



SOCIOCULTURAL THEORIES OF DEVELOPMENT

ISSN 1525-8225 September 01 & October 05, 2010

Sociocultural Theories of Development

- Research Investigates how social factors influence cognition and development, and how social and cultural practices shape and define thought
- Vygotsky founding father

Lev Semenovich Vygotsky



- 1896 Born in Russia
- 1924 – 34 produced seminal works including Language and Thought. School of Psychology created based on his work.
- 1934 died of tuberculosis at age 37.
- 1930s to 1950s work of Vygotskian schools suppressed under Stalin.
- 1960s work reappeared, translated

Vygostky's Beliefs

- People are eager to help children learn new skills needed to live in their culture
- There are differences in children due to their circumstances – time, culture
- Higher psychological processes distinguished humans from other animals and that these processes had their origins in social interactions.
 - ▣ attention, perception, memory
 - ▣ reasoning and concept formation

Vygotsky vs. Piaget

Piaget

- Child as a scientist trying to understand the world largely on their own.
- Similarities among children

Vygotsky

- Children learning in a social context through interaction with others.
- Differences in children due to context.

Vygotsky & Piaget

- Video Clip
- Piaget & Vygotsky in 90 Seconds
- <http://www.youtube.com/watch?v=yY-SXM8f0gU&feature=related>

Central Themes

- Cognitive development occurs in social interaction
- Psychological functioning is mediated by language and other cultural tools
- Cultural norms and other people influence children's opportunities for learning
- Social and cultural learning require particular cognitive abilities

Theme 1:

Cognitive Development Occurs in Social Interaction

- Interaction with others has a profound effect on how children develop
- Caregivers, siblings, extended family members, neighbors, teachers, and peers

Theme 1:

Cognitive Development Occurs in Social Interaction

- Piaget – (Individual child as unit of analysis)
 - Acknowledged that children learned through peers – more likely to promote disequilibrium
 - Believed children were more critical of age-matched peers.
 - Difference is that Piaget saw the outside environment as giving child information about development
- Vygotsky (child in context as unit of analysis) saw the outside environment as shaping development.

Theme 1:

Cognitive Development Occurs in Social Interaction

- Internalization of Socially Shared Processes
 - **Intermental level** – between people who are involved in the social interaction
 - **Intramental level** – within the individual
 - Example: infant pointing
 - 1st tries to reach object unsuccessfully
 - Adult – “you’re looking at this?” (intermental)
 - Child develops ideas of pointing as communication (intramental)
 - Example: Learning to tie Shoes
 - Intermental: adult giving step by step instructions
 - Intramental: child can do without adults help

Theme 1:

Cognitive Development Occurs in Social Interaction

- Zone of Proximal Development
 - Defined as the distance between what a child can do independently, and what the child can do in interaction with an adult or more advanced peer.
 - Children can reason in more complex ways or perform more complex behaviors when they receive assistance than they can do on their own.
 - Examples
 - Counting
 - Math problem (child can do simple arithmetic on own, but with teacher can learn to solve problem together, and later internalize solution).
 - Important to assess both what child can do independently and what child can do with assistance

Theme 1:

Cognitive Development Occurs in Social Interaction

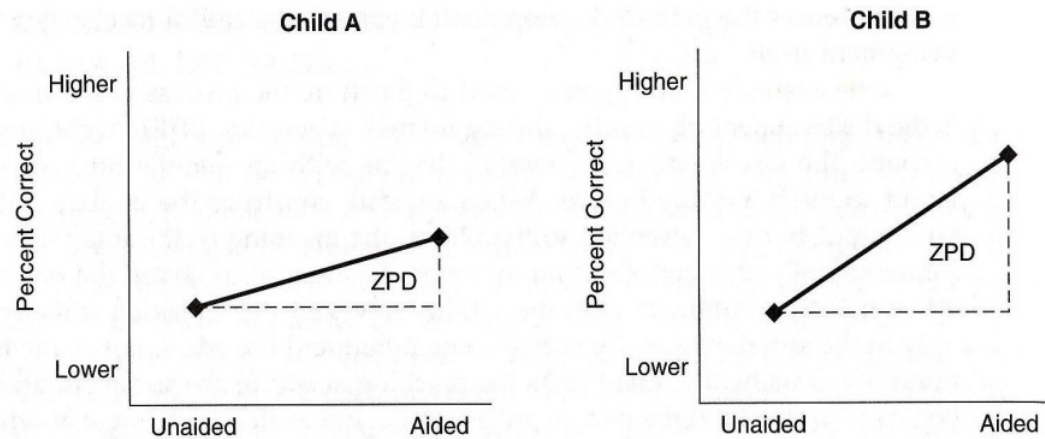


FIGURE 4.1 Two children's zones of proximal development (ZPD). The children's unaided performance is similar, but child B benefits more from another person's help.

Figure 4.1 display comparable levels of independent performance, but dramatically different levels of potential competence. Thus, an accurate characterization of each child's knowledge requires assessments of both levels. As discussed later in the chapter, Vygotsky's views have had an important impact on knowledge assessment in educational settings.

Theme 1:

Cognitive Development Occurs in Social Interaction

- Video Clip
- Vygotsky's Developmental Theory: An Introduction
- 4:01 min
- <http://video.google.com/videoplay?docid=634376752589779456#>

Theme 2: Psychological functioning is mediated by language and other cultural tools

- Technical Tools – tools for acting on the environment (i.e. – plows, hammers, silverware)
- Psychological Tools – tools for thinking – influence the way we organize and remember information
 - Language – used for regulating behavior, planning, remembering, solving problems
 - Maps
 - Diagrams
 - Number systems
 - Algebraic symbols
 - Programming languages
 - Systems for conceptualizing dates and time (calendars, clocks)
 - Alphabet song
 - Tools for solving mathematical problems

Theme 2: Psychological functioning is mediated by language and other cultural tools



- Example of impact of psychological tools
 - Abacus – 11 year old Taiwanese children made mistakes in mental arithmetic suggesting that they were thinking about solving the problem on an abacus. This illustrates a cultural tool difference, since East Asian children are likely to learn math using an abacus, whereas their North American counterparts are not.
 - Because of the calculator, less emphasis is placed on math

Theme 3: Cultural norms and other people influence children's opportunities for learning

▣ Examples

- Education: availability of formal education, whether or not mandatory (how would the US be different if formal education was not readily available? mandatory?)
- Infant care practices
- Child care arrangements
- Expectations about work, study, play

Theme 3: Cultural norms and other people influence children's opportunities for learning



- Girl Scout Cookie Example –
 - Learning occurs through direct interaction with troop leaders, parents customers, and other children
 - Tools – color coded order forms
 - Specific skills – marketing, math
 - Values – responsibility, courtesy, efficiency, precision, promptness

Theme 3: Cultural norms and other people influence children's opportunities for learning

- Study comparing industrialized societies where all children receive formal schooling found variations in children's typical activities.
 - ▣ Play most common activity in all four cities, but levels of play varied. Korean children spent the most time playing, Russian children the least.
 - ▣ Russian and Estonian children spent more time in lessons and work than US and Korean children
 - ▣ Korean children spent less time in conversation than the other three groups of children
 - ▣ Systematic differences between middle-class and working-class families
 - Middle-class spent more time in lessons and conversation
 - Working-class spent more time in play

Theme 4: Social and Cultural Learning Require Particular Cognitive Abilities

□ Intersubjectivity

- The shared understanding between people that emerges through processes of mutual attention and communication.
- Contingent Interaction – begins at about 2 months of age – reciprocal actions and reactions between infants and caregivers that resemble the mutual give and take of conversation
- Joint Attention – at 9 months infants can readily follow adults' gaze and pointing gestures; both sharing a common focus on particular objects or events – this is key to intersubjectivity

