PSYC100 GENERAL PSYCHOLOGY

WHAT IS PSYCHOLOGY? PSYCHOLOGY AS A SCIENCE

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PSYC100 Course Outline

ATTENDANCE	Attendance will be taken in all sessions. **Students who do not attend 70% of classes will not qualify for taking the final exam and be given an NA grade. Therefore, will not be able to benefit from the make-up exams**
MID-TERMS	Date: Week 7 and Week 12 Weighing: 30% each Format: MCQs Coverage: Weeks 1-6 & Weeks 8-11, respectively.
FINAL EXAM	Date: TBA Weighing: 40% Format: MCQs Coverage: All

PSYC100 Course Outline

SECTION D: TEACHING SCHEDULE		
Week	**Lecture Topic**	**Chapter**
Week 1	What is Psychology? & Psychology as a Science	1-3
Week 2	Theoretical Approaches to Psychology	2
Week 3	Learning	11
Week 4	Motivation	9
Week 5	Perception	15
Week 6	Memory	17
Week 7	Midterm I	
Week 8	Social Psychology Topics	23-26-27
Week 9	Developmental Psychology Topics	32-34
Week 10	Intelligence	41
Week 11	Personality	42
Week 12	Midterm II	
Week 13	Psychopathology	43-44
Week 14	Treatments and Therapies	45

Learning Outcomes

- What is psychology?
- A brief history
- The relationship between psychology and other disciplines
- Main areas of psychology
- The scientific study of human behaviour

What is psychology?

The word ‘psychology’ is derived from the Greek *psyche* (mind, soul or spirit) and *logos* (knowledge, discourse or study). Literally, then, Psychology is the ‘study of the mind’.

Psychology is the scientific study of the mind, brain, and behaviour, exploring thoughts, emotions, and actions to understand individuals and groups. It's a diverse, interdisciplinary field that uses research and experimentation to gain insights into human development, mental processes, and the factors—biological, social, and environmental—that influence how we think, feel, and behave.

A brief history

1879 Wilhelm Wundt opens first experimental psychology lab in Leipzig - Psychology separates from philosophy, becoming an independent science focused on introspection and experimentation.

1883 Stanley Hall opens first U.S. psychology lab at Johns Hopkins - Expanded scientific psychology globally, emphasizing research.

1885 Hermann Ebbinghaus publishes on memory experiments - Demonstrated systematic self-experimentation, solidifying cognitive psychology's scientific basis.

1886 Sigmund Freud begins psychoanalysis - Introduced talk therapy and unconscious mind theories, adding depth to scientific inquiry into mental processes.

1888 Cattell publishes on mental tests - Advanced psychological assessment with standardized measurements, enhancing scientific rigor.

A brief history

1892 formation of American Psychological Association - Professionalized the field, fostering scientific collaboration and standards.

1904 Ivan Pavlov’s work on classical conditioning - Introduced behavioral experiments, shifting focus to observable responses and scientific objectivity.

