Learning Theories and Cognitive Development

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Cognitive Development

⌘ Cognition: mental processes through which information is acquired, transformed, retained, and used to influence behaviour

⌘ Cognitive development: changes in those processes across the lifespan

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Back to Basics: Differences among theories

⌘ What develops?

For example:

- Knowledge structures
- Strategies
- Processing speed or efficiency
- Nature of representations (implicit, explicit)

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Differences among theories 2

⌘ What drives development?

- Nature - innate mechanisms; biological change
- Nurture - child is shaped by his/her experiences in the social and natural environment
- Interactionist/constructivist position - change is partly driven by innate mechanisms, but is also influenced by interactions with the environment; the child actively seeks exchange with the environment and influences the nature of that exchange.

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Differences among theories 3

⌘ Is development domain-general or domain-specific?

⊟ That is, do major changes influence the child's cognition in all areas (such as reasoning about number, causality and morality), or is change in each area governed by a unique set of influences?

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Differences among theories 4

⌘ Is change qualitative or quantitative?

⊟ That is, are there major changes in the nature of the child's thinking, with early forms of thought superceded by thought that is substantially different in structure?

⊟ Or is there steady change in thought processes and a gradual accumulation of knowledge that does not change in quality over time?

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Infant Abilities

⌘ Infants are born with immature visual system
  – can detect movement and large objects

• Other senses function well on day 1
  – will orient to sounds
  – turn away from unpleasant odours
  – prefer sweet to sour tastes

• Born with a number of reflex behaviours

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Infant Reflexes

⌘ Rooting - turning the head and opening the mouth in the direction of a touch on the cheek

⌘ Sucking - sucking rhythmically in response to oral stimulation

⌘ Babinski - fanning and curling toes when foot is stroked

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Infant Reflexes 2

⌘ Moro - throwing the arms out, arching the back and bringing the arms together as if to hold onto something (in response to loud noise or sudden change in position of the head)

⌘ Grasping - curling the fingers around an object

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⌘ Infant reflexes provide insight into their mental life

- gaze duration related to visual perception
- head turning related to auditory attention
- sucking, reaching, kicking can be used to measure interest

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Perceptual and cognitive development

⌘ Visual perception

- Visual acuity is poor at birth, but develops with age.
- Infants can distinguish mother from female stranger
  - by smell & voice at birth
  - visually, by 5 weeks (possibly sooner)
- Newborns can perceive overall shapes and depth by 2 or 3 months of age.
  - Visual cliff experiment
    - 6-month infants will not crawl across the 'cliff'
  - Habituation technique
    - Will look less at images they have seen before

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Perceptual and cognitive development 2

⌘ Auditory perception
- This is more fully developed at an earlier age than visual perception
- By 6 months seem to be able to hear well enough to detect different musical intervals.
  - Hear pairs of sounds will turn to novel sound

⌘ Perception develops so that the child can make finer discriminations, needs less stimulus information to recognize objects, and can search more systematically. In addition, very young children learn to ignore the distinctions in sounds that are not used in their languages, and also to distinguish sounds that correspond to words and to memorize the words
- Some aspects of perceptual development continue to develop until late adolescence.
  - 2 to 3-year old look haphazardly when looking for specific object
  - 6 to 9 year old will search more systematically
  - 11 year olds similar to adults but slower

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Infancy

- ◆ Sensory Capabilities
  - ⊡ Immature vision at first
  - ⊡ Display visual preferences
  - ⊡ Reasonably developed sense of taste
  - ⊡ Respond to touch, temperature, sounds

How Infants Scan the Human Face

ONE-MONTH-OLD   TWO-MONTH-OLD
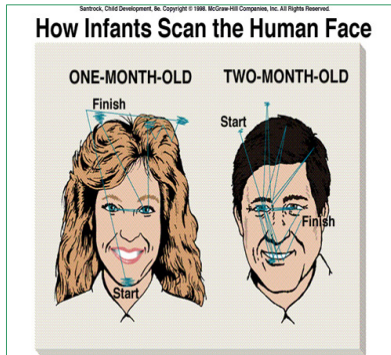
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Facial imitation in newborns (Melzoff & Moore)

