

PSYC105- Introduction to Psychology II

1.1 What is Psychology? Science versus Intuition

Psychology- The scientific **study of the mind, brain and behaviour**

- A discipline that spans multiple levels of analysis
 - Lower rungs → the brain
 - Higher rungs → the mind
- Psychologists investigate different rungs but are united by a shared commitment to understanding the causes of human and animal behaviour
- To fully understand psychology, we must consider **multiple levels of analysis**

What makes psychology distinctive and fascinating

1. Human behaviour is **difficult to predict, all actions are multiply determined**- that is, they are produced by many factors. Most behaviours are due to the interplay of an enormous array of factors
2. Psychological influences are **rarely independent of each other**
3. People **differ** from each other in thinking, emotion, personality and behaviour
4. People often **influence** each other, often making it difficult to pin down what causes what.
 - **Reciprocal determinism** – we mutually influence each others behaviour
5. Peoples behaviour is often shaped by **culture**

Naïve Realism: Seeing is believing

- We trust our common sense largely because we are prone to naïve realism: the belief that we see the world precisely as it is

1.2 Psychological pseudoscience: Imposters of science

- Pseudoscientific claims appear scientific but don't play by the rules of science
- Pseudoscience lacks the safeguards against confirmation bias and belief perseverance that characterise science
- We are drawn to pseudoscientific beliefs because the human mind tends to perceive sense in nonsense and order in disorder
- Pseudoscientific claims can result in opportunity costs and direct harm due to dangerous treatments

The Major Theoretical Frameworks of Psychology

1. **Structuralism** → identify basic elements of experiences through introspection
2. **Functionalism** → understand adaptive purposes of behaviour
3. **Behaviourism** → psychological science must be completely objective and derived from laws of learning
4. **Cognitive view** → emphasised the importance of knowledge processes in understanding behaviour
5. **Psychoanalysis** → focused on conflicts and unconscious motivations as cause of neurotic behaviour

Two great debates that have shaped the field of psychology

1. **Nature- Nurture Debate:** Asks whether our behaviours are attributable mostly to our **genes (nature)** or our **rearing environments (nurture)**
2. **Free will- determinism debate:** Asks to what extent our behaviours are freely selected rather than caused by factors outside our control

Pseudoscience

- Claims that are presented as scientific, but are not scientific
 - Often extraordinary claims
 - Often overreliance on testimonials, especially from inappropriate experts
 - Often seek to confirm, rather than falsify
 - Avoids peer review
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Developmental Psychology

Chapter 10: Human Development

What is Developmental Psychology?

- The study of human behaviour as a function of age
- How and why we change
- Change as a function of:
 - Physical maturation
 - Cognitive development
 - Social experience

Change and Continuities

- **Change:** systematic changes are **orderly, patterned and relatively enduring** (eg crawling to walking)
- **Continuities:** refer to ways in which we remain the **same or consistent** over time (eg attachment from infancy to adulthood, temperament/ personality).

Some Conceptual Challenges

Bidirectional influences

- Developmental influences are bidirectional
- Parent $\leftarrow \rightarrow$ child (transactional/ two way)
- Children's development influences their experiences, but their experiences also influence their development
- As children grow older, they play an increasingly active role in altering and selecting their environments
- Gene environment interactions

Early experience- critical and sensitive periods

- Early life matters, BUT
- Can be an oversimplification- bonding example
- More applicable to biological aspects of development

Areas of Study in Developmental Psychology

- **Physical development:** body changes, motor skills, puberty, physical signs of ageing
- **Cognitive development:** perception, language, learning, memory, problem solving
- **Psychosocial development:** personality, emotions, gender identity, moral behaviour, interpersonal skills, roles

Developmental Theories

- A **FRAMEWORK**- organise thinking
- A **LENS**- Guides collection of new facts
- Different theories dominate at different times
- Impact of parent's theories: Folk psychology
 - Parental locus of control and efficacy
 - Representations of the child
 - Discipline approaches

Major theories of Development

- **Psychoanalytic theory:** Freud and Erikson
- **Cognitive developmental theory:** Piaget and Kohlberg
- **Social cognitive theory:** early behaviourist theories through to Bandura's social cognitive theory
- **Ethological theory:** Attachment theories of Ainsworth and Bowlby

