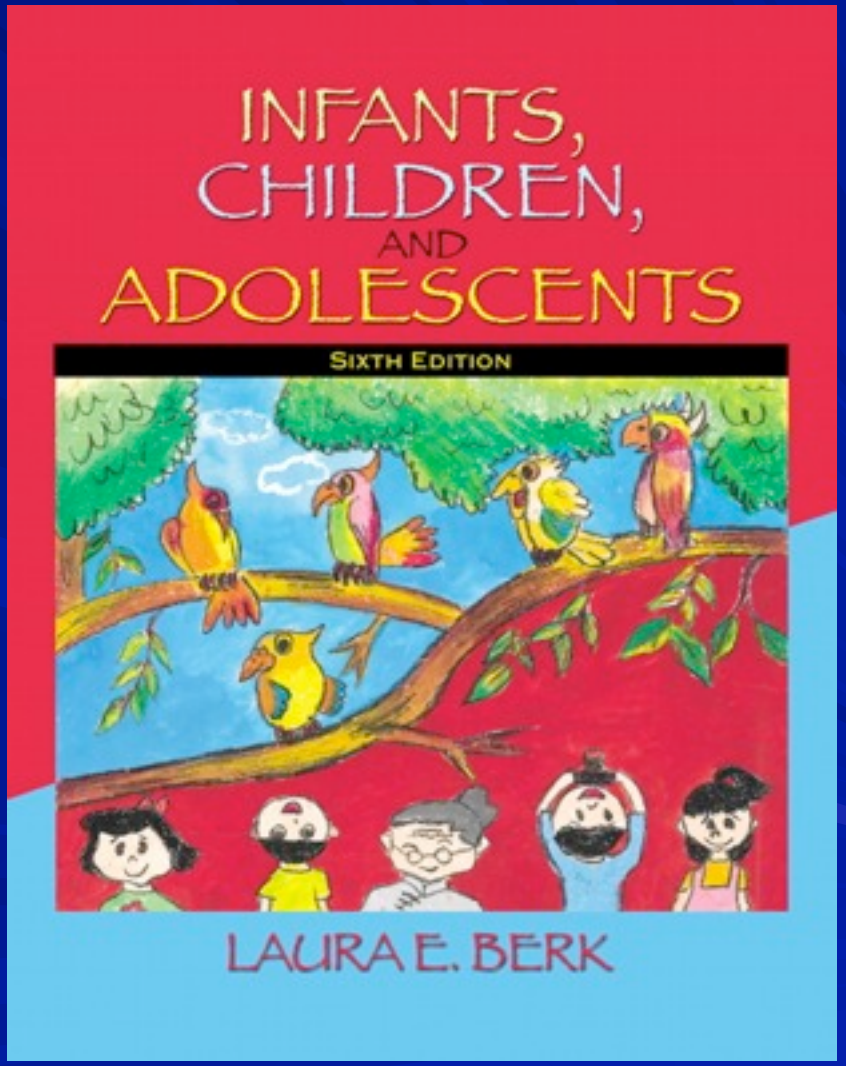
Infants, Children, and Adolescents
Laura E. Berk 6th edition



Chapter 1

History, Theory, and Research Strategies

Domains of Development

Domain	Changes in
Physical	■ Body size & proportions, appearance ■ Functioning of body systems, health ■ Perceptual & motor capacities
Cognitive	■ Intellectual abilities
Emotional and Social	■ Emotional communication ■ Self-understanding, knowledge about others ■ Interpersonal skills & relationships ■ Moral reasoning & behavior

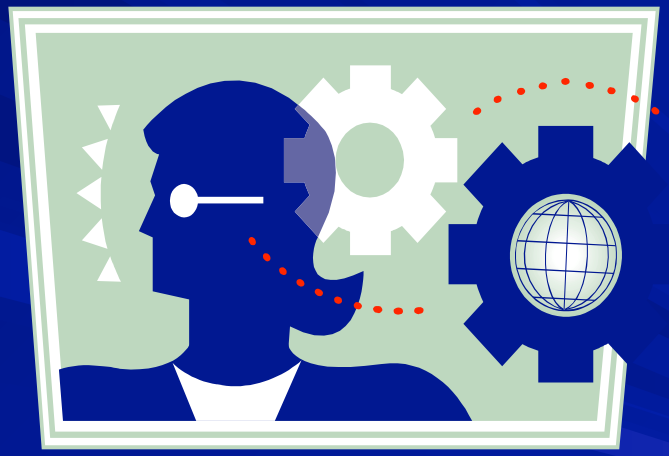
Periods of Development

Prenatal	Conception to birth
Infancy and Toddlerhood	Birth to 2 years
Early Childhood	2 to 6 years
Middle Childhood	6 to 11 years
Adolescence	11 to 18 years
Emerging Adulthood	18 to 25 years