⌘ implies representations that link 'what it looks like' with 'what it feels like'

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Jean Piaget: 1896 - 1980

⌘ Photographs from http://www.piaget.org

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Piaget

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Piaget

⌘ early interests in birds, seashells, and fossils

⌘ completed his PhD on mollusks

⌘ this work in the natural sciences, and the dominant influence of Darwin's theory of evolution, explain some of Piaget's central ideas on how children's thinking develops, i.e. how it consists of a continual adaptation of the child's knowledge structures to the demands of the environment

Jean Piaget

"my aim of discovering a sort of embryology of intelligence fit in with my biological training; from the start of my theoretical thinking I was certain that the problem of the relation between the organism and the environment extended also into the realm of knowledge, appearing here as the problem of the acting or thinking subject and the object of his experience"

(Piaget, 1952, cited in Miller, 1993)

Piaget

⌘ He also read extensively in philosophy in his teens and early 20s, and studied philosophy as well as psychology in Paris, after completing his PhD.

⌘ Philosophy also influenced his theorizing.

⌘ For example, some of the proposed stages in the child's development are based on knowledge structures that are similar to logical-mathematical structures like groups.

Piaget: Early work in psychology

⌘ While in Paris, Piaget worked in Binet's laboratory, standardizing an intelligence test for children.

⌘ Children of different ages made different types of errors, and also offered different explanations for their answers (correct or incorrect).

⌘ Became convinced that there are qualitative changes in children's thought with development.

Essence of Piaget's subsequent work

⌘ "His research in developmental psychology and genetic epistemology had one unique goal: how does knowledge grow? His answer is that the growth of knowledge is a progressive construction of logically embedded structures superceding one another by a process of inclusion of lower less powerful logical means into higher and more powerful ones up to adulthood. Therefore, children's logic and modes of thinking are initially entirely different to those of adults."

(http://www.piaget.org)

Scope of Piaget's theorizing

⌘ Development of children's understanding of:
- time
- space
- quantity
- causality
- morality
- (and more)

General features of Piagetian theory

⌘ It is a constructivist theory:
- The child is neither driven by innate influences nor shaped by external influences.
- Instead, the child constructs knowledge through his/her interaction with the external world (and later, through the internal manipulation of symbolic representations).

General features of Piagetian theory

⌘ Cognitive development consists of the growth of knowledge structures (genetic epistemology)

⌘ Knowledge structures take the form of action schemas or their internalized forms (operations)

⌘ Knowledge structures (and the reasoning that is enabled) pass through four stages or periods, each representing a qualitatively different organization of knowledge

General features of Piagetian theory

⌘ Major processes driving the child's construction of knowledge:
- organization
- adaptation
- equilibration

Major processes

⌘ Organization:
- combining action schemas or operations into new and more complex organizational structures that are internally consistent and also in balance with the environment, e.g. realizing that one operation (dividing) is the inverse of another (combining), and that these can be used to form subsets and supersets (e.g. men + women = adults)

Major processes

⌘ Adaptation - process of adjusting to the demands of the environment:
- assimilation - interpreting experiences using existing knowledge structures - e.g. treating all furry animals like the family's pet dog
- accommodation - modifying knowledge structures to incorporate or adapt to new experiences - e.g. developing new action schemas for dealing with those furry things that scratch.

