Developmental Psychology

Study of changes in behavior and mental processes that occur over time

vs. Learning: relatively permanent change in behavior due to experience

Difference between Development and Learning: Development emphasizes capacities rather than contents

Nature vs. Nurture

- Nature = what you’re born with
  - focus on biology, genes
- Nurture = how you’re brought up
  - focus on environment, experience
- false dichotomy to ask which is more important, since it’s widely accepted that they interact and always have a simultaneous interdependent effect
Nature vs. Nurture

- historical / philosophical perspectives
  - original sin (Christianity / Middle Ages) – born bad, must remove sin from child and bring salvation through religious teaching
  - tabula rasa (John Locke) – “blank tablet” written on by experience which ideally makes them into contributors to society
  - innate goodness (Jean-Jacques Rousseau) – child will naturally develop right without constraints or parental monitoring

Psychology as “the science of experimental epistemology”

Outline of Epistemology for Psychology

<table>
<thead>
<tr>
<th></th>
<th>Foundations</th>
<th>Modern Philosophy</th>
<th>Modern Psychology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RATIONALISM</strong></td>
<td>Plato d. 347 BC</td>
<td>Descartes 1641</td>
<td>Kant 1781</td>
</tr>
<tr>
<td><strong>EMPIRICISM</strong></td>
<td>Aristotle d. 322 BC</td>
<td>Locke 1690 Berkeley 1710 Hume 1748</td>
<td>Skinner 1957</td>
</tr>
<tr>
<td><strong>RATIONALISM / NATIVISM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EMPIRICISM / ASSOCIATIONISM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the origin of knowledge?

- born with innate ideas; experience provides occasion for knowing; "nativism"
- born as clean slate ("tabula rasa"); experience is source of knowledge; "empiricism"

How is knowledge arrived at?

- learn by operation of mind – manipulation of concepts and ideas; "rationalism"
- learn by connecting experiences in world; "associationism"
Cognitive Development

Jean Piaget (1896-1980): genetic epistemology
- “epistemology” - the study of knowledge
- “genetic” doesn't mean "in the genes" but “the genesis or origins of”
- understanding the biological, psychological, and social construction of knowledge is key to understanding the nature of knowledge

Cognitive Development

Jean Piaget: cognitive development as biological growth or maturation
- fixed stages everyone goes through in order
- four periods are qualitatively different steps
- sensorimotor (0-2 years)
- preoperational (2-7 years)
- concrete operational (7-11 years)
- formal operational (11-122 years, 164 days)
Cognitive Development

- Intelligence is ability to adapt to world as experienced and acted upon
- Schemas – framework, concepts that allow interpretation and understanding of world
  - assimilation: fit new experience to existing schemas
  - accommodation – update / create new schemas to incorporate new experience
  - equilibrium: when schemas come to match experience by balancing assimilation and accommodation

Sensorimotor Period (0-2 yrs)

- world of the present and self
- sensing and moving are the major abilities
- initial lack of intentionality of action
- initial lack of object permanence
- egocentrism
- object permanence failure
- A-not-B error
Preoperational Period (2-7 yrs)

- representational thought
  - language development
- initial preconcepts don’t differentiate the individual from the general category
- initial egocentrism, lack of conservation
- conservation failure
- egocentrism mountains task
- egocentrism false belief task

Piaget's Conservation Task

I
A B C

II
A B C
Piaget's Mountain Task
Concrete Operations (7-11 yrs)

- higher-order schemas or operations
- logical thought for concrete objects only
- egocentrism has been overcome by “theory of mind”
- conservation success
- deductive reasoning fails

Formal Operations (11+ yrs)

- logical thought for abstract concepts
- deductive reasoning succeeds
- ability to recognize implications, entertain hypotheticals
- no further stages after this, but rather accumulation of information proceeds
- David Elkind (1967): formal operations stage allows adolescent egocentrism
Criticisms of Piaget

- small, non-random samples (especially Jacqueline, Lucienne, and Laurent)
- mostly observational research, not experimental for causal conclusions
- exaggeration of younger children’s inabilities, due to task e.g. manual search
- neglect of social and cultural influences, notably parents

Criticisms of Piaget

- experimental research using preferential looking and high amplitude sucking
- Baillargeon and others have pushed back the earliest age for object permanence and other knowledge to as young as 3.5 months
- Vygotsky viewed development as making use of scaffold provided by parents, helping move children upwards and into their culture
Information Processing

• working memory - 5 yr olds recall 2-3 items (adult 7)
  – role in reading, math, problem-solving