Theory

An orderly, integrated set of statements that

- Describes
- Explains
- Predicts behavior

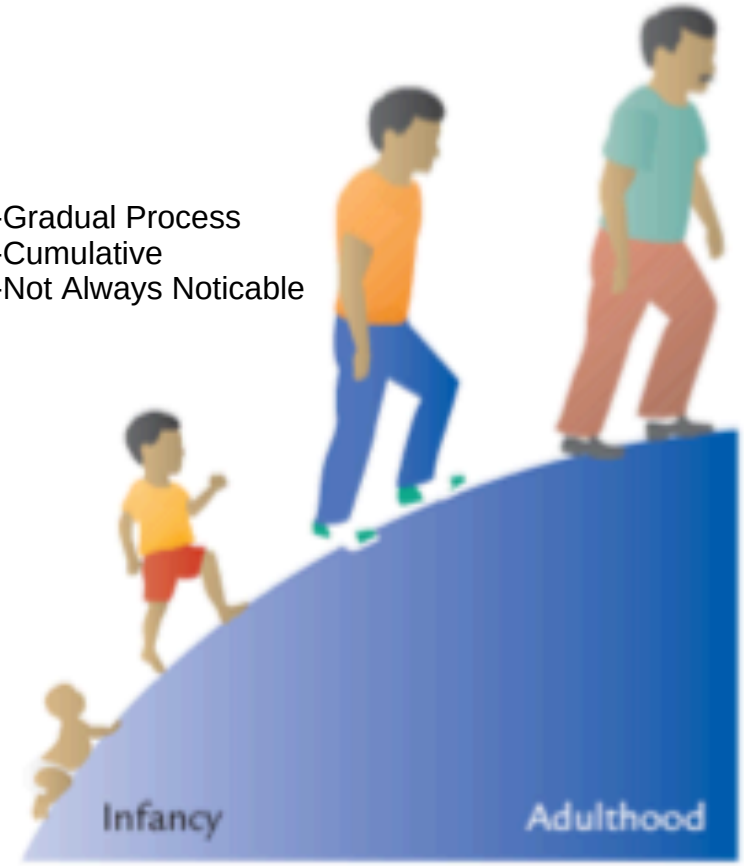


Basic Issues in Development

1. Continuous or discontinuous?
2. ~~One course of development or many possible courses?~~
3. Relative influence of nature and nurture?

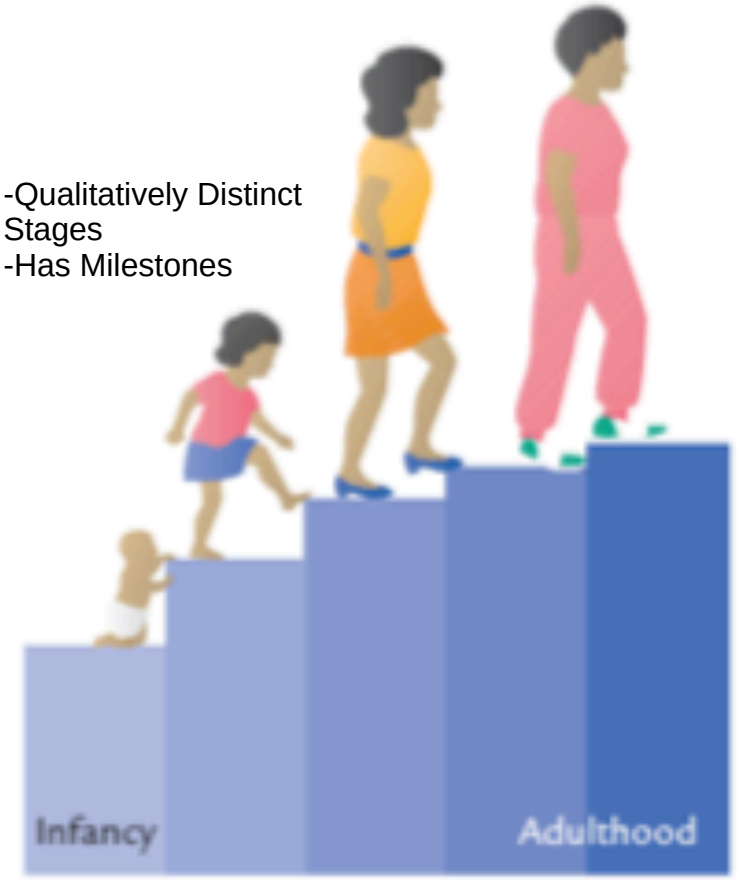
Continuous or Discontinuous Development

-Gradual Process
-Cumulative
-Not Always Noticable



(a) Continuous Development

-Qualitatively Distinct Stages
-Has Milestones



(b) Discontinuous Development

Nature and Nurture

Nature

- Inborn, biologic givens
- Based on genetic inheritance

Nurture

- Physical and social world
- Influence biological and psychological development

Resilient Children

- Personal Characteristics
- A Warm Parental Relationship
- Social Support Outside the Immediate Family
- Community Resources and Opportunities

Historical Views of Childhood

Medieval Era	Childhood (to age 7 or 8) regarded as separate phase with special needs
16th Century	Puritan “child depravity” views
17th Century	John Locke “tabula rasa” or “blank slate” view
18th Century	Jean-Jacques Rousseau “noble savages” view

Early Scientific Study of Development

Evolutionary Theory	**Darwin's ideas of natural selection and survival of the fittest are still influential.**
Normative Approach	**Hall & Gesell: Age-related averages based on measurements of large numbers of children.**
Mental Testing Movement	**Binet & Simon: Early developers of intelligence tests**

Freud's Three Parts of the Personality

Id CHILD LIKE I = IMPULSIVE	▪ Largest portion of the mind ▪ Unconscious, present at birth ▪ Source of biological needs & desires
Ego	▪ Conscious, rational part of mind ▪ Emerges in early infancy ▪ Redirects id impulses acceptably
Superego	▪ The conscience ▪ Develops from ages 3 to 6, from interactions with caregivers

Freud's Psychosexual Stages

- Oral
- Anal
- Phallic
- Latency
- Genital

Erikson's Psychosocial Stages

Basic trust v. mistrust	Birth–1 year	**Identity v. role confusion**	Adolescence
Autonomy v. shame and doubt	1–3 years	**Intimacy v. isolation**	Emerging Adulthood
Initiative v. guilt	3–6 years	**Generativity v. stagnation**	Adulthood
Industry v. inferiority	6–11 years	**Integrity v. despair**	Old Age

Behaviorism & Social Learning

Classical Conditioning	Stimulus – Response
Operant Conditioning	Reinforcers and Punishments
Social-Cognitive Approach	Modeling Self-efficacy

Social Learning Theory

Modeling or Observational Learning	**A baby claps her hands after her mother does so, a teenager dresses like her friends.**
Cognition	**Stressed today *Social-cognitive approach.***
Personal Standards	**Children begin to believe their own abilities will help them succeed.**

Behavior Modification

- Behavior modification: combines conditioning and modeling to eliminate undesirable behaviors and increase desirable responses.
- Examples: 4- and 5- year-olds' unruliness in preschool was reduced using tokens that could be traded for candy in exchange for good behavior.
- Children being treated for acute burn injuries played a virtual reality game that distracted them from the procedure and caused their levels of pain and anxiety to drop dramatically.