Nature and Nurture

- Universal genetically determined capacities for language, motor development- stage theorists
- But **expression** influenced by environment- what babies need to know to survive/ do well and what is valued and what is possible- individual differences/ cultural differences

Classifying the Nature- Nurture Debate

Gene environment interaction: situation in which the effects of genes depend on the environment in which they are expressed

Nature via nurture: tendency of individuals with certain genetic predispositions to seek out and create environments that permit the expression of those predispositions

Gene expression: activation or deactivation of genes by environmental experiences throughout development

Example: Motor Development

Maturation: Unfolding of genetically programmed behaviour patterns

But environment (childrearing customs) has an impact

- Swaddling
- Carrying on body
- 'Baby' containers- seats, swings, floor
- Experience in prone – SIDS prevention

Key terms

Cross sectional design – A design in which researchers examine people of different ages at a single point in time

Cohort Effects – effects observed in a sample of participants that result from individuals in the sample growing up at the same time

Longitudinal design – research design that examines development in the same group of people on multiple occasions over time

The Influence of Early Experience

- Early life experiences often shape later development in powerful ways
- **Two myths:**
 - **Infant Determinism:** the widespread assumption that **extremely early experiences** are almost always **more influential** than later experiences in shaping us as adults
 - **Childhood fragility:** Children are **delicate** little creatures who are easily damaged (but in fact, they are remarkably resilient)

10.2- The developing body: physical and motor development

Conception and prenatal development: from zygote to baby

- **Blastocyst- embryo – foetus – baby**
- During the prenatal period of development, the human body acquires its basic form and structure
- Germinal stage: zygote begins to divide and double, forming a blastocyst – a ball of identical cells that haven't yet begun to take on any specific function
- Once the different cells start to assume different functions, the blastocyst becomes an embryo
- The embryo becomes a foetus in the 9th week. This is when all major organs are established

Brain development: 18 days and beyond

- The human brain begins to develop 18 days after fertilisation
- Proliferation- neurons begin developing at an astronomical rate
- Final stage of brain development includes three additional processes that help the brain to work more efficiently:
 - Myelination
 - Synaptogenesis
 - Pruning

Obstacles to normal foetal development

- Foetal development can be disrupted in three ways:
 - Exposure to hazardous environmental influences
 - **Teratogens-** environmental factors that can affect prenatal development negatively
 - Foetal alcohol syndrome- learning disabilities, physical growth retardation, facial malfunctions etc..
 - Biological influences resulting from genetic disorders or errors in cell duplication

- Placental failure
- Premature birth – born fewer than 36 weeks gestation. They have underdeveloped lungs and brains, often experience serious delays in cognitive and physical development

Early experience: sensitive periods

- Term comes from the study of embryology
- “teratogens” – timing of exposure critical
 - Eg facial anomalies in fetal alcohol spectrum disorder
 - Hearing- rubella virus
- Empirical support for sensitive periods:
 - Neurological development – first 3 years
 - Extensive myelination of the nervous system
 - Language development- early deprivation important
 - Studies of Romanian orphans who were later adopted
- Cognitive impairments are related to timing, but also duration of deprivation

Infant motor development: how babies get going

Survival instincts: Infant reflexes

- Infants are born with a large set of automatic motor behaviours/ reflexes that are triggered by specific types of stimulation. Reflexes fulfil important survival needs.

Learning to get up and go: coordinating movement

- Motor behaviours are bodily motions that occur as a result of self initiated force that moves the bones and muscles

Factors influencing motor development

- Physical maturation of the both the body and the brain plays a key role in allowing children to becoming increasingly steady and flexible in their movements
- Differences among children in the rate at which motor development unfolds are also tied to their body weight
- Parenting styles and cultural practices. Indigenous infants reach motor milestones earlier than Anglo- Australians due to cultural differences in child rearing practices

Growth and physical development throughout childhood

- Evidence suggests growth spurts occur, but the periods between aren't marked by a total absence of growth

Physical maturation in adolescence: the power of puberty

- Boys' muscle strength exceeds girls' in adolescence, resulting in greater average physical strength and endurance in boys than in girls.

10.3 - The Developing Mind: Cognitive Development

Cognitive Development- how we acquire the ability to learn, think, communicate and remember over time- sheds light on the mystery of how we come to understand our worlds