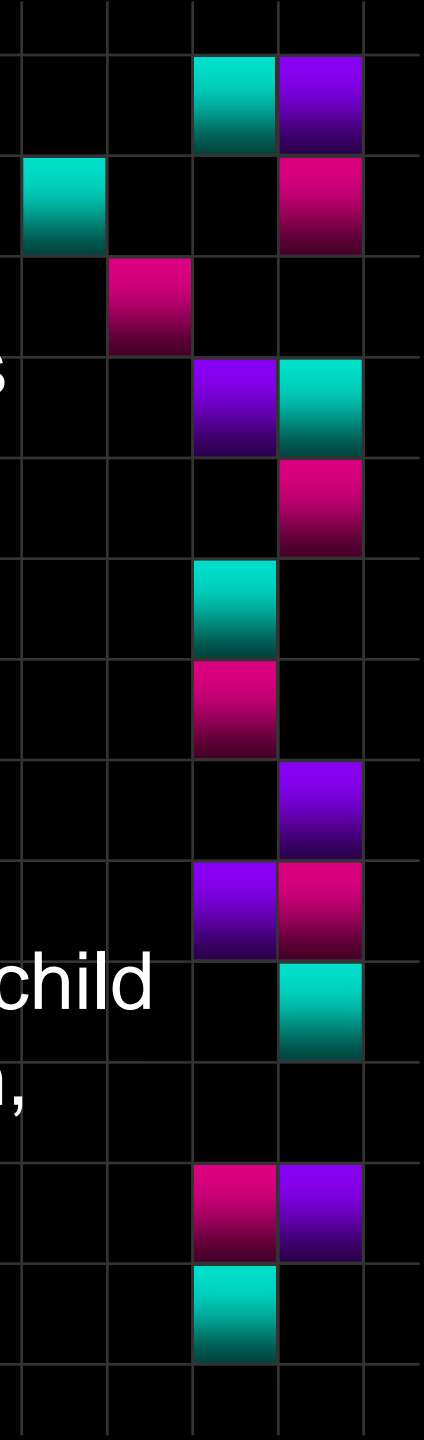


- 
- A decorative graphic in the top right corner of the slide, consisting of a grid of colored squares in shades of cyan, purple, and magenta, arranged in a pattern that tapers to the right.
- What is development? How/why does development occur throughout the lifespan? In other words, what is responsible for psychological development?
 - What interests you specifically about child psychology (e.g. language acquisition, adolescence, behavior disorders)?

Introduction

Chapter 1

Human Development

- One of the most complex topics studied by scientists – still can't predict the weather!
 - Single cell to talking, thinking, walking
- Even trickier because we are intimately aware of our own development
 - We observe our own psychological changes – we are our own subjects
 - Led to numerous pseudoscience-y theories

Child Psychology

□ What is it?