Limitations of Behaviorism and Social Learning Theory

- Too narrow a view of important environmental influences
- Bandura's work is unique in that it grants children an active role in their own learning.

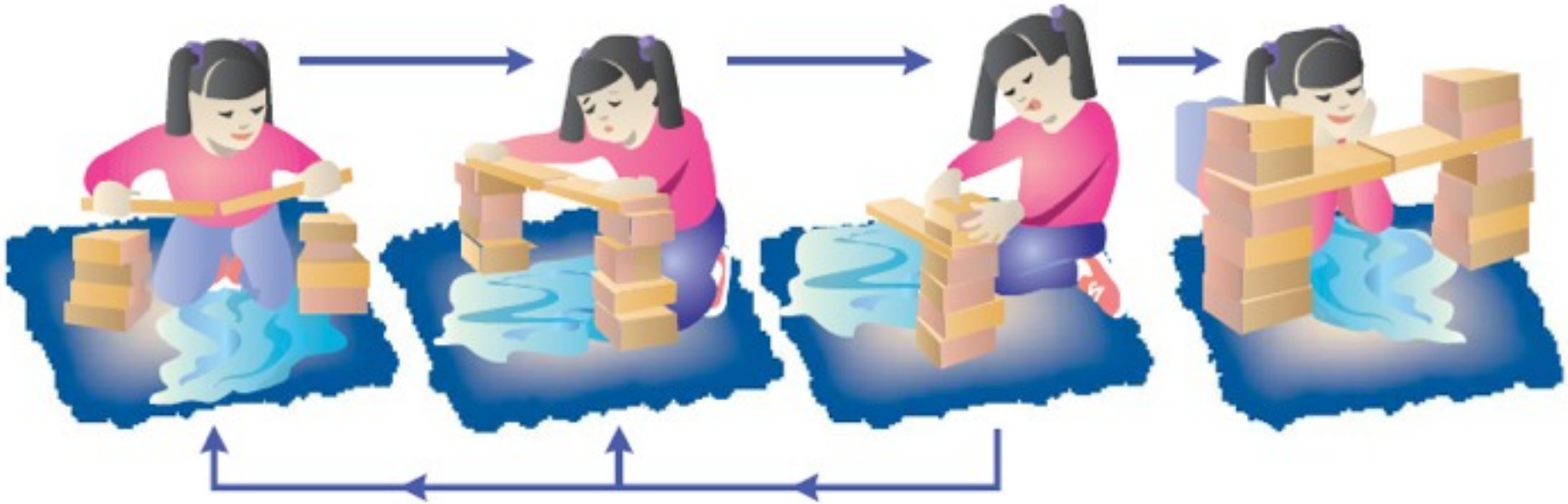
Piaget's Stages of Cognitive Development

STAGE	PERIOD OF DEVELOPMENT	DESCRIPTION
Sensorimotor Explore via senses	Birth–2 years	Infants "think" by acting on the world with their eyes, ears, hands, and mouth. As a result, they invent ways of solving sensorimotor problems, such as pulling a lever to hear the sound of a music box, finding hidden toys, and putting objects in and taking them out of containers.
Preoperational Starting to use language for understanding of the world. Capable of 'pretending' Lack logic (no 'if-then' thinking)	2–7 years	Preschool children use symbols to represent their earlier sensorimotor discoveries. Development of language and make-believe play takes place. However, thinking lacks the logic of the two remaining stages.
Concrete operational - Can use logic - Can categorize objects - No abstract thinking	7–11 years	Children's reasoning becomes logical. School-age children understand that a certain amount of lemonade or play dough remains the same even after its appearance changes. They also organize objects into hierarchies of classes and subclasses. However, thinking falls short of adult intelligence. It is not yet abstract.
Formal operational - Problem solving (math) - Abstract thinking	11 years on	The capacity for abstract, systematic thinking enables adolescents, when faced with a problem, to start with a hypothesis, deduce testable inferences, and isolate and combine variables to see which inferences are confirmed. Adolescents can also evaluate the logic of verbal statements without referring to real-world circumstances.