Major processes

⌘ Equilibration:
- inherent tendency of the organism to find a balance:
  - between assimilation and accommodation
  - within knowledge structures, by fitting knowledge together in relational systems, e.g. by recognizing that one action reverses the effect of another

General features of Piagetian theory

⌘ The child's cognitive development proceeds through 4 major stages or periods:
- sensorimotor (birth to ≈ 2 years)
- preoperational (≈ 2 years to ≈ 7 years)
- concrete operational (≈ 7 years to ≈ 11 years)
- formal operational (≈ 12 years onwards)

⌘ Individual differences - different children proceed through stages at different rates

Stages or periods:

⌘ Each stage is characterized by a unique organization of knowledge (action schemas or operations)

⌘ Knowledge structures are in a state of equilibrium at the completion of each stage

⌘ Stages follow an invariant sequence, with each developing out of, and supplanting the preceding stage

⌘ The structures defining stages are universal, i.e. they have broad application across content areas

Sensorimotor stage

⌘ Knowledge in this stage is based on action schemas

⌘ Development proceeds from innate reflexes to internalized representations of actions that form integrated systems

⌘ The child becomes capable of combining actions to achieve novel outcomes

⌘ Symbols begin to be used

Sensorimotor stage

⌘ Divided into 6 substages:

⌘ 1. Reflex activity (birth to ≈ 1 month)
- Child develops primitive reflexes like the sucking and grasping reflexes. These reflexes are strengthened and generalized, e.g. the child discovers which objects are "suckable".

Sensorimotor stage

⌘ 2. Primary circular reactions (≈ 1-4 months)

⬒ Child discovers some pleasurable experience and repeats it (a habit develops), e.g. discovers that scratching cloth feels nice and scratches rug, sheet, teddy, etc.
(primary = centred on own body;
circular = repeated)

Sensorimotor stage

⌘ 3. Secondary circular reactions (≈ 4-8 months)

⬒ Child discovers some interesting effect in the external world, e.g. shaking a rattle leads to a nice sound.
⬒ Will then repeat this procedure, to repeat the effect.

(secondary = with reference to the external world)

Sensorimotor stage

⌘ 4. Coordination of secondary schemas (≈ 8-12 months)

⬒ Child can coordinate schemas and apply them to achieve novel outcomes.
⬒ Means-ends behaviour becomes possible, e.g. will push parent's hand aside to get a piece of food or will push a box over to get a ball inside.

Sensorimotor stage

⌘ 5. Tertiary circular reactions (≈ 12-18 months)

⬒ Discovers new means through active experimentation.
⬒ Tries different variations on an action to observe the result, e.g. dropping different things over the side of a highchair to see how they bounce (or better still, break).

Sensorimotor stage

⌘ 6. Invention of new means through mental combinations (≈ 18-24 months)
  - ⌂ Mental images become available to symbolize external events
  - ⌂ So new sequences of actions can be explored internally (no need for overt trial and error)
  - ⌂ New solutions can be developed spontaneously

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Sensorimotor stage

⌘ Major achievements in this stage:
  - ⌂ object permanence - awareness that objects have a continuing existence when no longer perceived (develops across substages 1-3 according to Piaget)
  - ⌂ development of symbolic representations, as demonstrated by deferred imitation

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Preoperational Stage (≈ 2 to 7 years)

⌘ Achievements
  - ⌂ commencing the translation of knowledge represented in actions to knowledge represented in mental symbols
  - ⌂ semiotic function - capacity to use one entity to stand for another
  - ⌂ terminology: signifier -> significate
  - ⌂ signifiers can be words, visuospatial images, another object.

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Achievements of the preoperational period

⌘ Rapid expansion of the child's use of language as a symbolic system
⌘ Piaget on thought and language
  - ⌂ development of representational thought enables the development of language
  - ⌂ thought is broader than language (we can think using other signifiers)
  - ⌂ however, once available, language is a tool that can rapidly accelerate the development of thought

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Limits to the preoperational child's thought

Egocentrism
- perceiving and interpreting the world from own perspective
- unable to adopt the perspective of someone else
- not to be confused with selfishness

⌘ Centration
- focussing on a single feature of an object or event and ignoring other features

Limits to the preoperational child's thought

⌘ Judgements are based on appearance rather than reality

⌘ Inability to coordinate information
- focusing on states rather than the transformations that connect states
- not able to connect change in one feature with a complementary change in another feature

Critical problem at Pre-Op stage according to Piaget:

⌘ Mental representations are not inter-related
- they do not form systems

⌘ For example, the child cannot simultaneously imagine a transformation and its reverse

Concrete operational stage (≈ 7 to 11 years)

⌘ Thought is governed by operations, which are internalized actions.