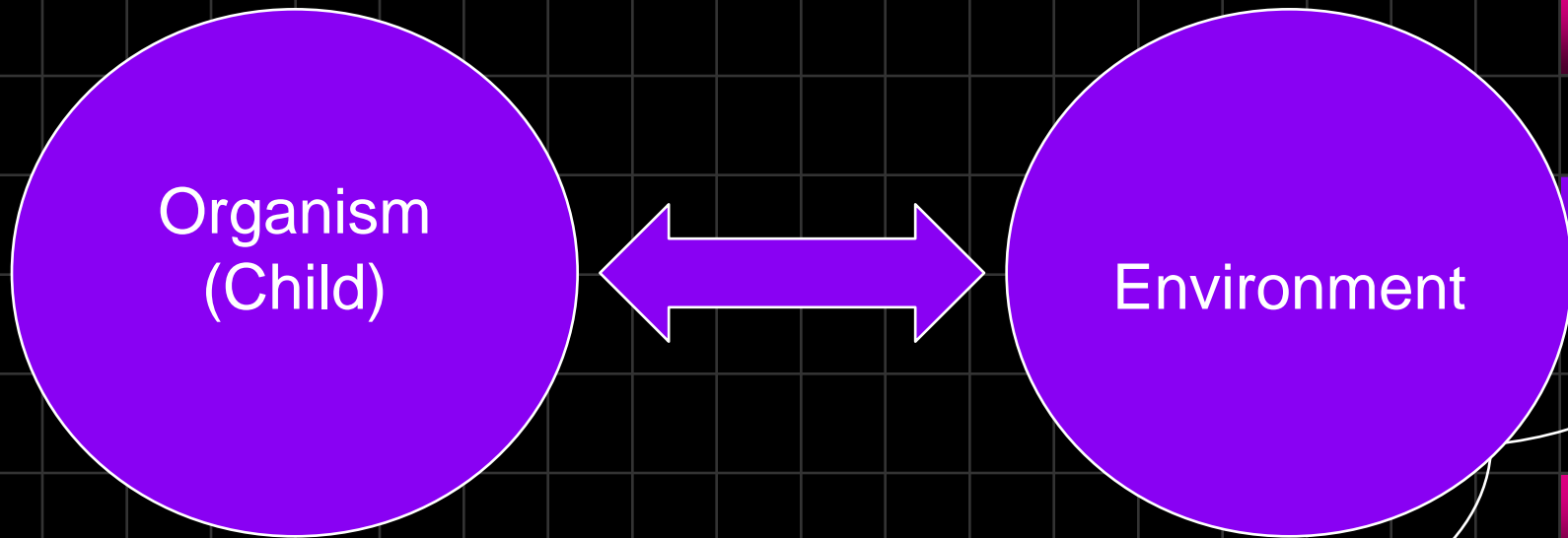
- Development: A dynamic process of adaptation to the environment in which learning plays an important role by providing us with the flexibility to meet changing demands
- Genetics? Environment?
 - BOTH! Nature AND Nurture
 - Cultural v. scientific understanding

Child Psychology

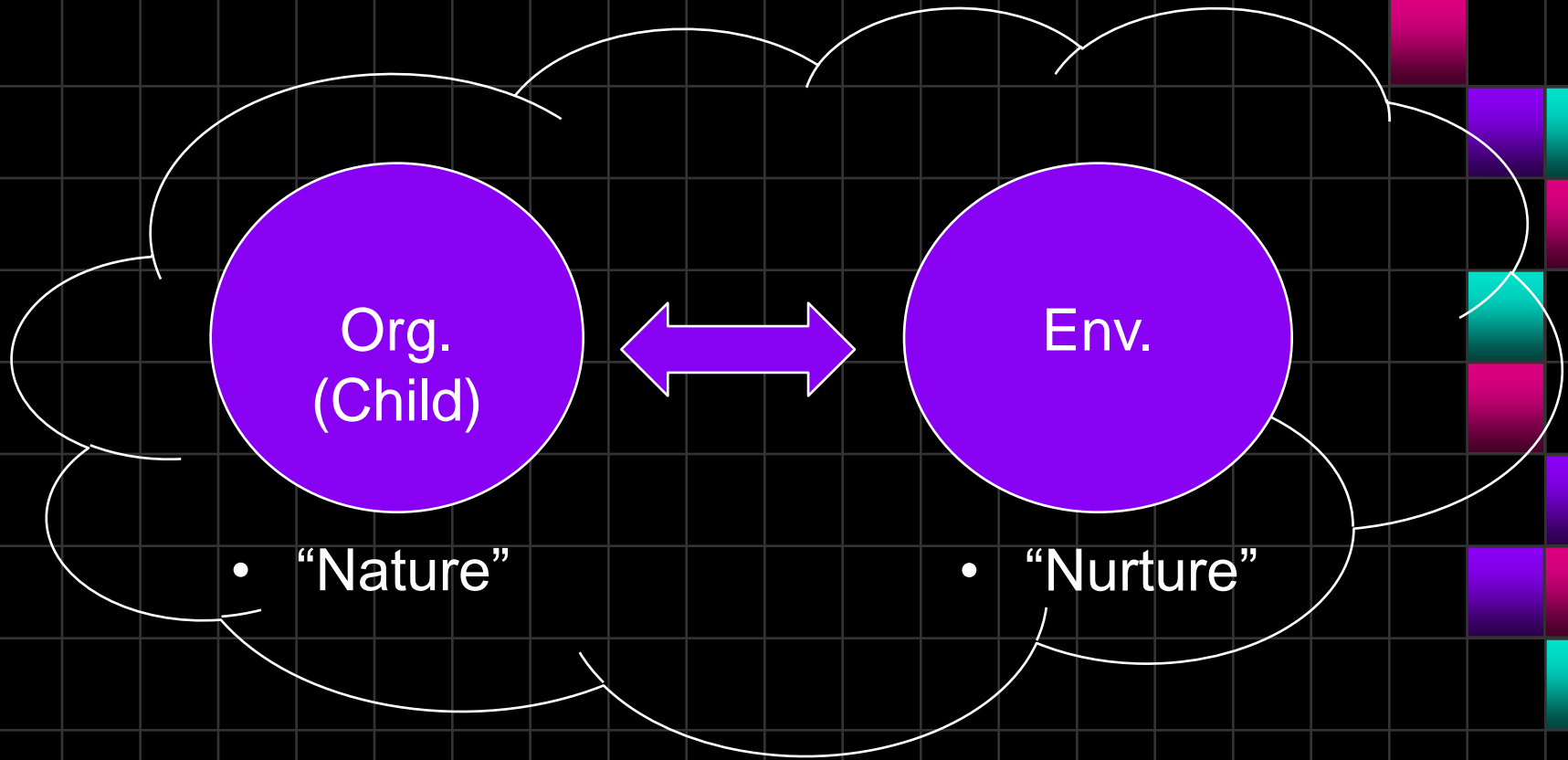
- As physical complexity increases, so to does psychological capabilities
 - Behavioral cusps
 - Potentialities: increased abilities in one area of development (i.e., physical) creates more potential for dynamic interactions with environment, thereby increasing potential for psychological development!
 - Examples:

A Psychological Event

Dynamic, reciprocal interaction between the organism and the environment



A Psychological Event



A Behavioral Systems Approach

- Combines:
 - Dynamical Systems Theory (Chaos Theory)
 - Behavior Analysis

A Behavioral Systems Approach

□ Combines:

- Dynamical Systems Theory (Chaos Theory)
 - Ever-changing person in constant and reciprocal interaction with the environment
 - Neither nature or nurture
 - Systems are interlocking, inseparable, and non-linear
- Behavior Analysis

A Behavioral Systems Approach

□ Combines:

- Dynamical Systems Theory (Chaos Theory)
- Behavior Analysis
 - Natural Science
 - Focuses on behavior-environment relations
 - ABA – use of this technology to problems of social significance
 - No appeals to spiritistic or causal internal entities

What is behavior?

- An action of a living thing in relation to the environment
 - Walking?
 - Sitting?
 - Talking?
 - Thinking?
 - Breathing?
- Dead Man's test: If a dead man can do it, it's not behavior (e.g., nothing, laying down, not breathing, not talking)

What is Development?

- Three aspects of psychological development:
 - Changes in Interactions
 - Progressive Changes
 - Changes Occur Across the Life Span

What is Development?

- Changes in Interactions:
 - Focus not only on behavior
 - As behavior changes, so too does the person-environment relationships
 - What develops ISN'T the organism, but these functional relations
 - Example: car keys, the function of peers, maternal communication