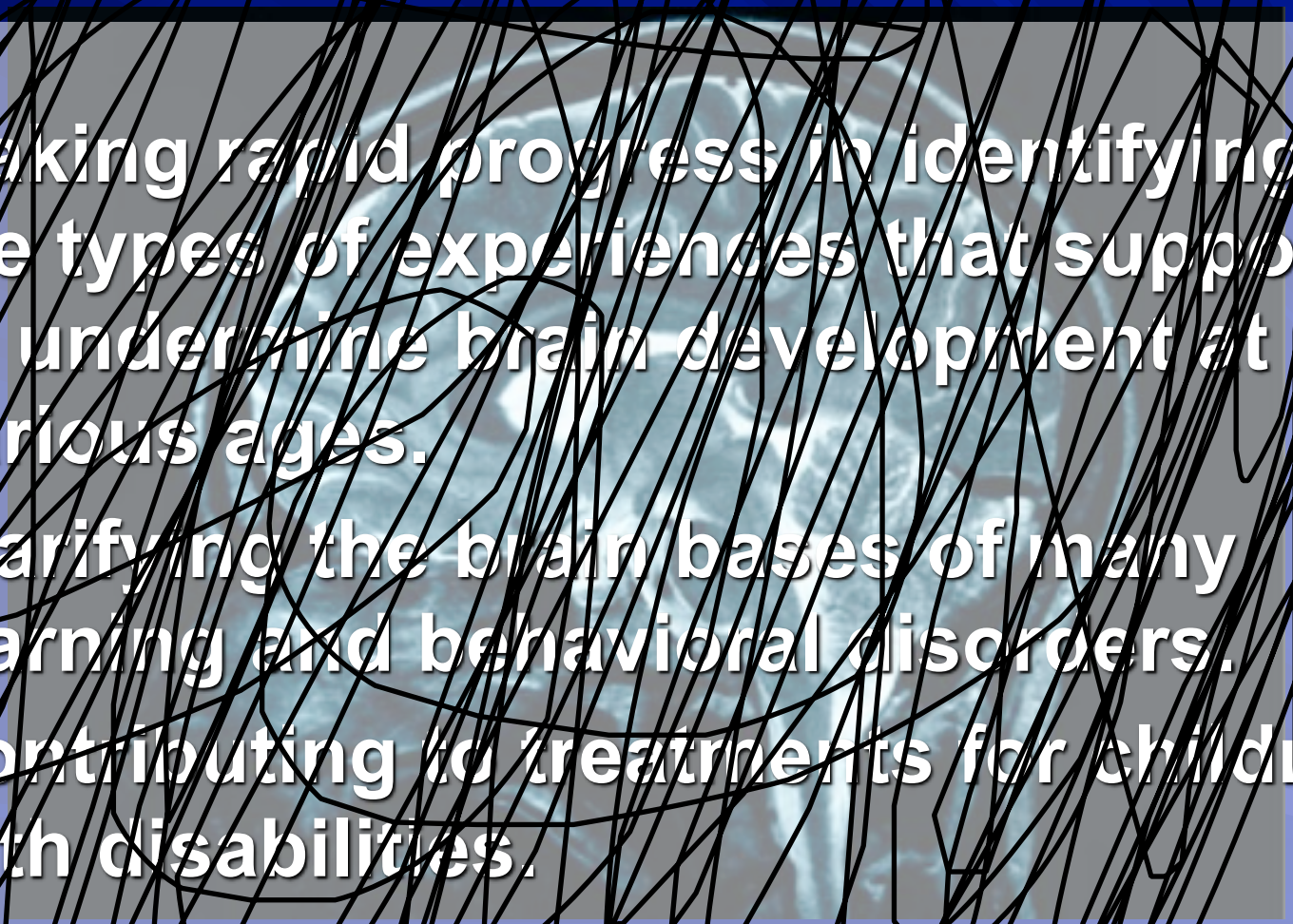
Jean Piaget

Information-Processing

- Flowchart



Neuroscientists



- Making rapid progress in identifying the types of experiences that support or undermine brain development at various ages.
- Clarifying the brain bases of many learning and behavioral disorders.
- Contributing to treatments for children with disabilities.

Ethology

- Concerned with the adaptive, or survival value of behavior and its evolutionary history.
- Roots traced to Darwin:
  - Imprinting
  - Critical Period

Evolutionary Developmental Psychology

- Seeks to understand adaptive value of human competencies
- Studies cognitive, emotional and social competencies as they change with age
- Expands upon ethology

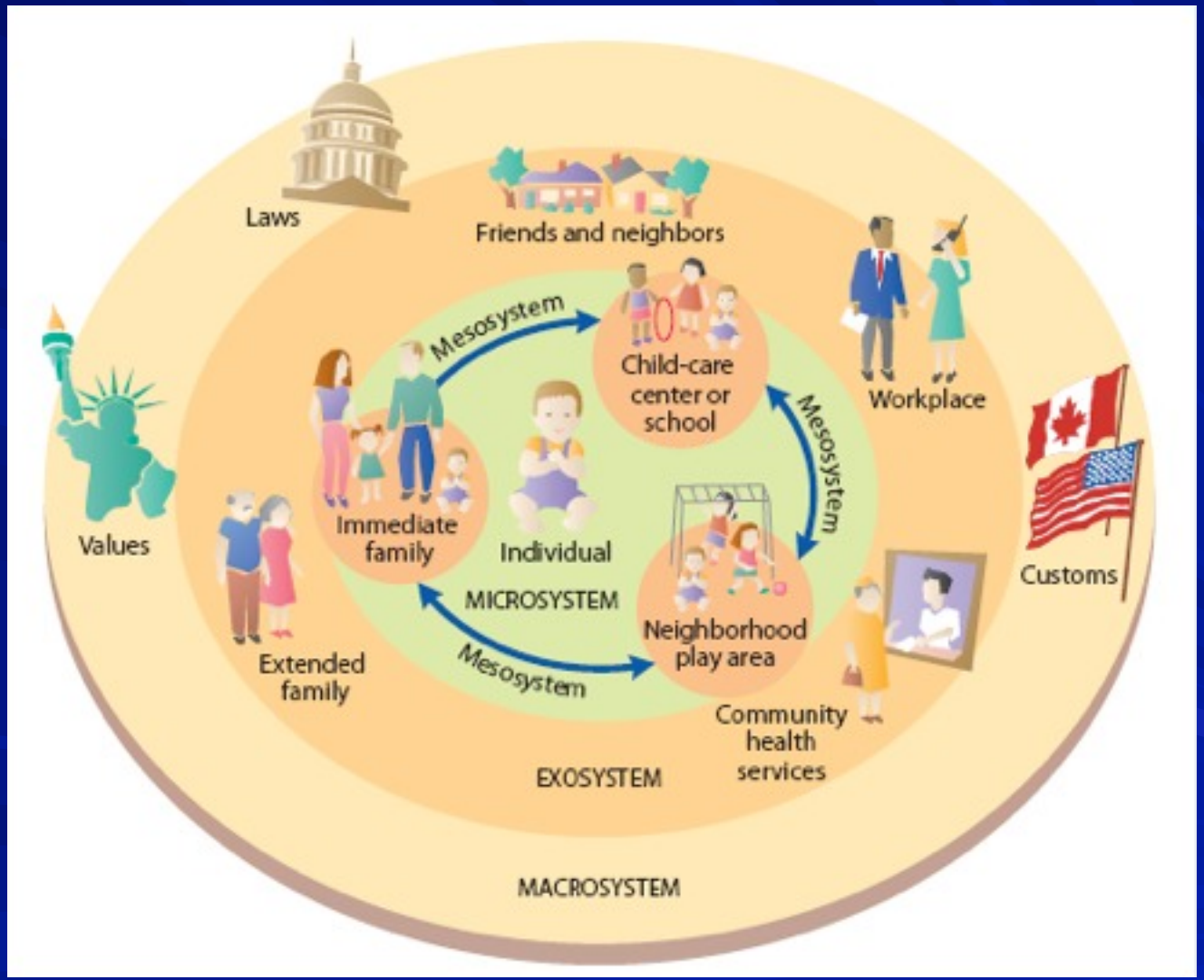
Sensitive Period

- An optimal time for certain capacities to emerge
- Individual is especially responsive to environment
- Boundaries less clearly defined than a critical period

