




Adolescence

Chapter 2: Cognitive Transitions

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Changes in Cognition (Thinking)

Main advantages over child's thought

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

2



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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● ● ● | **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

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● ● ● Piagetian Cognitive-Developmental Theory

<p>SENSORIMOTOR STAGE BIRTH TO TWO YEARS</p>
<p>PREOPERATIONAL 2 TO 6 YEARS</p>
<p>CONCRETE OPERATIONAL 6 TO 11 YEARS</p>
<p>FORMAL OPERATIONS 11 + YEARS</p>

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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's Integration
 - Integrates findings on improvements in adolescents' information-processing abilities within a cognitive-developmental framework similar to Piaget's
 - Automatization
 - Basic elements of information processing become more automatic

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● ● ● | **New Directions re:
Adolescent Thinking**

- Paul Klaczynski
 - Why are individuals' behaviors so often illogical despite the cognitive skills they have developed?
 - 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**

- Research w/ fMRI and PET scans
- 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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● ● ● Individual Differences in Intelligence in Adolescence

- Sternberg's Triarchic Theory
 - Componential intelligence
 - Experiential intelligence
 - Contextual intelligence
- Gardner's Theory of Multiple Intelligences
 - **Eight** (not seven) intelligences

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● ● ● Culture and Intelligence

- Vygotsky emphasized context in which intellectual development occurs
- Zone of Proximal Development
 - challenging tasks that can be completed with help from another
- Scaffolding
 - structuring the learning situation so that it is within the reach of the student

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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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● ● ● | Adolescent Thinking in Context

- Changes in Social Cognition
 - Adolescents' conceptions of interpersonal relationships are more mature:
 - their understanding of human behavior is more advanced
 - their ideas about social institutions and organizations are more complex
 - their ability to figure out what other people think is far more accurate.

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● ● ● | Adolescent Thinking in Context

Studies of social cognition fall into three categories

- (1) Impression formation
- (2) Social perspective taking
- (3) Conceptions of morality and social conventions

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