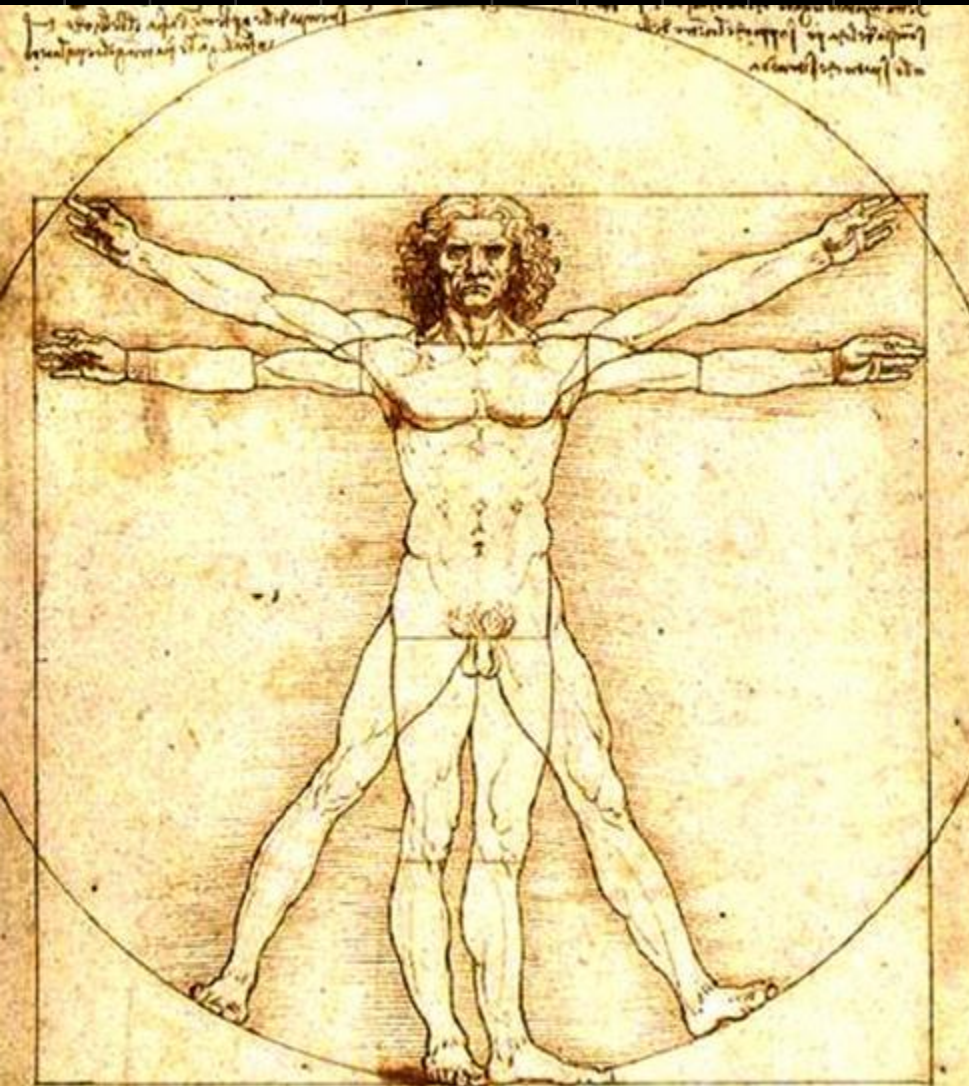
What is Development?

- Progressive Changes:
 - Development is cumulative
 - Changes based on both history and current conditions
 - Not necessarily “higher level of functioning”
 - Deterioration of old age (memory)
 - Example: reading, walking, talking

What is Development?

- Changes Occur Over the Lifespan:
 - “womb to tomb” approach
 - Child psychology typically narrows focus to birth through adolescence.
 - This class will stay within birth through late childhood developmental periods

Science is Just One Approach



AND WE CHOOSE SCIENCE!!

The Scientific Method

- Systematic observation (!)
 - Specialized methods for organizing & summarizing these observations
 - Formulating & testing hypotheses
 - Focusing on relationships between objects and events
 - Objectivity
- **Science still a product of man**

The Continuum of Scientific Disciplines

□ Molecular to molar:

- Physics
- Chemistry
- Biology
- Psychology (Behavior analytic psychology)
- Sociology
- Anthropology

The Continuum of Scientific Disciplines

Which is “best”?