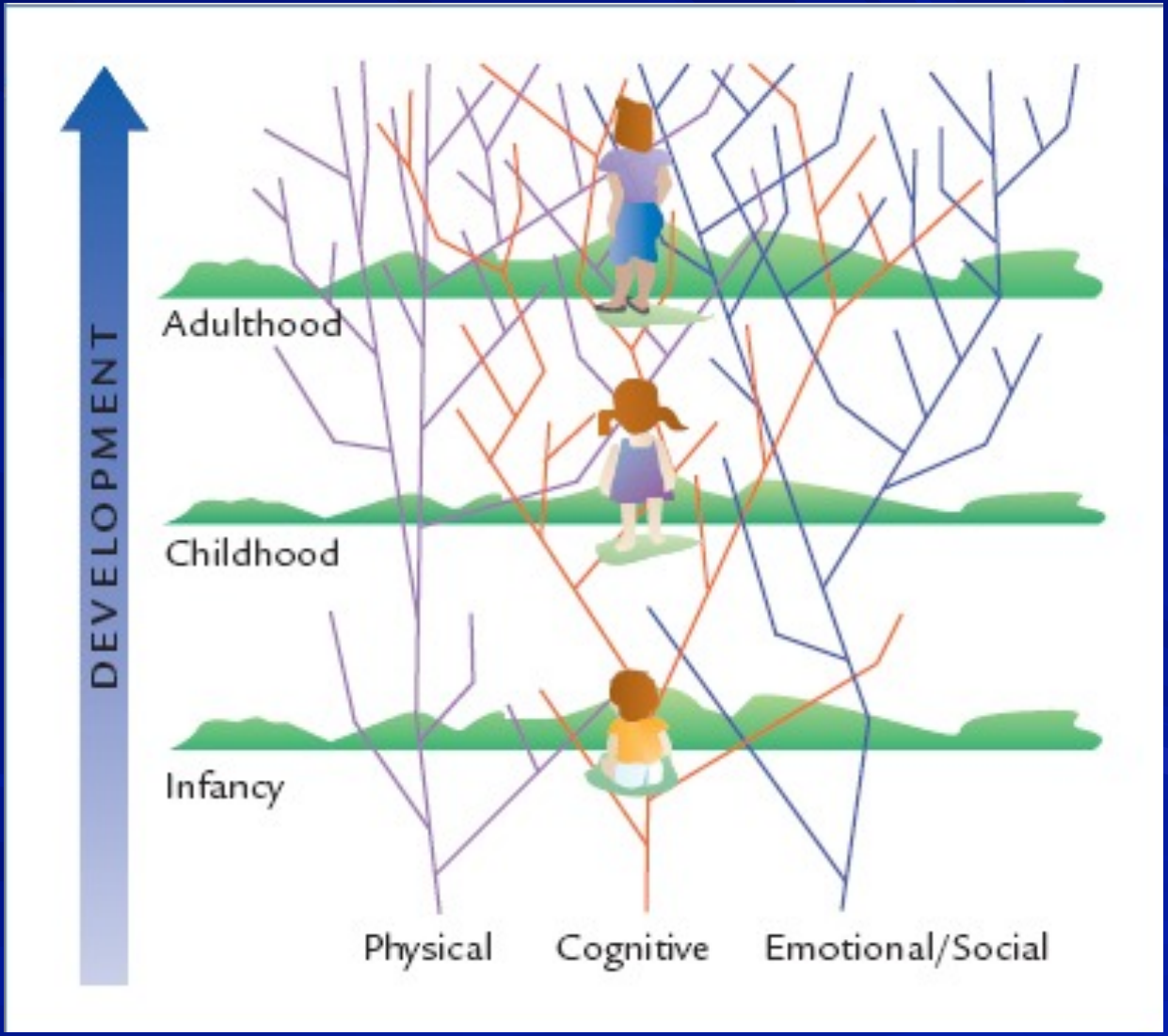
Vygotsky's Sociocultural Theory

- Transmission of *culture* to new generation
  - Beliefs, customs, skills
- *Social interaction* necessary to learn culture
  - Cooperative dialogues with more knowledgeable members of society

Ecological Systems Theory



Dynamic Systems Perspective



Comparing Child Development Theories

THEORY	CONTINUOUS OR DISCONTINUOUS DEVELOPMENT?	ONE COURSE OF DEVELOPMENT OR MANY?	NATURE OR NURTURE AS MORE IMPORTANT?
Psychoanalytic perspective	*Discontinuous:* Psychosexual and psychosocial development takes place in stages.	*One course:* Stages are assumed to be universal.	*Both nature and nurture:* Innate impulses are channeled and controlled through child-rearing experiences. *Early experiences* set the course of later development.
Behaviorism and social learning theory	*Continuous:* Development involves an increase in learned behaviors.	*Many possible courses:* Behaviors reinforced and modeled may vary from child to child.	*Emphasis on nurture:* Development results from conditioning and modeling. *Both early and later experiences* are important.
Piaget's cognitive-developmental theory	*Discontinuous:* Cognitive development takes place in stages.	*One course:* Stages are assumed to be universal.	*Both nature and nurture:* Development occurs as the brain matures and children exercise their innate drive to discover reality in a generally stimulating environment. *Both early and later experiences* are important.
Information processing	*Continuous:* Children gradually improve in perception, attention, memory, and problem-solving skills.	*One course:* Changes studied characterize most or all children.	*Both nature and nurture:* Children are active, sense-making beings who modify their thinking as the brain matures and they confront new environmental demands. *Both early and later experiences* are important.