⌘ A critical feature of operations is that they form structures (integrated systems).

⌘ The different structures available to the concrete operational child were labeled groupings by Piaget.

Concrete operational structures

⌘ In conservation:
- ⊟ An operation such as pouring from glass A to glass B is reversible (pouring from B back to A)
- ⊟ The null change in liquid quantity associated with pouring can be understood with reference to non-null operations -adding and subtracting

Concrete operational structures

⌘ In class inclusion:
- ⊟ linking together subsets (e.g. Cowboys, Indians) and supersets into a system of part-whole relationships
- ⊟ recognizing that the operation of adding two subsets together is the reverse of taking them apart

Achievements in the concrete operational period:

⌘ Class inclusion

⌘ Conservation

⌘ Seriation

⌘ Transitive inference

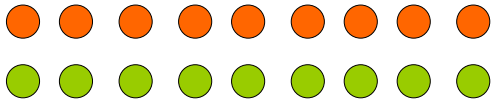⌘ Multiple classification

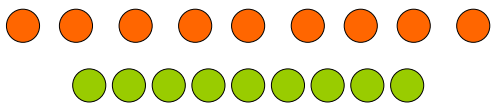⌘ More complete representation of space

Many forms of conservation

⌘ basic idea: some aspect of an object is conserved despite changes in other aspects, so it is possible to test conservation of
- ⊟ liquid
- ⊟ number
- ⊟ mass
- ⊟ length
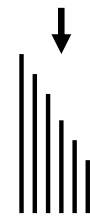- ⊟ area
- ⊟ volume

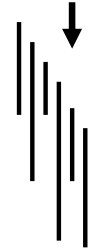## Conservation of number:

Same?

Same?

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Seriation

Put these sticks in order from biggest to smallest?

Conc. Op. child

Pre. Op. child - fail completely or
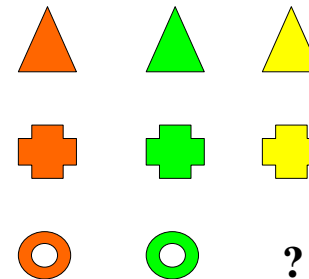

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Transitivity

⌘ Shown that:
  ▱ Green stick is longer than red stick
  ▱ Red stick is longer than yellow stick

⌘ Asked:
  ▱ Which is longer, green or yellow?

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Multiple classification

?

Child has to choose a shape to fill missing cell in matrix

Conc. Op. = both attributes correct

Pre. Op. = only a single attribute correct

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More complete representation of space in concrete operational stage

- ⌘ Able to adopt the perspective in space of someone else
  - ◹ Piaget's three mountains task

- ⌘ Able to ignore "local" spatial information and make judgements with reference to global axes
  - ◹ Piaget's water level problem

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Formal operational stage (≈ 12 years +)

- ⌘ Concrete operational stage - can map operations to objects and events, enabling understanding of relationships between those objects and events
- ⌘ Formal operational stage - operations can be applied to operations themselves

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Formal operational stage

- ⌘ Applying operations to operations enables:
  - ◹ abstract thought - thought divorced from reality
  - ◹ generation and testing of hypotheses
  - ◹ systematic examination of all possibilities - all possible outcomes can be conceived and tested
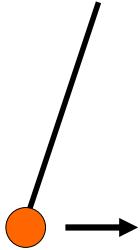
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Formal operational stage

- ⌘ Child has available an integrated system of 16 logical operations, e.g.
  - ◹ conjunction - A and B
    - = A + B
  - ◹ disjunction - A or B
    - = A + B or A + not B or not-A + B
- ⌘ Knowledge is in its ultimate state of equilibrium

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Piagetian tasks used to assess formal operational thought

⌘ Pendulum problem

- What influences the rate at which the pendulum swings?

- Provided with various sized bobs and different lengths of string, and can vary the strength of push to start the swing.