- Wrong question: None are better, more serious, more objective**
- Different level of analysis
 - Language

** Not including traditional psychologies

Levels of Understanding Development: Reductionism and Anti-reductionism

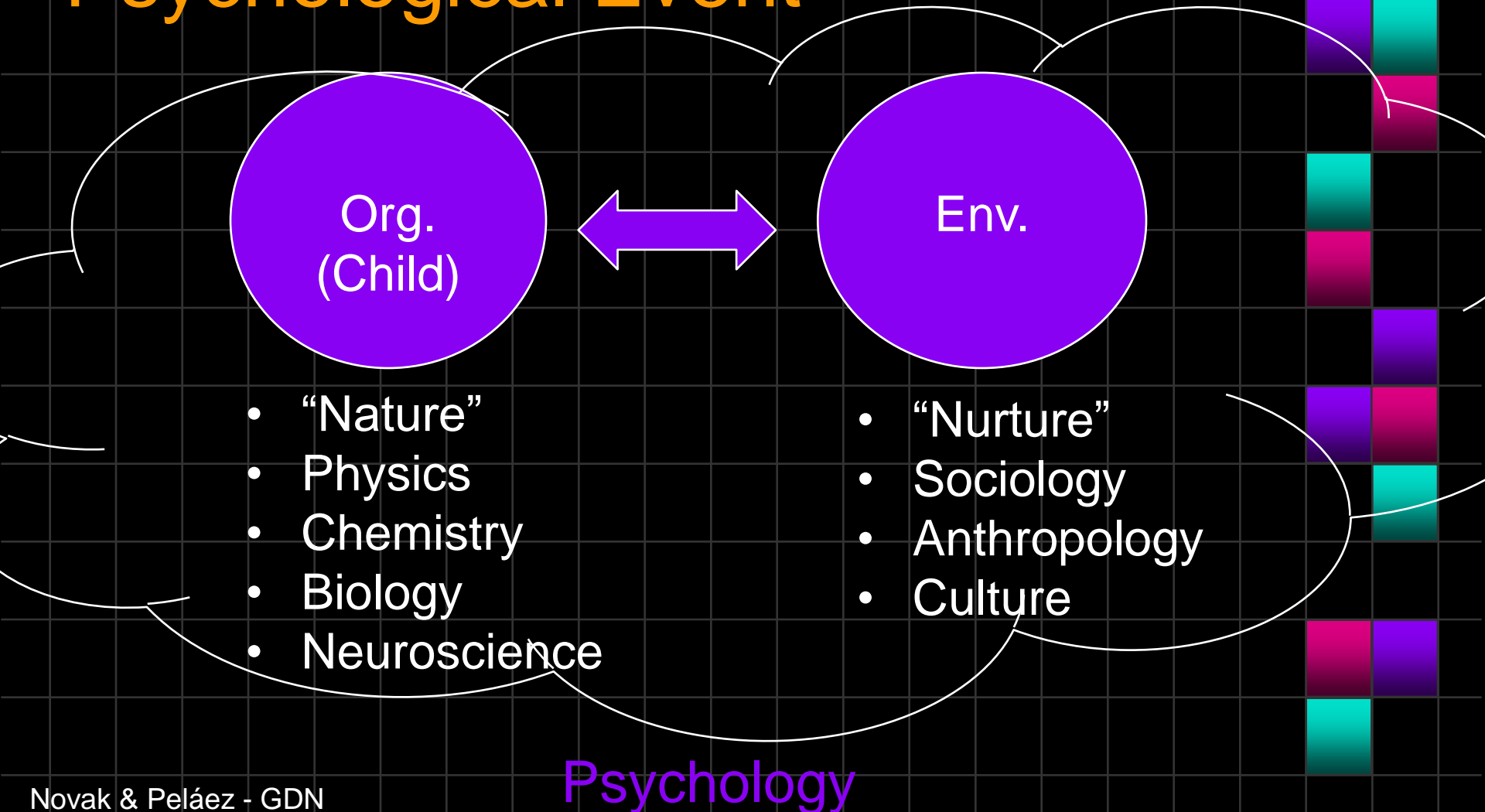
□ Reductionism

- Analyzing at a lower level of explanation
- e.g., Using biological explanations to analyze a psychological issue (e.g., ADHD, dyslexia, aggression).
- Biology DOES NOT equal behavior!

