continuity-discontinuity* issue
- The continuous view: children stay on the same path throughout development
- The discontinuous view: children can change paths at any point in development
- Development is not completely rigid, nor completely flexible

### 1.3 Early Development is Related to Later Development...

- It partly depends on how and when you measure



### 1.3 Development is Jointly Influenced by Heredity and Environment

- Known as the *nature-nurture* issue
- Current view: nature and nurture interact with each other to influence development
- Major goal of child-development research is to understand how heredity and the environment jointly determine children's development

### 1.3 Children Influence Their Own Development

- Known as the *active-passive child* issue
- Children were once viewed as passive recipients of their environments
- Today's view: children interpret their experiences and often influence the experiences that they have

### 1.3 Development in Different Domains is Connected

- Development in different domains of children's lives is always connected
- Cognitive development affects social development and vice versa

### 1.4 Doing Child-Development Research

Measurement in Child-Development Research  
 General Designs for Research  
 Designs for Studying Age-Related Changes  
 Ethical Responsibilities  
 Communicating Research Results

### 1.4 Measurement in Child-Development Research

- Systematic Observation: *naturalistic* observation and *structured* observation
- Sampling behavior with tasks
- Self reports include questionnaires and interviews
- Physiological measures (e.g. heart rate)
- *Samples* of children who participate in research should be representative of the *population* of interest
- Measures should be both valid and reliable

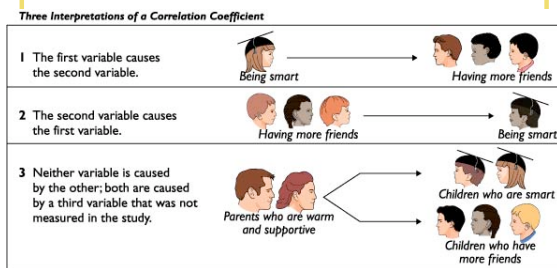
### 1.4 Measurement in Child-Development Research

- **Validity:** your measurement should capture what you are actually interested in
  - This is surprisingly difficult
  - How do you measure what an infant is interested in?
  - How do you measure what a teenager really thinks about sex?
  - How do you measure friendship, trust, honor, intelligence, morality?
- **Reliable:** repeated measurements should give similar values
  - Otherwise you cannot make comparisons between two different situations

### 1.4 General Designs for Research

- Correlational studies look at relations as they exist in the real world
- These real-world relations are expressed as a *correlation coefficient,  $r$* , that ranges from -1 to 1

### Three Interpretations of a Correlation Coefficient

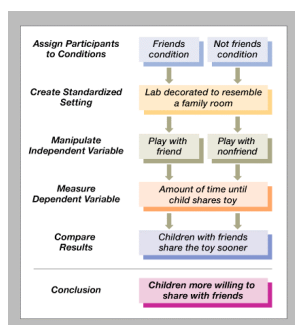


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- *Experiments* involve manipulating key factors that an investigator thinks are important
- The manipulated factor is the *independent variable*; the behavior measured is the *dependent variable*

### Example of an Experiment



1.4: General Designs for Research

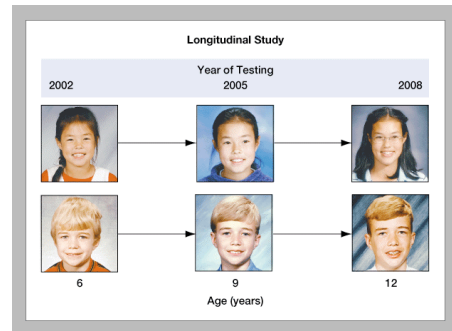
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- The manipulated factor is the *independent variable*; the behavior measured is the *dependent variable*
- In *field experiments*, the researcher manipulates independent variables in a natural setting
- We always look at how changes in the independent variables lead to changes in the dependent variables

### 1.4 Designs for Studying Age-Related Changes

- *Longitudinal study*: the same individuals are tested repeatedly

#### Longitudinal Study

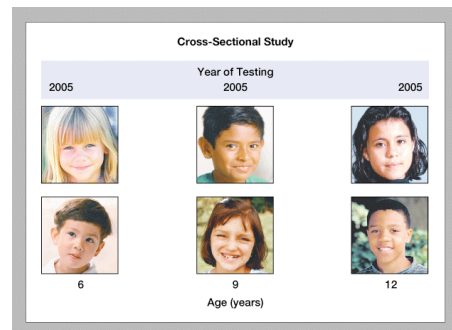


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- *Longitudinal study*: the same individuals are tested repeatedly
- *Microgenetic study*: children are tested repeatedly over a span of days or weeks
- *Cross-sectional study*: children of different ages are tested

#### Cross-Sectional Study

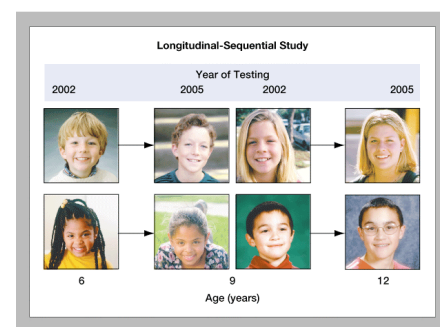


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- *Longitudinal-sequential studies* are hybrids of longitudinal and cross-sectional studies

#### Longitudinal-Sequential Study



1.4 Designs for Studying Age-Related Changes

### 1.4 Ethical Responsibilities

- Minimize risks to research participants
- Describe the research to potential participants
- Avoid deceiving the participants
- Keep results anonymous or confidential

### 1.4 Communicating Research Results

- Research results are reported in scientific journals
- Results of individual studies will be reported in the *Focus on Research* features
- Converging evidence from many studies is necessary

### Next time

- Biological perspective
- Genetics
- DNA
- Genes
- Chromosomes