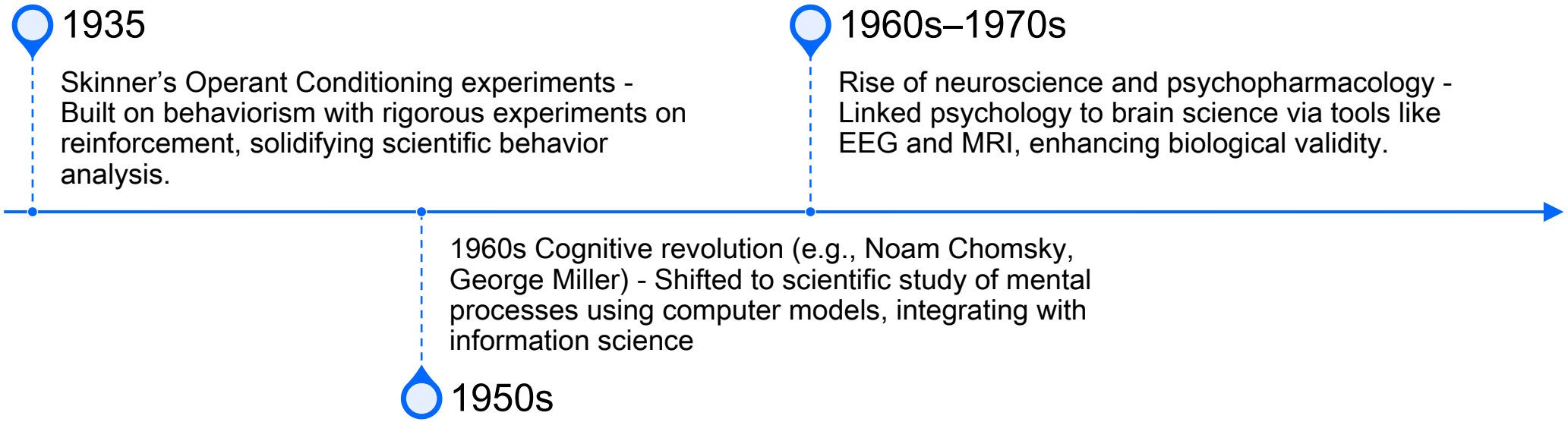
1905 Binet first IQ test - Developed empirical tools for measuring cognition, advancing psychometrics as a science.

1912 Gestalt Psychology - studies of perception, enriching scientific approaches.