Comparing Child Development Theories (continued)

Ethology and evolutionary developmental psychology	*Both continuous and discontinuous:* Children gradually develop a wider range of adaptive behaviors. Sensitive periods occur, in which qualitatively distinct capacities emerge fairly suddenly.	*One course:* Adaptive behaviors and sensitive periods apply to all members of a species.	*Both nature and nurture:* Evolution and heredity influence behavior, and learning lends greater flexibility and adaptiveness to it. In sensitive periods, *early experiences* set the course of later development.
Vygotsky's sociocultural theory	*Both continuous and discontinuous:* Language acquisition and schooling lead to stagewise changes. Dialogues with more expert members of society also lead to continuous changes that vary from culture to culture.	*Many possible courses:* Socially mediated changes in thought and behavior vary from culture to culture.	*Both nature and nurture:* Heredity, brain growth, and dialogues with more expert members of society jointly contribute to development. *Both early and later experiences* are important.
Ecological systems theory	*Not specified.*	*Many possible courses:* Children's characteristics join with environmental forces at multiple levels to mold development in unique ways.	*Both nature and nurture:* Children's characteristics and the reactions of others affect each other in a bidirectional fashion. Layers of the environment influence child-rearing experiences. *Both early and later experiences* are important.
Dynamic systems perspective	*Both continuous and discontinuous:* Change in the system is always ongoing. Stagelike transformations occur as children reorganize their behavior so components of the system work as a functioning whole.	*Many possible courses:* Biological makeup, everyday tasks, and social experiences vary, yielding wide individual differences in specific skills.	*Both nature and nurture:* The child's mind, body, and physical and social surroundings form an integrated system that guides mastery of new skills. *Both early and later experiences* are important.

Systematic Observation

Naturalistic Observation

- In the “field” or natural environment where behavior happens

Structured Observations

- Laboratory situation set up to evoke behavior of interest
- All participants have equal chance to display behavior

Interviews

Clinical Interview

- Flexible, conversational style
- Probes for participant's point of view

Structured Interview

- Each participant is asked same questions in same way
- May use questionnaires, get answers from groups

Cultural Influences: Immigrant Youths Adaptation

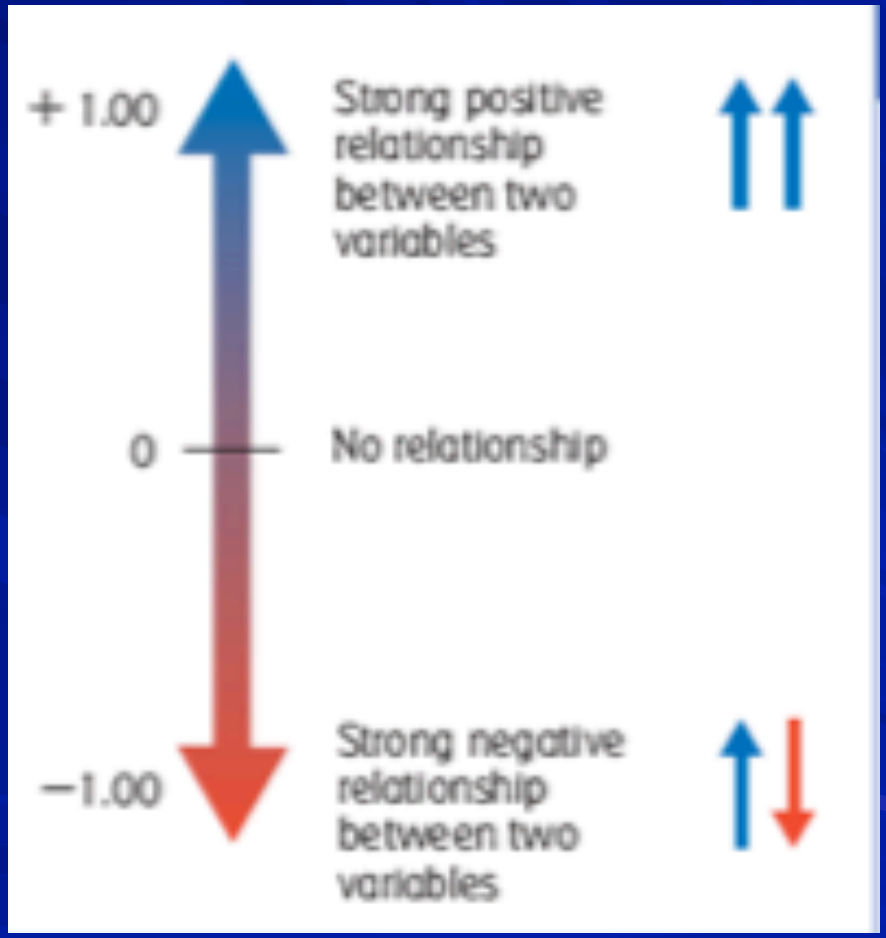
- Academic achievement and adjustment: many children of immigrant parents from diverse countries adapt amazingly well.
- The experience of these children is not problem-free, but family and community cohesion, supervision, and high expectations combine to promote favorable outcomes.

Correlational Design

- Researchers gather information and make no effort to alter their experiences.
- Limited because cause and effect can not be inferred.

Correlation Coefficients

- The magnitude of the number indicates the ***strength*** of the relationship.
- The sign of the number (+ or -) indicates the ***direction*** of the relationship.



Correlation Coefficients

Magnitude

- Size of the number between 0 and 1.
- Closer to one (positive or negative) is a stronger relationship

Direction

- Indicated by + or - sign.
- Positive (+) means, as one variable increases, so does the other
- Negative (-) means, as one variable increase, the other decreases.