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Pendulum problem

⌘ Interest centres on the problem solver's strategy

⌘ Concrete operational strategy:
- exploring the different variables in a haphazard way - changing two variables at the same time

⌘ Formal operational strategy
- changing only one variable at a time; systematically checking changes in bob weight, string length, and strength of push.

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Another formal operational task

⌘ What makes objects float or sink?
- Weight
- Volume
- Surface area
- Density

⌘ Objects varying in weight, volume and shape are provided.

⌘ Concrete and formal operational children differ in how systematically they approach the problem, e.g. formal operational child might try out objects of the same size, but differing in weight, and vice-versa

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Essence of the formal operational stage

⌘ Child is a "scientist"
- Systematic analysis of variables
- Generation of hypotheses
- Systematic manipulation of variables to test those hypotheses
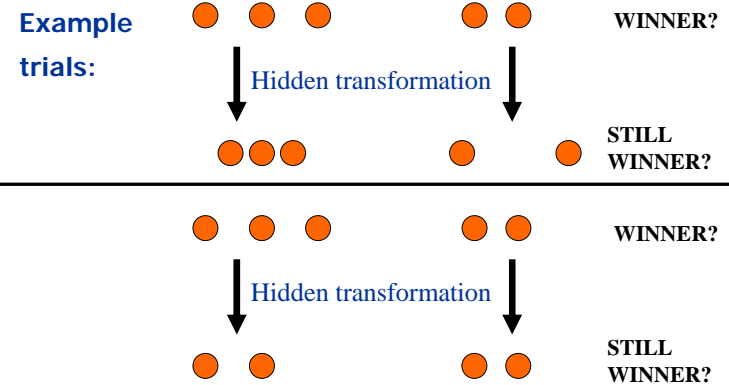- Capacity to apprehend multi-factorial relationships

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Challenges to Piaget's theory

⌘ Developments in children's thinking occur much earlier than Piaget predicted, e.g.

- ◹ very young infants are capable of some understanding of object permanence
- ◹ some concrete operational capabilities appear to have been demonstrated for 3 & 4 year olds, e.g.
  - ⊠ Gelman (1972) on conservation of number
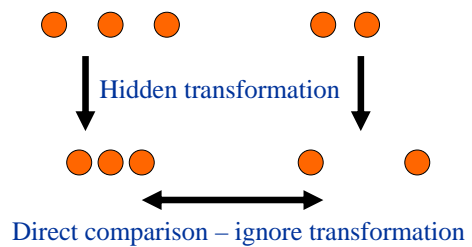 - ⊠ Bryant & Trabasso (1971) on transitivity

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Gelman (1972) – Conservation of Number

Example trials:

WINNER?

Hidden transformation

STILL WINNER?

WINNER?

Hidden transformation

STILL WINNER?

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Gelman (1972) on conservation

⌘ Halford (1982) argued that the child simply has to make a numerical comparison of the two rows after the transformation – there is no need for the child to appreciate that transformations like changing length leave number unchanged – the essence of conservation.

Hidden transformation

Direct comparison – ignore transformation

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Transitive inference

Basic Piagetian Task

| Premises (separate trials) A>B, B>C, C>D, D>E | Test B?D |

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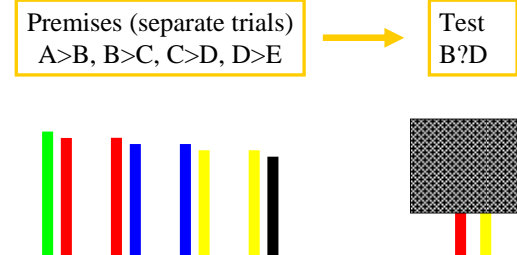
Bryant & Trabasso (1971) on transitive inference

Young children might fail the test question, B?D, not because the can't make an inference, but because they forget the two premise, B>C and C>D.

Their procedure: train the children over and over until they can remember the premises, then apply the test

Result: 4 year olds could answer with a very high success rate that B>D.