1913 - 1920 Watson’s Behaviourism and Little Albert Experiment - emphasized experimentation over introspection

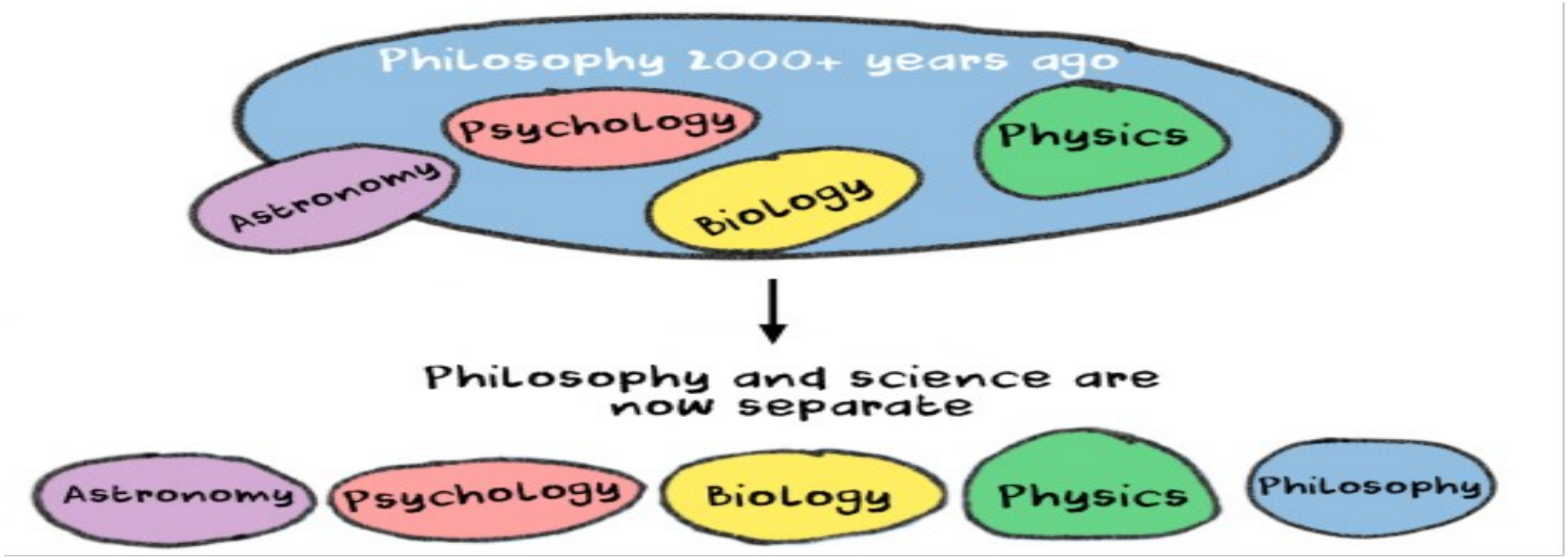
1932 Jean Piaget - Used empirical observation to map child cognition, establishing developmental psychology as a science.