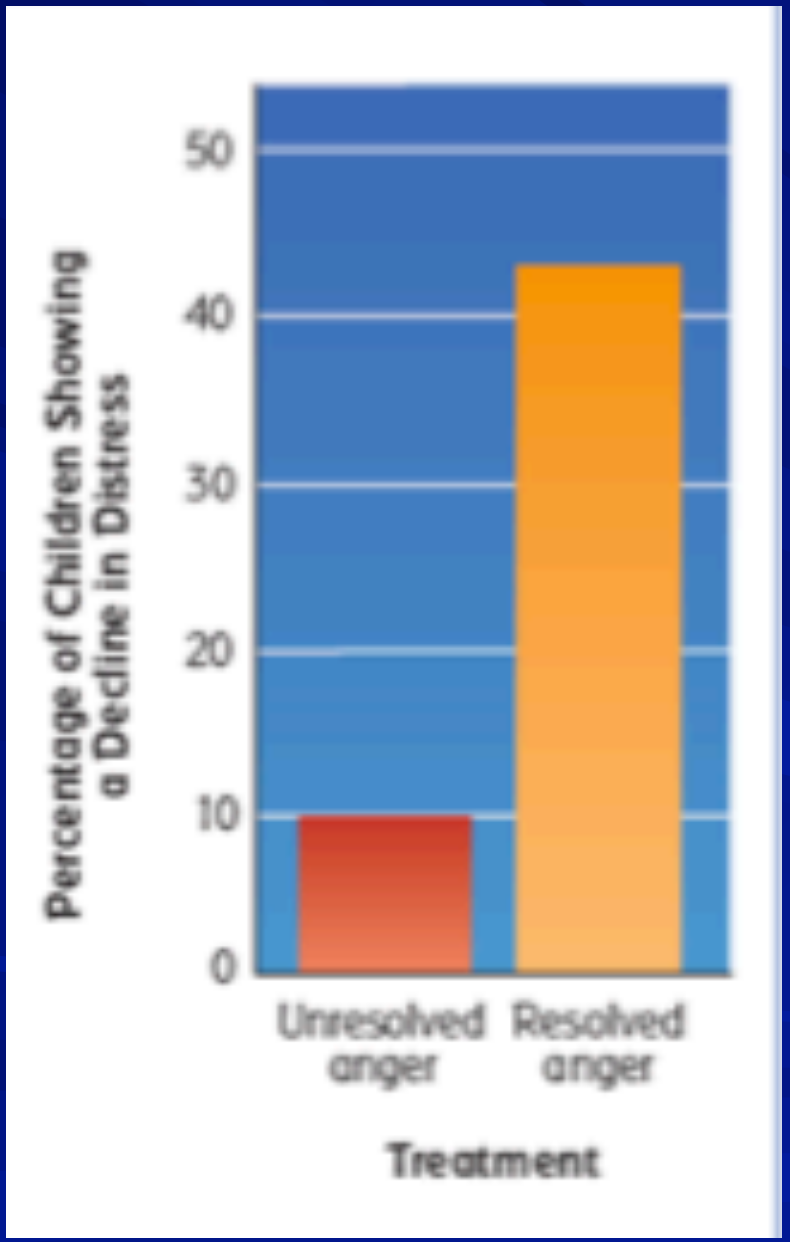
Independent and Dependent Variables

Independent

- Experimenter changes, or manipulates
- Expected to cause changes in another variable.

Dependent

- Experimenter measures, but does not manipulate
- Expected to be influenced by the independent variable



Laboratory Experiment Using

Modified Experiments

Field Experiments

- Use rare opportunities for random assignment in natural settings

Natural Experiments

- Compare differences in treatment that already exist
- Groups chosen to match characteristics as much as possible

