Historical Context

- 1920s - 1940s competition between Psychodynamic Theory and Learning Theory
- 1950s Behaviorism dominates the study of human development
- 1950s - 1960s theorists began focusing on the role of internal, cognitive processes
- 1970s - 1980s Piaget's theory completely dominated the study of human development

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Foundations of Piaget's Theory

- Everything humans know and understand is filtered through our current frame of reference
- Humans construct knowledge based on what's know
- *Schema* - Behavioral or mental representations that organize knowledge
- Humans are born with the three basic schemes of looking, sucking and grasping
- Infants use reflexive actions to manage the world

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Foundations of Piaget's Theory

continued

Human development advances from the complementary processes of assimilation and accommodation

Assimilation - Using existing schemes to deal with new information or experiences

Accommodation - Adjusting schemes to fit new information and experiences

Assimilation and Accommodation

Assimilation allows humans to use what we know and understand already

Accommodation allows humans to modify what we know and to expand our schemes

Equilibration Process

- Humans desire equilibrium
- Humans are motivated to fully assimilate and accommodate to objects and situation
- When humans accomplish this we reach equilibrium

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Piaget's Stages

- Qualitative shifts in thinking
- Reorganization of both understanding, mental tools and strategies used to solve problem
- Sequential and hierarchical
- Neurologically normal people, regardless of culture, develop through a sequence of stages
- Humans in a stage will be in that stage for their development in all domains

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Cognitive Development Stages

Sensory-Motor - Infancy - 24 months

Pre-Operational - 24 months - 7 years

Concrete-Operational - 7 - 11 years

Formal-Operational - 11 - adulthood

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Sensory-Motor

Infants understand the world through their sensory experiences and motor actions

Symbols - A thing (e.g., object, idea or action) that refers to or stands for something else

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Substage	Age	Description	Example
1 **Simple reflexes**	Birth to 1 month	Coordination of sensation and action through reflexive behaviors.	Rooting, sucking, and grasping reflexes; newborns suck reflexively when their lips are touched.
2 **First habits and primary circular reactions**	1 to 4 months	Coordination of sensation and two types of schemes: habits (reflex) and primary circular reactions (reproduction of an event that initially occurred by chance). Main focus is still on the infant's body.	Repeating a body sensation first experienced by chance (sucking thumb, for example); then infants might accommodate actions by sucking their thumb differently than they suck on a nipple.
3 **Secondary circular reactions**	4 to 8 months	Infants become more object-oriented, moving beyond self-preoccupation; repeat actions that bring interesting or pleasurable results.	An infant coos to make a person stay near; as the person starts to leave, the infant coos again.
4 **Coordination of secondary circular reactions**	8 to 12 months	Coordination of vision and touch—hand-eye coordination; coordination of schemes and intentionality.	Infant manipulates a stick in order to bring an attractive toy within reach.
5 **Tertiary circular reactions, novelty, and curiosity**	12 to 18 months	Infants become intrigued by the many properties of objects and by the many things they can make happen to objects; they experiment with new behavior.	A block can be made to fall, spin, hit another object, and slide across the ground.
6 **Internalization of schemes**	18 to 24 months	Infants develop the ability to use primitive symbols and form enduring mental representations.	An infant who has never thrown a temper tantrum before sees a playmate throw a tantrum; the infant retains a memory of the event, then throws one himself the next day.

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Pre-Operational

Symbol use facilitates the transition

Child perfects the ability to have anything stand for anything else

Animism - Belief that inanimate objects have lifelike qualities and are capable of action

Centration - Centering attention on one characteristic to the exclusion of all others

Egocentrism - Inability to distinguish between one's own perspective and someone else's perspective

J S Michael Jefferson
Cognitive Development

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5 - 7 Year Shift

Develop the ability to represent a person, thing or situation in multiple ways at the same time and to switch smoothly between representations in comparing and coordinating them

Multiple Representational Ability - Ability to look at things in two or more ways at the same time

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Concrete Operational Stage

Operation - Mental manipulation performed on something or an idea that can be reversed or brought back to the original state by a complementary transformation

Mental operations are possible considering real-life situations, concrete instances of a problem, and not hypothetical or theoretical problems

Seriation - Order stimuli along a quantitative dimension

Necessary Truth - Some things must be true because logic says they must be this way

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Concrete Operational Stage

Transitivity - Logically combining things to understand certain conclusions

Conservation - Awareness that altering an object's or a substance's appearance does not change its basic properties

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Formal Operational

Abstract Thinking - Extraction of general laws and principles from a set of specific instances of concrete, real-world problems

Level of abstraction is no longer tied to one concrete instance

Formal Operations - Adolescents can deal with hypotheses or propositions in the abstract form of the proposition, regardless of the specific instances and the empirical evidence or the truth or falsehood of a particular proposition

Ability to perform operations on operations

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Postformal Thought

Postformal Thought - Thinking that is reflective, relativistic, contextual, provisional, realistic and influenced by emotion

Reflective, relativistic, and contextual

Provisional

Influenced by emotion

Search for and presence of meaning leads to wisdom

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Criticism of Piaget's Theory

Basic process is metaphorical and difficult to disprove because it's not empirically testable

Misjudged the ages at which children show evidence for understanding a particular concept

Focus on logical thought led Piaget to ignore many other aspects of development

Idea that Piaget's stages are universal

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Robert Siegler

- Theorized that there is extreme variability at all times and at all levels
- Consolidate our mastery of new strategies or skills gradually and with experience

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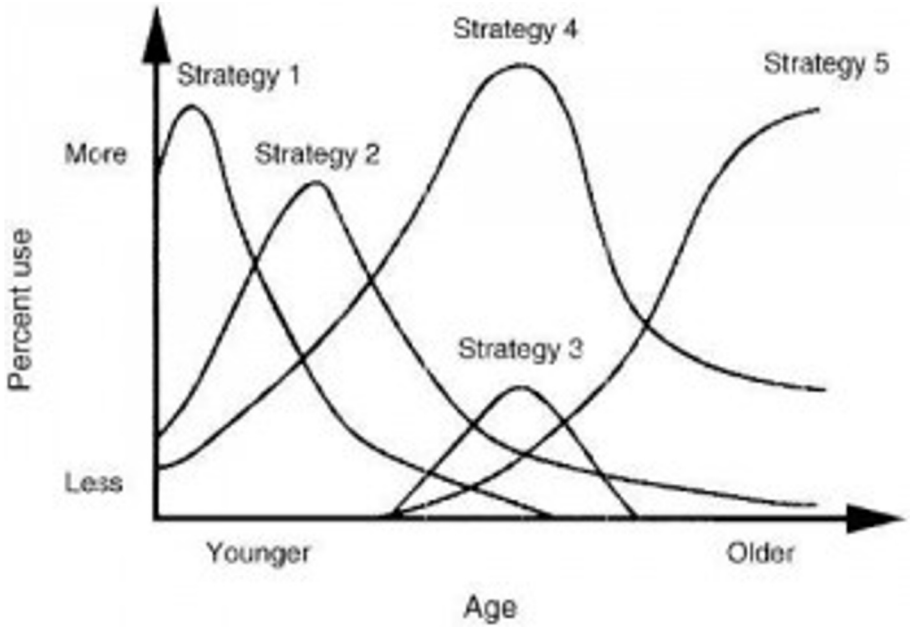

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