□ Antireductionism

- Maintaining the analysis at the appropriate level.

Need to look at ALL scientific disciplines to understand a Psychological Event



Behavioral Systems and Developmental Psychology

- Selection metaphor
 - Contingencies of survival; contingencies of reinforcement
- Developmental Phylogenesis
 - Study of evolution of a species in evolutionary time (generations)
- Developmental Ontogenesis
 - Changes in an organism over its lifetime

Behavioral Systems and Developmental Psychology

- Ontogenesis is the focus of this class:
 - Person/Environment **Relations**
 - These relations are **constantly changing**
 - Effects are **reciprocal**
 - **Multiple influences**
 - Development is **nonlinear**
 - Multiple directions of outcomes (e.g. peer groups in adolescence)

Development Is Analyzed at Different Levels of Systems

- Level 1: Basic Processes
 - Genetics and learning
- Level 2: (Emergent & Organized) Patterns of Behavior
 - Chunks of level 1 (e.g. intelligence, personality) although we can still analyze them at level 1
- Level 3: Individual Social Interactions
 - Bidirectional interactions (e.g. Motherese)
- Level 4: Society & Culture
 - Effects of society and culture on the child

Development Is Analyzed at Different Levels of Systems

- All are happening simultaneously, but we distinguish between the “levels” for ease of analysis
 - Course starts with level 1, the basic processes of learning, and moves to level 4, the influences of the culture at large

The Central Role of Learning for Development

What is Learning?

- A relatively permanent change in behavior in relation to the environment that is due to experience
 - Ontogenetic development
 - Responsible for psychological development
- Three part definition:
 1. Change in behavior/environment relationship
 2. Change is relatively permanent
 3. Requires experience with the environment
- Examples?

Learning & Evolution are Parallel Processes:

- Learning is the *process* of development
 - Behavior changes appear in individuals due to selection by environmental consequences in individual's experiences.
- Natural Selection is the *process* of evolution
 - Structural changes appear in species due to selection by environmental consequences (natural selection) for the species.

Learning is THE Process in Most Human Development

- Inherited biological structures contribute to development.
- Even reflexes, which are usually considered biological, depend on the environment
 - Immediately subjected to environmental consequences (e.g. crying, pupil dilation, heart rate, vomiting)
- For most behaviors, learning is the central process in their development.

Learning and Evolution

- Humans have evolved a higher capacity to *learn*
 - *NOT* “better” or “special”
 - Just more able to adapt to changing conditions
- Animals with Fixed Action Patterns cannot adapt to changes in environment
 - Example: stickleback fish, egg rolling
 - More committed behavior = less ontogenetic learning
- Learning enables adaptation to changes in environmental contingencies.

Learning:

“A relatively permanent change in behavior in relation to the environment that is due to experience.”

- Change in behavior-environment relationship.
- The change is relatively permanent
- The change is due to experience

What Do Developmental Psychologists Study?

- Developmental Psychologists as Researchers
 - Naturalistic approach: observation and description of development in natural context
 - Applied behavior analysis – single subject designs
- Applied Developmental Psychologists
 - Behavioral Pediatrics
 - Consultants
- Child Clinical Psychologists
 - Marriage, Child, & Family Counselors

Naturalistic Approach

Advantages

- Very likely to describe how development occurs in real life rather than in the lab.
- Yields good descriptions of what actually occurs.

Disadvantages

- Its lack of control over variables makes the determination of casual variables impossible.

Basic and Applied Behavior Analysis

Emphasis on Single-Subjects Designs.

Two advantages are:

1. Multiple developmental variables unique to the individual are controlled by the use of the individual as its own control.
2. Individual patterns of change are not masked by averaging the changes out as group methods do.

* Disadvantage is that generalizability may be reduced by this focus on the individual. *