Theme 4: Social and Cultural Learning Require Particular Cognitive Abilities

- Tomosello – comparison of humans and non-human primates
 - What is crucial in learning from social interaction is humans' ability to understand other people as being like themselves, having intentions and mental states like their own.
 - Identified 3 forms of cultural learning that rely on this understanding
 - Imitative learning
 - Instructional learning
 - Collaborative learning

Theme 4: Social and Cultural Learning Require Particular Cognitive Abilities

□ Imitative Learning

- Reproducing another individual's behavior in order to achieve the same goal
- Involves understanding the relation between the other individual's behavior and his/her goal
- *Emulation* is learning that involves focusing on the end result of the other individual's behavior, without an appreciation of the relation between the specific behavior and the intended goal.
 - Involves only learning about the task
 - Non-human primates emulate rather than imitate

Theme 4: Social and Cultural Learning Require Particular Cognitive Abilities

□ Instructional Learning

- Involves direct, intentional transmission of information from one individual to another, with the learner attempting to understand the task or material from the teacher's point of view.
 - Formal: Lessons as school
 - Informal: Father teaching to cast fishing line
- Human adults regularly instruct their children, non-human primates do not

Theme 4: Social and Cultural Learning Require Particular Cognitive Abilities

□ Collaborative Learning

- Learning that occurs when multiple individuals engage in cooperative, goal-directed problem solving.
- Differs from imitative and instructive learning in that it is not merely a transmission of knowledge from one to another, but rather a joint construction of new knowledge.
- Involves establishing a common goal, sharing responsibility for goal-directed actions, and cooperatively carrying out those actions. These activities require an ability to take the perspective of the other participants in the interaction.
- Example: building a train track together – likely to be more complex when working on it together, each child will learn something

Next Section: Modern Empirical Research in the Sociocultural Tradition

- Learning in interaction with adults
 - ▣ Scaffolding
- Learning in interaction with peers
- Guided Participation in Cultural Activities
- Language as a Psychological Tool

Sociocultural Research Area 1:

Learning in Interaction with Adults: Scaffolding



- Construction scaffold** - Temporary structure that is used to support workers and materials high above the ground as the building is being constructed.
- Provides support for construction workers
 - Extends their range of activities
 - Allows them to perform tasks that would otherwise be impossible.
 - Once the structure of the building is complete, the scaffold is no longer needed.

Sociocultural Research Area 1:

Learning in Interaction with Adults: Scaffolding

- **Social Scaffold** – supports children’s task performance, allows them to extend the range of their activities and perform tasks that would be impossible for them to perform alone.
- Once children can perform the task unaided, the social scaffold is no longer necessary.
- Examples
 - ▣ Learning to ride a bicycle
 - ▣ Puzzle
 - ▣ Story Telling video clip

Sociocultural Research Area 1:

Learning in Interaction with Adults: Scaffolding



Example: Preschooler able to complete puzzle with Mom.

Scene: A mother is assisting her son as he attempts to construct a puzzle depicting a truck. They are using an identical, completed puzzle as a model, and their goal is to make the child's puzzle correspond to the model. The child repeatedly attempts to place green, triangular pieces in the cargo section of the truck, even though no such pieces were used in the corresponding part of the model.

Child: Another green one. Where's the green? (picks up two green triangles from the pieces pile without looking at the model)

Mother: Do we find green up here? (points to the model)

Child: (looks at the model) This one. (points to an incorrect place on the model)

Mother: I think maybe it's a leftover? Do you think so?

Child: Nods.

Mother: Maybe we don't need the green one, cause there isn't any green one up there, is there. Remember?