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Limitations of the Bryant & Trabasso procedure

⌘ Substantial proportions of the 4 yr olds cannot learn the premises in the training phase. These were removed from B & T's sample before the test phase.

⌘ Premises have to be trained in height order, e.g. A>B, B>C, C>D, D>E for 4 yr olds to learn them. (Perhaps ordering is built item-by-item through contiguity across the extended training. Is this inference?)

⌘ With random order: little learning.

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Limitations of the Bryant & Trabasso procedure

Halford (1984)

⌘ Alternative procedure to eliminate memory demands:

Memory board:

Test item: **?**

Results: children below age 5.5 yrs didn't succeed on inference question.

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Conclusions on transitive inference

Children below age 5.5 can represent an ordered sequence in some manner, if trained repeatedly on adjacent pairs in a consistent direction (e.g. larger to smaller).

This representation allows the child to make correct judgments about remote items in the series (e.g. B>C).

However, it is not clear this represents transitive inference (integration of two relations to infer a third) because there is little evidence of inference with other procedures that also eliminate the need to remember the premises.

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Conclusion on early acquisition of Piagetian concepts

⌘ Claims of early appearing capabilities have often been overstated.

⌘ However, the general trend is for tasks to be mastered somewhat earlier than Piaget had described, e.g. concrete operational tasks are often mastered at around age 5.5 rather than age 7 as Piaget described.

⌘ There is an uneven appearance of abilities tied to the same stage, suggesting some domain-specificity of development.

⌘ Nevertheless, within each task domain, clear developmental progressions consistent with Piaget's theory are found,

☑ e.g. children can reason with a single relation (e.g. "bigger than") much earlier than they can coordinate two relations (complete a transitive inference)

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Other problems for Piaget's theory

⌘ Substantial cross-cultural differences in the emergence of different concrete operations.

⌘ This implies that the environment has a greater influence than Piaget allowed (see Vygotsky).

⌘ Piaget doesn't really consider what maturational changes make it possible for the child to progress from one stage to the next (see next lecture on information processing approaches).

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Use of Piagetian principles in education

⌘ Stages

☑ different instructional methods for different age groups preschool – concrete activities – manipulation adolescents – abstract thought – hypothetical

☑ individuals progress through stages at different rates, so learning objectives need to be individualized – pitched to the child's current developmental level (developmentally appropriate curriculum)

⌘ Constructivism

☑ child is active and competent

☑ instruction pitched to child's interests

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Lev Vygotsky

⌘ 1896 - 1934

⌘ Russian, and like Piaget, born into an intellectual family

⌘ Law degree, then PhD on Shakespeare's Hamlet

⌘ Taught psychology at a teacher's college

⌘ Lectured at Psychology Institute in Moscow

⌘ Work was banned by the Stalinists, so didn't become influential until the 1960s

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Vygotsky

⌘ Similar to Piaget:
- ☑ stages
- ☑ constructivist
- ☑ conflict (disequilibrium) promotes cognitive development

⌘ Different to Piaget:
- ☑ culture influences cognition (contextualist)
- ☑ social interaction is critical to cognitive development
- ☑ language and thought develop independently initially, but later converge

Vygotsky's key ideas 1

⌘ Emphasised social and historical-cultural influences on cognitive development. Smallest meaningful unit of study = child in social context.
- ☑ Miller (1993): "The social-cultural-historical context defines and shapes any particular child and his experience. At the same time children affect their contexts."
- ☑ Social-cultural context refers to social interaction and also general constraints imposed by the culture (e.g. belief systems).
- ☑ Cultures are not static – cultures influence individuals; individuals modify cultures.

Vygotsky's key ideas 2

⌘ Focus on process of intellectual change rather than static ability – potential for change (through social interaction) is more important than child's current level of intellectual functioning.
- ☑ "The only good learning is that which is in advance of development." (Vygotsky)
- ☑ "The zone of proximal development defines those functions that have not yet matured but are in the process of maturation .... The actual developmental level characterizes mental development retrospectively, while the zone of proximal development characterizes development prospectively." (Vygotsky)
- ☑ Teaching needs to look to develop constructs just beyond those the child has attained.