A brief history

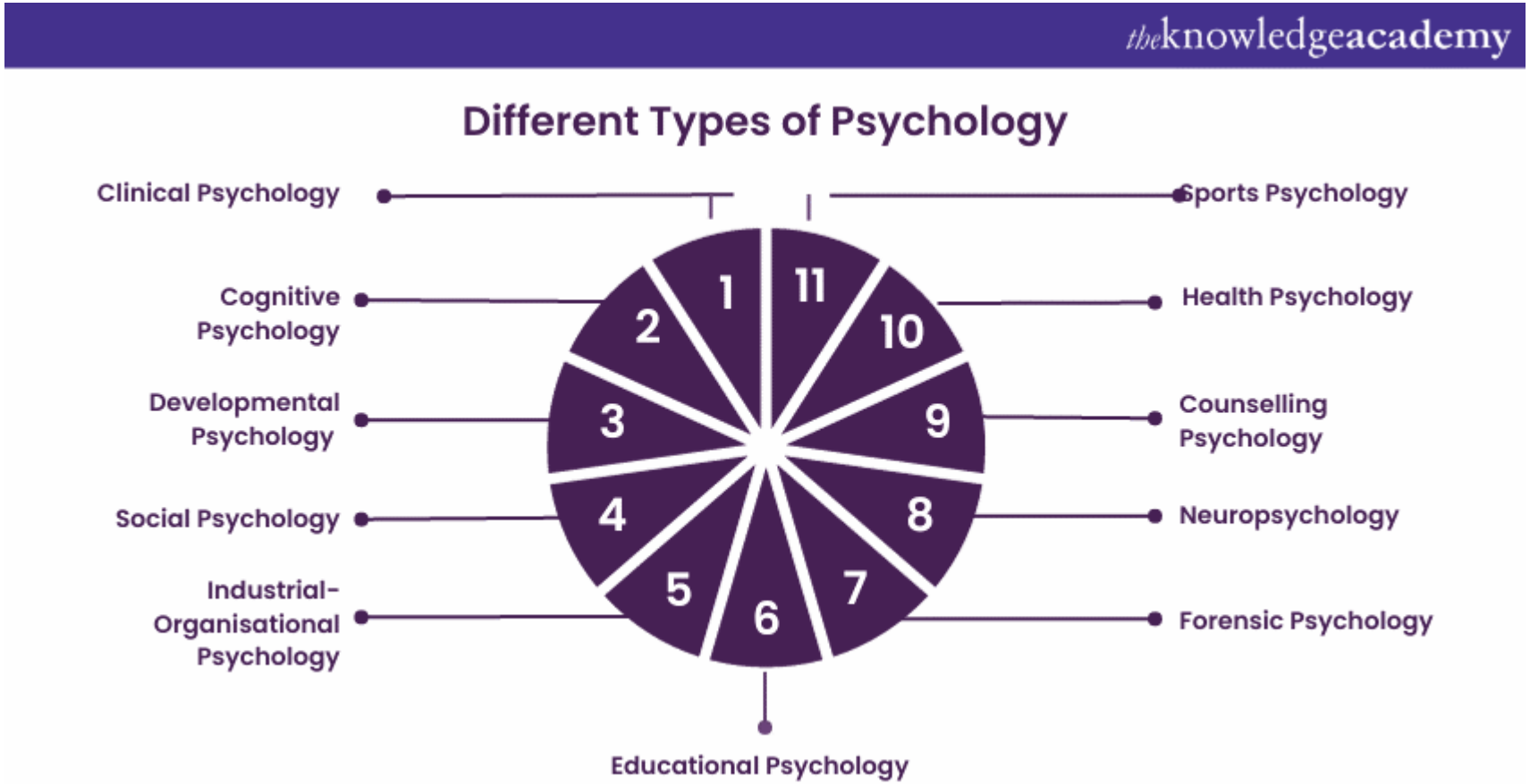


A brief history

- 1980s–1990s Positive psychology emerges (Martin Seligman) - Focused on empirical study of well-being and strengths, expanding beyond pathology
- 2000s Integration of genetics and psychology (e.g., behavioral genetics) - Used scientific methods like twin studies to explore heritability of traits.
- 2010s Digital psychology and big data - Leveraged technology for large-scale behavioral analysis, making psychology more data-driven.
- 2021–2023 Studies on social media, loneliness, and AI-inspired models - Empirical research on modern issues like TikTok's impact on adolescents and machine learning in cognitive modeling.
- 2024–2025 Advancements in AI therapy, telehealth, digital therapeutics etc. - Psychology integrates with tech (e.g., AI chatbots for mental health, brain-computer interfaces) and neuroscience (e.g., immune system's role in anxiety), expanding access and precision in evidence-based interventions.


Philosophy 2000+ years ago
Psychology
Physics
Astronomy
Biology
Philosophy and science are now separate
Astronomy
Psychology
Biology
Physics
Philosophy

