

## Children's Cognitive Development: Alternatives to Piaget

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### Outline:

- Brief review of Piaget's theory
- The role of culture - implications for Piaget's theory
- The theory of Vygotsky
- The theory of Bruner

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## Summary of Piaget

- Stage theory of development - older children think qualitatively differently to younger children
- 4 stages:
  - Stage 1: Sensorimotor Period (0-2 years)
  - Stage 2: Pre-operational stage (2-7 years)
  - Stage 3: Concrete Operational Stage (7-11 years)
  - Stage 4: Formal Operational Stage (11+ years)
- Development is the combined result of:
  - maturation of the brain and nervous system
  - experiences that help children adapt to new environments - adaption: an organism's ability to fit in with it's environment.

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## Summary of Piaget: Criticisms

- But Piaget:
  - **underestimated the importance of knowledge**
    - Gagné: Complex skills can be acquired easily once simpler prerequisite skills have been learned. Development is based on LEARNING new skills - continuous not discontinuous.
  - **underestimated the ability of children**
    - Tasks were methodologically flawed.
  - **underestimated the impact of CULTURE:**
    - Piaget's tasks are culturally biased
    - Schooling and literacy affect rates of development
      - e.g. Greenfield's study of the Wolof
    - Formal operational thinking is not universal
      - e.g. Gladwin's study of the Polynesian islanders

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## Alternative to Piaget: 1: Lev Vygotsky

- 1896 - 1934
- Work remained little known because it was banned by Stalin after Vygotsky's death
- Collapse of the Soviet Union meant:
  - greater dialogue between the West and Russia
  - Vygotsky's work translated into English

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## Vygotsky's Theory: The role of culture/social interaction (1)

- Sociocultural environment ALL IMPORTANT for cognitive development
- Different contexts create different forms of development
- Cognitive processes (language, thought, reasoning) develop THROUGH social interaction
- Development is a product of CULTURE

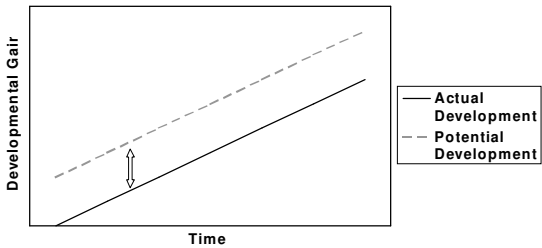
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## Vygotsky's Theory: The role of culture/social interaction (2)

- Vygotsky emphasised the role of:
  - social interaction
  - instruction
- Central idea:
  - Zone of Proximal Development (ZPD):
    - the difference between the level of actual development and potential development

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## Zone of Proximal Development



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## Example from Seifert, Hoffnung & Hoffnung

- Parent: Here are four books for you and the same for your brother
- Child: The same? (*He investigates his brother's pile of books.*) No, he has more (*spoken with annoyance*).
- Parent: No, really, they're the same. Take another look.
- Child: He does have more.
- Parent: Try laying his out in a row. Then lay yours out too. Then compare
- Child: (*Does as suggested*) One two three four . One two three four. The same! (*He looks satisfied*)

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## Summary of the role of social interaction

- 1. Confirm existing knowledge
- 2. Add new information
- Instruction most effective when:
  - it builds on previous knowledge and skills (e.g. counting)
  - it provides a 'sensible' challenge - there's no point pushing children beyond their potential

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## Vygotsky's theory: The role of language

- Piaget's view: language is just another representational system. Underdeveloped until 6/7 years of age
- Vygotsky's view: language is social and communicative. Essential for cognitive development.
- Why did Vygotsky think this?
  - Private speech - children talk to themselves

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## Vygotsky suggested:

- adults give instructions to children (social speech)
- children start to use parent's instructions to direct their own behaviour (private speech)
- private speech becomes internalised as thought processes (silent statements)
- Children use this 'internalised' speech to plan and organise behaviour => **cognitive development**

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## Summary of Vygotsky

- Culture and social interaction very important in cognitive development
- Social interaction with knowledgeable others moves development forward - ZPD
- Language is central to cognitive development:
  - social speech => private speech => thought