Vygotsky's key ideas 2

⌘ **Intermental -> intramental** shift in new cognitive skills
- ☑ skills acquired socially
- ☑ new skill is first developed cooperatively (i.e. it is intermental, or shared between instructor and child)
- ☑ then the child internalizes the skill (intramental), separating it from its social context

Vygotsky's key ideas 3

⌘ **Learning reflects dialetical change**
- conflict promotes change, with a synthesis of the conflicting ideas
- conflict or disequilibrium can arise through:
  - a changing physical environment
  - interchange in an instructional setting
  - peer interaction

Vygotsky's key ideas 4

⌘ **Cognitive development is facilitated by tools provided by the culture**

⌘ **Tools include:**
- language (oral speech; writing systems)
- mathematics
- art

Vygotsky's key ideas 5

⌘ **Development of speech**
- up to around age 2: speech (babble) serves primarily a social function
- at about age 3: egocentric speech (audible speech directed at self) develops in addition to communicative speech
- later (age 6-7) the self-directed speech becomes internalized (thinking in words)

Connection between language and thought

⌘ Vygotsky
- thought and language initially develop independently, but later converge

⌘ Piaget
- thought is primary; language is one of several symbolic forms

Vygotsky

thought
language
→ | thinking using internalized speech |

Piaget

| thought | → | language |
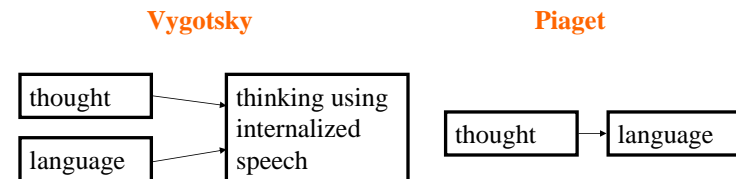
Use of Vygotsky's principles in education

⌘ Social-cultural context
  ☐ cooperative (small group) learning
⌘ Zone of proximal development
  ☐ establish child's current understanding and skills and provide challenges to move just beyond those
  ☐ **scaffolding** – providing support through memory aids, prompts, questions, rephrasing, setting subgoals to enable child to move beyond current state
⌘ Speech and thought
  ☐ encourage private speech

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Limitations of Vygotsky's theory

⌘ Has been described as a framework in which a theory could be developed rather than a theory itself.
⌘ Emphasizes the (social) means by which cognitive skills develop, but does not detail those skills – what exactly has the child acquired?
⌘ How does the child's development influence the context that parents and teachers provide?
⌘ How does the child influence the learning process?

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Cognitive Development: Lifespan Models

⌘ Sigmund Freud   ⌘ Erik Erikson

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Freud (1856 – 1939)

⌘ Considered the early years of a child's life to be the most formative ones.

⌘ **Freud's Structural Theory**
⌘ Two powerful forces :
  (i) Life instinct Sex Libido
  (ii) The death instinct is Thanatos

⌘ He postulated several interrelated themes:
  ☐ Psychic determination
  ☐ Unconscious motivation
  ☐ Motivation for thought and behaviour

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There are 3 main components to these themes

⌘ The ID : The pleasure principle. The primary process of thinking.

⌘ The Ego : Reality principle. The secondary process.

⌘ The Super-ego : Ideal process.

Freud's Development Theory

⌘ The Id, Ego, and Super-ego emerge and develop through five stages of development :-

1. **Oral stage** - reflex, basic drives
2. **Anal stage** - anal region
3. **Phallic stage** - genital zone
4. **Latency stage** - libinal delay
5. **Genital stage** - reproduction - Cathexis

Evaluation of Freud's Theory

Kline (1977), *Codorw* (1978) criticise Freud's theory as it...
⌘ is not scientific
⌘ is not replaceable
⌘ is not adequate for hypothesis.
⌘ Although with this in mind, it must also be noted that Freud was the founder of Psychoanalysis and that he developed new theories.
⌘ Rich, new concepts in the psychology of human development.
⌘ Relations with the mother and father are critical for how the psychosexual stages are resolved.
⌘ Neuroses are a direct result of experiences which occurred in early childhood, even at the unconscious level.

