

● ● ● | *Adolescent Development*

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Chapter 2: Cognitive Transitions

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● ● ● | Outline/overview 

- Five main changes in cognition
- Piaget on cognitive development
- Information processing perspective
- New perspectives
- Brain development
- Intelligence and IQ testing

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● ● ● | Five Main Changes in Cognition (Thinking)

Main advantages over child's thought?

- (1)
- (2)
- (3)
- (4)
- (5)

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Thinking about Possibilities

- Example: Ways in which their lives might be affected by different career choices
- Moves easily between the specific and the abstract to generate alternative possibilities
- Development of deductive reasoning”
 - “If-then” thinking
 - Major intellectual accomplishment

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Thinking about Abstract Concepts

- Ability to comprehend higher-order abstract logic inherent in puns, proverbs, metaphors, and analogies
- The growth of social thinking (social cognition) during adolescence is directly related to the young person's improving ability to think abstractly

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Metacognition: Thinking about Thinking

- Monitoring one's own cognitive activity during the process of thinking
- Increased introspection
 - thinking about our own emotions
- Increased self-consciousness
 - Thinking about others thinking of us
- Increased intellectualization
 - Thinking about our own thoughts

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● ● ● | **Metacognition: potential problems**

- Adolescent egocentrism
 - Extreme self-absorption
- imaginary audience
 - Behavior is the focus of other's concern
- personal fable
 - Experiences are unique

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● ● ● | **Imaginary Audience or Personal Fable?**

- Sally is going on a date and has a pimple on the end of her nose
- John is arguing with his parents at a restaurant when the girl he likes walks in
- Sylvia and Gerald decided to have sex even though they didn't have any birth control

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● ● ● | **Imaginary Audience or Personal Fable?**

- Molly is having her class picture taken and she just got braces the day before
- Elise broke up with her boyfriend, and when Mom tries to comfort her, Elise screams that she just doesn't understand
- Even though Cheryl is known for her reckless driving, Gordon decides to take a ride from her anyway

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● ● ● | **Thinking in Multiple Dimensions**

- See things in complicated ways rather than one aspect at a time
- More sophisticated understanding of probability
- Ability to understand when someone is being sarcastic
- Can understand *double-entendres*

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● ● ● | **Adolescent Relativism**

- Ability to see things as relative rather than as absolute
- Skepticism becomes common
- Everything may seem uncertain
- No knowledge seems completely reliable

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● ● ● | **Piagetian View of Adolescent Thinking**

- Cognitive-developmental view
 - Interaction between biological change and environmental stimulation
 - Leads to intellectual growth
- Each stage is characterized by a particular type of thought



Jean Piaget

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● ● ● Piaget's Cognitive Developmental Theory

- Equilibrium – ultimate goal
 - Schemes – mental systems/ operations
 - Adaptation – adjust schemes to maintain equilibrium
 - Assimilation – incorporate experience into existing scheme
 - Accomodation – scheme is extensively modified or new scheme created

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● ● ● Piagetian Cognitive-Developmental Theory

- Sensorimotor (birth-2)
 - Object permanence
- Preoperational (2-6)
 - Egocentrism profound
- Concrete operational stage (6-11)
 - Seriation & classification
- Formal operations (11 – adult)
 - Logical thought

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● ● ● Piagetian View of Adolescent Thinking

- Propositional logic
 - Based on formal principles of logic
 - Applies to abstract, complicated thinking as well as to concrete, literal thinking
- Competence-performance distinction
 - A large gap exists between what *can be done* and what *is done* in daily life

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● ● ● | Information-Processing View of Adolescent Thinking

- Question of Interest
 - What is it about the ways that adolescents think about things that make them better problem solvers than children?

(1)
(2)
(3)
(4)
(5)

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● ● ● | New Directions re: Adolescent Thinking

- Robbie Case Integration
 - Integrates findings on improvements in adolescents' information-processing abilities within a cognitive-developmental framework similar to Piaget's
- Paul Klaczynski
 - Two different cognitive systems at work
 - Analytic system using deductive reasoning
 - Intuitive system using heuristics and gut feelings

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● ● ● | The Adolescent Brain

- Brain maturation linked to behavioral, emotional, and cognitive development during this period
- Limbic system - changes in levels of neurotransmitters, like dopamine, affect reward sensitivity
- Synaptic "pruning" and myelination of the prefrontal cortex improves the efficiency of information processing

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● ● ● | Individual Differences in Intelligence in Adolescence

- Measurement of IQ
 - Intelligence quotient
 - First test developed in 1905
 - Most widely used – and misused- psychological instrument

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● ● ● | Culture and Intelligence

- Culture-fair tests
 - Intelligence tests that attempt to reduce sources of ethnic or cultural bias
 - Based less on verbal skills
 - Oriented toward performance tasks

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