Main areas of psychology



The relationship between psychology and other disciplines

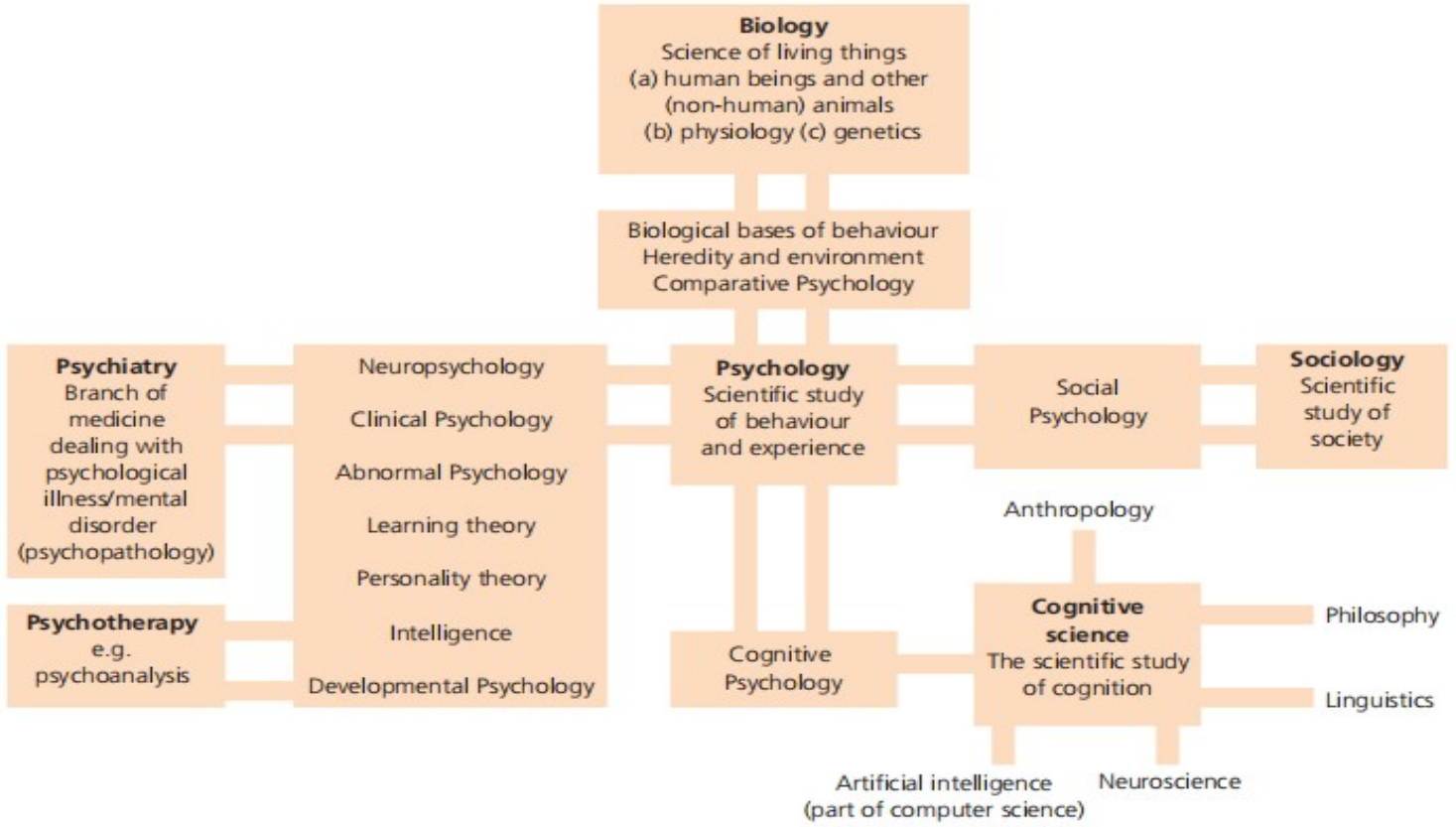


Figure 1.2 The relationship between Psychology and other scientific disciplines

Does psychology have deep connections with other fields?

Computer engineering

Software engineering

Industrial engineering

Mechanical engineering

Civil engineering

Electrical & Electronic engineering

Chemical engineering

Aerospace engineering

Also Business Administration, Economics, Political Science, EFL

Some examples

Mechanical engineering: understanding human error and stress when designing systems.

Civil engineering: how buildings, cities affect mental health and behaviour.

Electrical & Electronic engineering: designing devices that monitor stress, mood or cognitive performance.

Chemical engineering: working with neuropsychologists to develop drugs that affect the brain.

Aerospace engineering: aviation psychology, studying pilot cognition, fatigue and decision-making.

Computer engineering: HCI, user experience, cybersecurity, AI.

EFL: effective language teaching and learning involve understanding cognitive, emotional, social, and motivational processes.

PSIR: human behavior, cognition, and emotions underpin political and international dynamics