Sociocultural Research Area 1:

Learning in Interaction with Adults: Scaffolding

- Storytelling Example
 - ▣ Videoclip

Sociocultural Research Area 1:

Learning in Interaction with Adults

- Sensitivity of Adult Support
 - Simplify steps
 - Adjust directions to match children's performance
 - Example
 - Mayan mothers – more direct assistance to girls inexperienced at weaving, more help in more difficult phases
 - Contingent interaction helps children advance their skills
 - One step beyond current skill level is best

Sociocultural Research Area 1:

Learning in Interaction with Adults

- Language Acquisition
 - When infants point to objects, mothers say the names of the objects. Mothers who give more labels – greater vocabulary.
 - Infants whose mothers also label objects of attention (even when not pointed at) have greater vocabularies
 - Ability to tell coherent, well-constructed stories linked to the way mothers talk to children
- *Adult support of language in infancy and childhood alters the course of language development!*

Sociocultural Research Area 1:

Learning in Interaction with Adults

- Study – children categorizing of items
 - ▣ Adult provided rationale for category, and asked child to articulate categories
 - ▣ Adult provided rationale for category
 - ▣ Adult prompted child with lead-in questions
 - ▣ Control groups
- Results – post-test all supported groups got 12-14 correct, control group got 5 correct

Sociocultural Research Area 1:

Learning in Interaction with Adults

- Adults do a better job of scaffolding than peers
 - Outline goals of the task
 - Discuss strategies for meeting the goals
 - Involve learners in making decisions
 - Peers often just demonstrate instead of explaining

Sociocultural Research Area 2: Learning in Interaction with Peers

□ Benefits

- Can motivate children to try difficult tasks
- Provide opportunities to imitate and learn each other's skills
- Enable children to fine tune their understanding by explaining what they know
- Allow children to participate in discussions that increase their understanding

Sociocultural Research Area 2: Learning in Interaction with Peers

- But is it effective? Sometimes. Depends on:
 - Age
 - Quality of interaction
 - Relative expertise
 - Task difficulty
 - Cultural norms

Sociocultural Research Area 2: Learning in Interaction with Peers

- Age
 - Younger children (preschoolers) have trouble working together
 - Limited ability to ignore distractions
 - Coordinating attention to same aspects of problem
 - Communicating ideas with precision
 - Cooperating
 - Example: Legos, page 122

Sociocultural Research Area 2:

Learning in Interaction with Peers

- Quality of Interaction
 - Working in collaboration more beneficial
 - Example: 5-Year-Olds in pretend grocery store – pairs who shared responsibility for route planning did better than those who took turns performing the task
 - Siblings offer more explanations and positive feedback than same age (of sibling) children. Younger children more likely to ask for explanations from their siblings.
 - Actively thinking about each other's ideas is key
 - Combining ideas
 - Identifying strengths and weaknesses in each approach
 - Form a more abstract representation of the problem when working in a group

Sociocultural Research Area 2:

Learning in Interaction with Peers

- Relative Expertise
 - Children benefit from interactions with a more skilled or knowledgeable peer
 - 5-year-old Lego example – novices did better with experts than other novices or alone
 - Even more skilled peer benefits
 - Initial knowledge state
 - Must be ready to learn new idea
 - Example – fulcrum balance – work with peer did not help children who believed that ‘things balance in the center’
 - Same ability matched peers can be helpful
 - “Two wrongs make a right” particularly when the two children have different wrong views.
 - Conflicting views may be a trigger for knowledge change
 - When both make the same mistake, if feedback is given, they learn from the interaction

Sociocultural Research Area 2: Learning in Interaction with Peers

- Task difficulty
 - ▣ Task that would be expected to master relatively soon
 - ▣ Confidence level important factor
 - Less confident child will be lead by more confident child
 - Confidence can be from
 - being knowledgeable
 - being naïve

Sociocultural Research Area 2: Learning in Interaction with Peers

- Cultural Norms
 - ▣ Can influence children's collaborative style and outcomes
 - ▣ Some cultural values: speed, individual autonomy, cooperation
 - Example: Maze with Navajo and European American Children

Sociocultural Research Area 3:

Guided Participation in Cultural Activities

- Children's behavior is guided by other people
- Children participate in activities that are routinely practiced and valued in their cultural communities
- Important means by which children are socialized into the practices of the culture in which they develop
- Refers to both activities in which adults explicitly instruct children, and those in which children observe and participate in routine, everyday activities under the guidance of adults, older siblings, and peers.
- Examples of activities: dressing, doing household chores, preparing meals, attending religious services
- *More on Guided Participation on Thursday Oct. 7*

Sociocultural Research Area 3: Language as a Psychological Tool

- Believed to be the most important psychological tool
- Integral component of most forms of social interaction, including learning
- People use language as a means of regulating their behavior, making plans, solving problems
- Structures of language appear to influence habitual patterns of thought

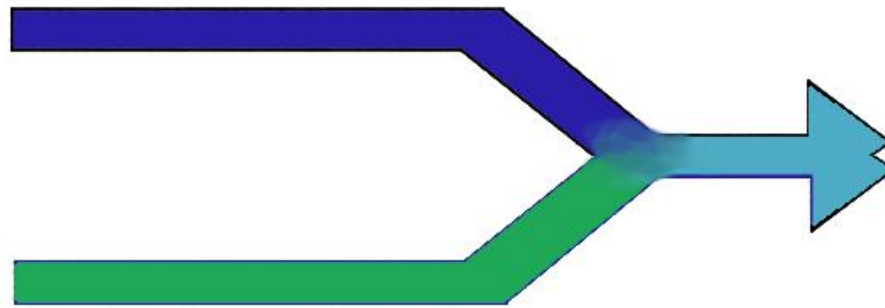
Sociocultural Research Area 3:

Language as a Psychological Tool

- Private speech
 - Children talking out loud to themselves as they play, explore, and solve problems.
 - Example: math problem $17 + 28$, “7 plus 8 is 15, carry the 1, (pause) 2,3,4, so its 45”
 - Vygotsky viewed private speech as manifestation of children’s use of language to regulate their behavior
 - Children use more private speech with more complex tasks
 - Private speech declines over developmental time
 - Eventually becomes inner speech – a silent, internalized dialogue with the self.
 - Thought becomes internalized language

Sociocultural Research Area 3: Language as a Psychological Tool

- Language and thought are separate until about 2 years of age.



Sociocultural Research Area 3: Language as a Psychological Tool

- Relation between language and thought
 - ▣ Implication: the language that an individual speaks may influence how that individual thinks
 - ▣ Linguistic Relativity Hypothesis – differences in how languages encode reality are reflected in parallel differences in how speakers of the languages think.
 - ▣ Benjamin Lee Whorf “We cut nature up, organize it into concepts, and ascribe significances as we do largely because we are parties to an agreement to organize it in this way – an agreement that holds throughout our speech community and is codified in the patterns of our language.”

Sociocultural Research Area 3: Language as a Psychological Tool

- Example: Study comparing Australian aboriginal speakers of Guugu Yimithirr language and Dutch
 - ▣ Spatial information encoded differently
 - ▣ Indo-European Languages have terms for orientation relative to body position (left,right)
 - ▣ Guugu Yimithirr only have absolute orientation terms (north, south)
 - ▣ Farmer, pig, cow figures presented in first room
 - ▣ Did placement in second room depend on language?

Sociocultural Research Area 3: Language as a Psychological Tool

- Example: Yucatec vs. English
 - Yucatec describes objects in terms of material (one long thing wax)
 - English describes objects in terms of shape (one candle)
 - Subjects give a small cardboard box, a small plastic box, and a flat piece of cardboard
 - Asked, which object is more similar?
- Study in children indicates language bias emerges at 7-9 years

Sociocultural Research Area 3: Language as a Psychological Tool

- Korean and English Speaking Toddlers 18 – 23 Months
- Spatial relationship differences
 - English – actions that result in containment (put in, on)
 - Korean – tight fits and loose fits