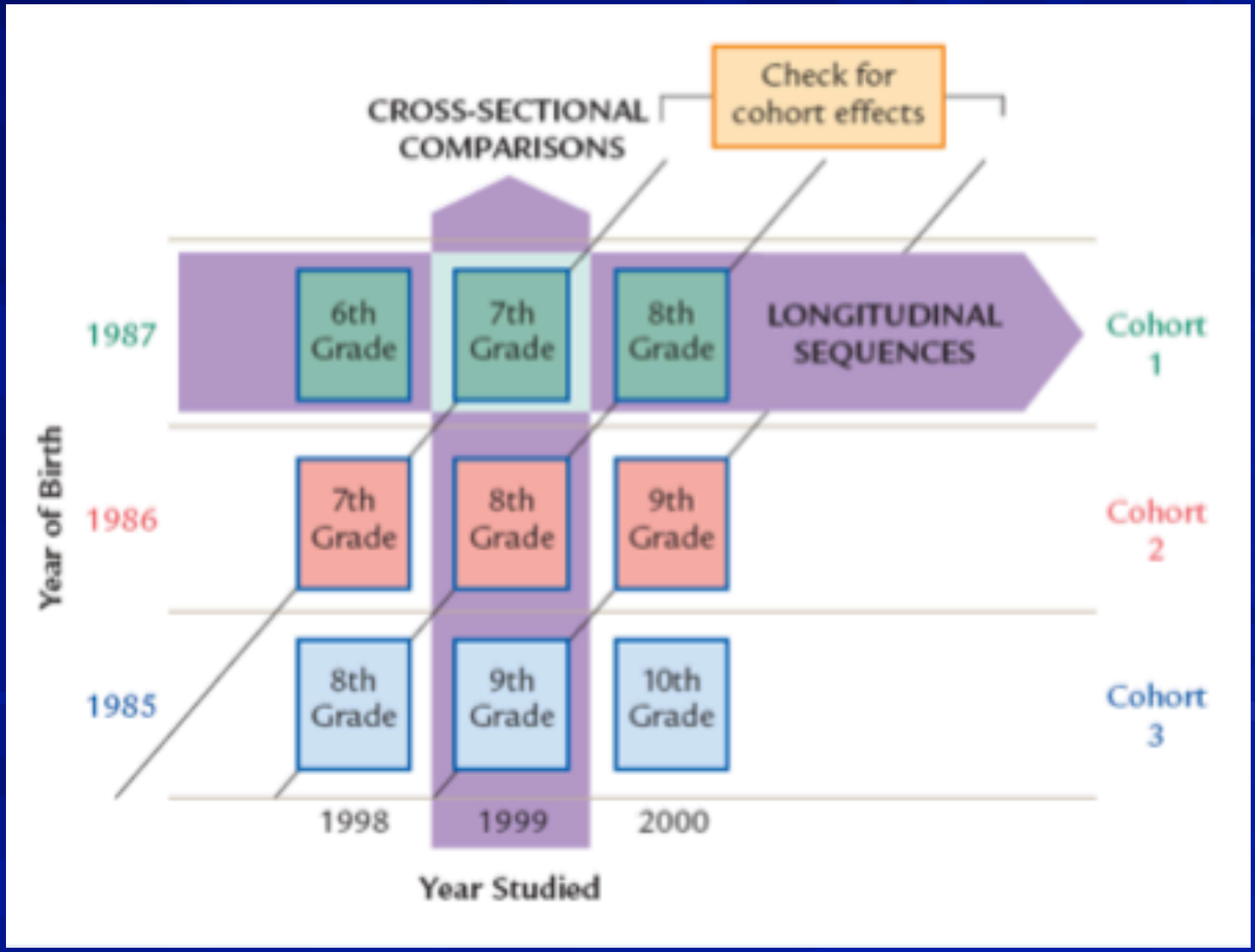
Designs for Studying Development

Longitudinal	Same participants studied repeatedly at different ages.
Cross-sectional	Participants of differing ages all studied at the same time.
Sequential	Several similar cross-sectional or longitudinal studies are conducted at varying times.
Microgenetic	Participants are presented with a novel task and their mastery is followed over a series of sessions.

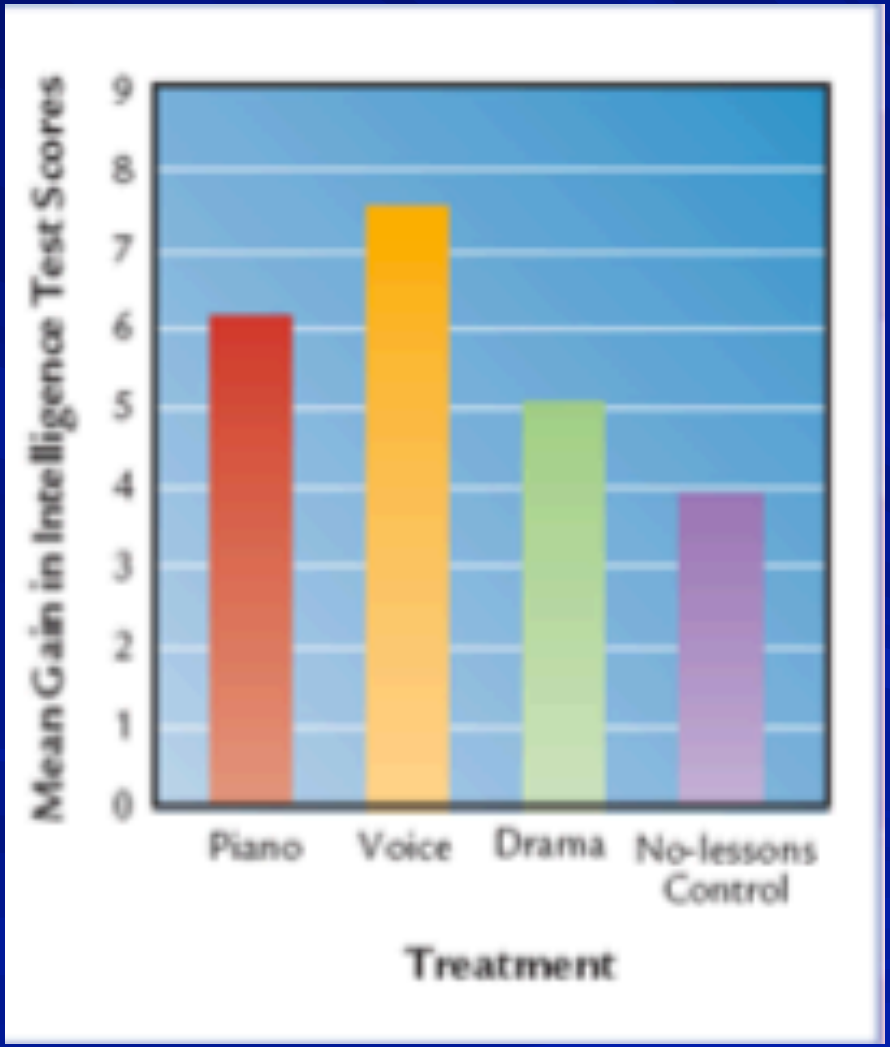
Strengths and Limitations of Research Designs

DESIGN	DESCRIPTION	STRENGTHS	LIMITATIONS
General			
Correlational	The investigator obtains information on participants without altering their experiences.	Permits study of relationships between variables.	Does not permit inferences about cause-and-effect relationships.
Experimental	The investigator manipulates an independent variable and looks at its effect on a dependent variable; can be conducted in the laboratory or in the natural environment.	Permits inferences about cause-and-effect relationships.	When conducted in the laboratory, findings may not apply to the real world. When conducted in the field, control is usually weaker, and results may be due to variables other than the treatment.
Developmental			
Longitudinal	The investigator studies the same group of participants repeatedly at different ages.	Permits study of common patterns and individual differences in development and relationships between early and later events and behaviors.	Age-related changes may be distorted because of dropout and test-wiseness of participants and because of cohort effects.
Cross-sectional	The investigator studies groups of participants differing in age at the same point in time.	More efficient than the longitudinal design.	Does not permit study of individual developmental trends. Age differences may be distorted because of cohort effects.
Sequential design	The investigator follows a sequence of samples (two or more age groups), collecting data on them at the same points in time.	Permits both longitudinal and cross-sectional comparisons. Reveals cohort effects. Permits tracking of age-related changes more efficiently than the longitudinal design.	May have the same problems as longitudinal and cross-sectional strategies, but the design itself helps identify difficulties.
Microgenetic design	The investigator presents children with a novel task and follows their mastery over a series of closely spaced sessions.	Offers insights into the process of development.	Requires intensive study of participants' moment-by-moment behaviors. The time required for participants to change is difficult to anticipate. Practice effects may distort developmental trends.

Sequential Designs



Can Musical Experience Enhance Intelligence?



Children's Research Rights

- Protection from harm
- Informed consent
- Privacy
- Knowledge of results
- Beneficial treatments