The scientific study of human behaviour

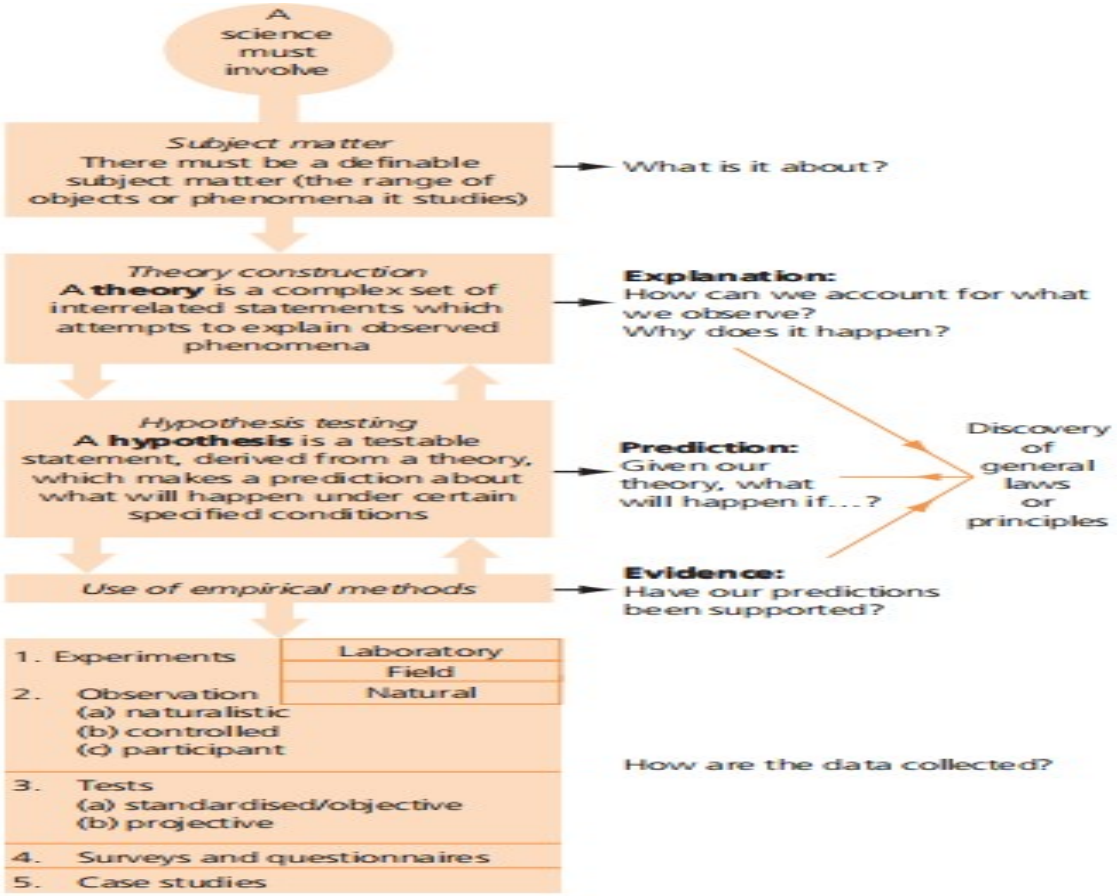
Wilhelm Wundt - the founder of the new science of Experimental Psychology; used introspection (looking inside); structuralism (structure of the mind)

William James – functionalism (function of the mind); individual differences

John Watson – critical of introspection; behaviourism, influenced by Pavlov; Little Albert experiment

McCarthy, Chompsky and Miller – cognitive revolution; various academics met to discuss the possibility of producing computer programs that could ‘behave’ or ‘think’ intelligently. These academics included McCarthy (generally attributed with having coined the term ‘artificial intelligence’), Chomsky and Miller.

Major features of a science



What makes psychology a science?

1. Empirical evidence (observable, measurable data collection).
2. Scientific method (hypothesis testing, analysing results, drawing conclusions).
3. Theories and models (psychology develops testable theories i.e. cognitive dissonance, attachment theory).
4. Experimentation (studies cause-effect relationships).
5. Quantitative and qualitative methods
6. Falsifiability (theories can be tested and disproven)

The scientific study of human behaviour

- **The social nature of science: the problem of objectivity -** Psychologists are part of their own subject matter, which makes it even more difficult for them to be objective than other scientists.
- **The Psychology experiment as a social situation**
  - Experimenter bias - expectations
  - Demand characteristics – interpretation of experiment's purpose
- **The problem of representativeness**
  - Culture?
- **The problem of artificiality**
  - Generalizability?
- **The problem of internal vs external validity**
  - High internal validity means that the observed effects are due to the manipulation of the IV.
  - High external validity means results can be generalised to other settings, populations, or times.

Psychology, as a science, seeks to explain the complexities of the human mind through rigorous observation and experimentation.

Carl Gustav Jung

Summary

- While Psychology sometimes faces challenges, like the complexity of human behaviour or ethical limits on experimentation, its commitment to evidence-based methods aligns it with other sciences like biology or physics.
- Recognizing and actively addressing the limitations are crucial for maintaining the scientific rigor and validity of psychological research