Erikson (1902 – 1994)

⌘ Erikson followed and recognised Freud's contribution to Developmental Psychology and psychoanalytic theories, and adapted and extended Freud's theories.

△ But...he believed that Freud misjudged some important issues about personality development - especially identity

Erikson's Theory

- Biological in belief that there are innate drives to develop social relationships and that these promote survival (Darwinism)

- Divided life span into eight psychosocial stages, each associated with a different drive and a problem or crisis to resolve

- Outcome of each stage varies along a continuum from positive to negative

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Stage 1 (Birth–1)
Trust vs. Mistrust

- Infants must rely on others for care

- Consistent and dependable caregiving and meeting infant needs leads to a sense of trust

- Infants who are not well cared for will develop mistrust

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Stage 2 (1–3 years)
Autonomy vs. Shame and Doubt

- Children are discovering their own independence

- Those given the opportunity to experience independence will gain a sense of autonomy

- Children that are overly restrained or punished harshly will develop shame and doubt

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Stage 3 (3–5 years)
Initiative vs. Guilt

- Children are exposed to the wider social world and given greater responsibility

- Sense of accomplishment leads to initiative, whereas feelings of guilt can emerge if the child is made to feel too anxious or irresponsible

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Stage 4 (5–12 years)
Industry vs. Inferiority

⌘ Stage of life surrounding mastery of knowledge and intellectual skills

⌘ Sense of competence and achievement leads to industry

⌘ Feeling incompetent and unproductive leads to inferiority

Stage 5 (Adolescence)
Identity vs. Confusion

⌘ Developing a sense of who one is and where one is going in life

⌘ Successful resolution leads to positive identity

⌘ Unsuccessful resolution leads to identity confusion or a negative identity

Stage 6 (Young adulthood)
Intimacy vs. Isolation

⌘ Time for sharing oneself with another person

⌘ Capacity to hold commitments with others leads to intimacy

⌘ Failure to establish commitments leads to feelings of isolation

Stage 7 (Middle adulthood)
Generativity vs. Stagnation

⌘ Caring for others in family, friends, and work leads to sense of contribution to later generations

⌘ Stagnation comes from a sense of boredom and meaninglessness

Stage 8 (Late adulthood to Death)
Integrity vs. Despair

- ⌘ Successful resolutions of all previous crises leads to integrity and the ability to see broad truths and advise those in earlier stages

- ⌘ Despair arises from feelings of helplessness and the bitter sense that life has been incomplete

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Freud Vs. Erikson

⌘ Freud
- ◰ Instinctual drives
- ◰ Life preserving
- ◰ Child's needs
- ◰ Biological Maturation
- ◰ Functions of the unconscious in
- ◰ relation to the nervous system

⌘ Erikson
- ◰ Cognitive process
- ◰ Drives for identity
- ◰ Focus on shifts on Social Development

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Both stress...

- ⌘ Behaviour is governed by the unconscious and conscious motives.

- ⌘ Ego is created and is fundamental to personality development.

- ⌘ Various stages are important for personality development.

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References

- ⌘ Barnes, P., Oates, J., Chapman, J., Lee, V., & Czerniewska, P. (eds.) (1984) ***Personality, development and learning***. Hodder & Stoughton, London.
- ⌘ Lock, A., & Fisher, E. (Eds.) (1984) ***Language development***. The open University, London.

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Internet Links

⌘http://www.nncc.org/Child.Dev/child.dev.
page.html - articles dealing with the
stages of development from infancy to
puberty.

⌘http://www.wpi.edu/~isg_501/nsushkin.h
tml - Developmental theory

Review Questions

⌘Critically evaluate Piaget's theory of
cognitive development.

⌘To what extent is cognitive development
different in different cultures?

⌘Critically evaluate Erikson's theory of
identity development.