• executive function - cognitive control processes
  – thinking, planning, problem solving; managing thoughts to engage in goal-directed behavior, self-control
  – restraining impulses, cognitive flexibility, setting goals, forgoing immediate pleasure or reward for a more desirable one later
  – predicts school readiness in pre-schoolers better than IQ (sit still, wait in line, raise hand); predicts theory of mind
  – in one study, predicted: less risk taking, decreased dropout rates, less drug use in adolescence, better physical and psychological health, better earnings, less criminal behavior in adulthood

Development of Language

• Nurture: experience and learning (Skinner)
  - children imitate sounds, adults reinforce - BUT…
  - inadequate info, and adults don’t reinforce syntax

• Nature: innate knowledge (Chomsky)
  – Language Acquisition Device hypothesized
    • brain hardwired to take in speech, extract correct rules
  – Critical Period (Lenneberg) - 18 mos. to puberty
    • “Genie” isolated and abused till 13 yrs old - learned words and nonverbal communication but never syntax
**Language Phases**

- **babblings (4 mos.)**
  - first sounds, meaningless, identical worldwide

- **single words (10-12 mos.)**
  - lose ability to make & hear sounds of other languages; understand more than they produce; useful words first, maybe only partially ("ba" for bottle; "ca" for cat)

- **2-word sentences (18-24 mos.)**
  - from 50 words at first to 200; telegraphic speech - basic noun-verb communication begins

- **3-word sentences (24-36 mos.)**
  - noun-verb-object; use of suffixes and prefixes (e.g., running). prepositions (e.g., in the car, out the door), verb tense irregularities (e.g., I ate, rather than I eated)

**Psychosocial Development**

- **Erikson’s 8 Stages**
  - first to examine **lifspan** development: four stages in childhood, four in adolescence and adulthood
  - psychosocial development extends/complements Freud’s psychosexual development
  - 8 characteristic tasks to be resolved, each with consequences for personality & socialization
  - maturational approach
  - result: usually either greater strength / competence or greater weakness / vulnerability
### Erikson – infancy to puberty

- **trust vs. mistrust (0-1 yr.)**
  - central to all further social and emotional development
  - cared for or neglected? world as predictable, friendly

- **autonomy vs. shame & doubt (1-3 yrs.)**
  - allowed to show independence without being shamed

- **initiative vs. guilt (4-5 yrs.)**
  - pursue interests, take on responsibility, gain confidence vs. feel anxiety

- **industry vs. inferiority (6-11 yrs.)**
  - master intellectual skills (school) or feel inadequate; social comparison with peers gives sense of competency

### Erikson – post-puberty

- **identity vs. role confusion (12-20 yrs.)**
  - ask “Who am I?”, “trying on” different roles

- **intimacy vs. isolation (20-24 yrs.)**
  - process of establishing close relationships

- **generativity vs. stagnation (25-65 yrs.)**
  - concern for next generation (own children or society); contribution to world

- **integrity vs. despair (65+ yrs.)**
  - acceptance of life “as was” without regrets; meaningfulness reduces fear of death
Moral Development (Kohlberg)

- from adolescence into adulthood: process of internalizing moral standards
- move through three stages from external to internal control of behavior - how much internalization?
  - Preconventional: none; obey to get rewards and avoid punishment of self by external world
  - Conventional: some; abide by standards from others (e.g., parents, authorities)
  - Postconventional: full; adopt personal standard of morality; individual recognition of alternative courses of moral behavior
- advance through: 1) maturation of thought 2) availability of opportunities for role taking 3) chance to discuss moral issues with person who reasons at a stage above one's own

Moral Development (Kohlberg)

each stage has two sub-stages
- Preconventional 1: punishment & obedience orientation: obey b/c adults tell them to
- Preconventional 2: individualism & purpose: obey when want to and when is in best interest to ("right" is what feels good)
- Conventional 1: interpersonal norms: adopt parents’ moral standards, wanting to be 'good girl/boy
- Conventional 2: social system morality: based on understanding of social order, law, justice & duty
- Postconventional 1: community rights vs. individual rights: values & laws are relative, standards vary by person
- Postconventional 2: universal ethical principles: moral standard based on universal human rights; will follow conscience even if it might involve personal risk
Moral Development (Gilligan)

- Gilligan care perspective vs Kohlberg justice perspective
  - Kohlberg’s justice perspective - focus on rights of individual as basis of sound moral reasoning, ignores concern for other people and social bonds
  - care perspective - focus on connectedness, communication, relationships, concern for others
  - possible reason why women tend to score lower than men on Kohlberg's measures of moral development
- Western cultures - individualistic sense of self favoring justice perspective; might score higher on Kohlberg measures than collectivistic Asian cultures seeing self as part of larger group
- Kohlberg overestimates role of logical reasoning in moral judgments - missing role of emotion and intuition