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## Alternative to Piaget 2: Jerome Bruner

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- Very influenced by Piaget's and Vygotsky's work
- Responsible for introducing Vygotsky's work to the non-Soviet world

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## Bruner's Theory: Similarities with Piaget

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- Socio-Cognitive Stage Theory:
  - Enactive Mode
  - Iconic Mode
  - Symbolic Mode
  - Abstract thinking develops out of concrete thinking

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## Bruner's Theory: Similarities with Vygotsky

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- Interpersonal communication necessary for development - socio-cognitive theory
- Development relies on active intervention of expert others:
  - SCAFFOLDING
  - Contingency Rule (Wood, 1980)

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## Bruner's Theory: The role of language

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- Language important:
  - without language, thought is limited
  - language forms the basis of understanding:
    - prelinguistic thought - games and rituals
    - rituals gradually replaced as adult adds information
    - rituals replaced by linguistic modes of communication

### Summary of Bruner

- Socio-cognitive stage theory
- Based on interaction with adults
- Relies on adults developing reciprocal behaviour with the child

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## Overall Conclusion

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- Piaget underestimated the importance of culture and social interaction
- Vygotsky:
  - social interaction and language necessary for cognitive development
- Bruner:
  - Stage theory but emphasised role of social interaction and language

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## Learning Outcomes

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- Critically evaluate the theories of Bruner and Vygotsky
- Critically compare and contrast the theories of Piaget, Bruner & Vygotsky

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## Developmental Psychology: Lecture 9: Reading

Items marked with a \* are on my restricted loan list.

### Reading List

- Berk, L.E.I (2000). *Child Development*. London: Allyn & Bacon. Chpt 6.
- Cohen, D. (1983). *Piaget: Critique and Reassessment*. London: Croom Helm.
- \*Dworetzky, J.P. (1996). *Introduction to Child Development*. St.Paul:West. Chpt. 10
- Demetriou, W. D. & van Lieshout, C. (1998). *Lifespan Developmental Psychology*. Chichester: John Wiley. Chapter 5.
- Gauvain, M. & Cole, M. (2001). *Readings on the Development of Children*. NY: Freeman & Co.
- \*Lee, K. (2000). *Childhood Cognitive Development: The essential readings*. Oxford: Blackwells. Chpt 4.
- Light, P., Sheldon, S. & Woodhead, M. (1991). *Learning to Think*. London:Open University Press. Chpts 5,6,16.
- \*Meadows, S. (1993). *The Child as Thinker: The development and acquisition of cognition in childhood*. Routledge: London. Chpt 4 (pgs. 198-212, 235-251). Chpt 5, especially pgs 313-344.
- Meadows, S. (1996). *Parenting Behaviour and Children's Cognitive Development*. Hove: Psychology Press. Especially chpts 2,3,4,5.
- \*Messer, D. & Dockerell, J. (1998). *Developmental Psychology: A Reader*. London: Arnold. Chpts. 18, 19 & 21.
- \*Messer. D. & Miller. S. (1999). *Exploring Developmental Psychology: From Infancy to Adolescence*. London: Arnold. Chpts 6.
- Richards, M. & Light, P. (1986 ). *Children of Social Worlds*. Cambridge:Polity Press. Chpts 8 & 9.
- Seifert, K. L., Hoffnung, R. J., & Hoffnung, M. (1997). *Lifespan Development*. Boston: Houghton Mifflin. Pgs 48-51
- Sutherland, P. (1992). *Cognitive Development Today: Piaget and his Critics*. London:Paul Chapman. Chpts 2,3,4,6,7,9,10,11.
- Vygotsky, L. (1978). *Mind in Society: The development of higher psychological processes*. Harvard: Harvard Press.
- Wadsworth, B.J. (1989). *Piaget's Theory of Cognitive and Affective Development*. NY: Longman
- \*Wood, D. (1998). *How Children Think and Learn*. Oxford: Blackwells. Pgs. 8-14 and 97-102. Also Chpts 1,2 and 3. The earlier edition is fine but Chpt 2 (A decade of development) is missing.