

HISTORY

History: agreements between historians on what we believe happened in the past - it is a memory of events from a perspective

History of psychology: the study of past events, people & ideas important to the development of how we understand mental processes, behaviours and brain function

- Studying history is necessary to avoid repeating past mistakes → helps understand past + shapes the present
- History is not a fact - it is a perspective - a definitive book of historical truth does not exist
 - ◆ E.g. The Wall of Berlin divided east and west Germany - post WW2 events documented by east vs west Germany are very different

Biases in history:

Ethnocentricity: The tendency to see the world through the lens of our own culture - the belief that one culture is superior to another - the idea that 'our' way of life is better

Presentist bias: The tendency to discuss & analyse past ideas, people & events in terms of the present

Zeitgeist: 'spirit of the times' - the social, cultural, economic beliefs of the time

- Context influences how we thought about psychology and the theories that we held - the zeitgeist influenced the way they thought about psychology
- Georg Wilhelm Friedrich Hegel: "no man can surpass his own time, for the spirit of his time is also his own spirit"
- Dominant zeitgeists in psychology include Skinner (behaviourism), Freud (psychoanalysis) etc.

Ibn Al-Haytham/Al Hazen - (Born 965 in Basra, Iraq; died 1040 in Cairo, Egypt)

- After his work was translated - he had made discoveries on visual phenomena that had only recently been discovered by the west
- Wrote about every discovered visual illusion → Was the first to correctly explain the theory of vision and to argue that vision occurs in the brain

Alhazen's neglected discoveries of visual phenomena

See P. P. Wiener
Quoted in: *Alhazen's Optics*, trans. Leonard North, New York, Dover, 1953, 1955, 1956
Reprinted 2 April 1985, in revised form 20 June 1985

Readers are invited to answer the following multiple-choice test before reading this work.

While this prepared the following:

1. A US\$1 which is shown five times will choose the more attractive one.

(a) 100% of the above

(b) 50% of the above

(c) 25% of the above

(d) 10% of the above

(e) None of the above

2. Visual rays striking the concave surface of the eye at right angles are more likely to be perceived than rays striking the surface at an oblique angle.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

3. In the process of perceiving that a person is anxious, the observer is aware of the person's facial expression.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

4. The distance of objects on a horizontal surface are judged with reference to the gradient of the surface.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

5. The most likely reason of the sun seen nearest when judging whether the motion of a vertical image is due to object motion or to motion of the eye.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

100

1. The moon seen behind a hill which appears to move.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

2. In general, when one eye moves, the other eye moves with the same motion.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

3. Biconvex lenses which do not differ greatly in position are not seen as double.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

4. Objects which subtend the same angle to the two eyes on the visual axis are seen as single and from this one can conclude that the locus of single vision is not in a straight plane.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

5. When the eyes are covered on the intersection of two lines extending from the eyes, one sees a single line in the middle extending to a point between the eyes.

(a) True

(b) False

(c) True and False

(d) None of the above

(e) None of the above

6. The correct answer to all the questions is "none of the above".

All these observations can be found in the Book written in the

eleventh century by the Arabic scholar Abu Ali al-Hasan ibn al-

Hasan ibn al-Haytham, better known by his Latin name

Alhazen.

EARLY PSYCHOLOGY

Wilhelm Wundt (1832-1920)

Founded first psych lab (Leipzig, 1879) - considered start of scientific psychology

- Was only interested in how the brain worked (the building blocks of mental thoughts), not clinical psychology/psychological problems/mental health
- One of the founders of structuralism (structure of the mind and consciousness), focused on the building blocks of conscious experience
- Used introspection - a method where individuals systematically examined and reported their own thought

Psychophysics

- Gustav Theodor Fechner 1801-87 (father of psychophysics)

- ◆ Central idea: we are a product of evolution in a physical environment so, why shouldn't our brain, as a product of this process, not obey physical rules?
 - Our sensations must follow physical laws (e.g. how we notice or adjust to light brightness) because our brain and senses evolved in a physical environment

→ **Ernst Weber 1795-1878**

- ◆ **Weber's law 1834:** change in a stimulus that will be just noticeable is a constant ratio of the original stimulus
- ◆ If you lift a 5 kg weight, you might only notice a difference when at least 0.5 kg is added (10% increase). If you lift a 50 kg weight, you might only notice a difference when at least 5 kg is added (also 10% increase)
 - The larger the initial stimulus, the greater the change needed to detect a difference
- ◆ **Applications of Weber's Law:**
 - Perception of brightness, sound, and pressure - a dim room requires only a small increase in light to notice a change, but a brightly lit room requires a much greater increase

Trepanation

Trypanon = a drill turned by hand or with a string

Trepanation was used in ancient times to let out evil spirits in people who were thought to believe abnormally (mental disorders)

****BRAIN, MIND, BEHAVIOUR****

Psychology: Scientific study of the brain, mental process & behaviour, and the relations between them

- ◆ **Brain:** neuro-biological processes that generate mental processes & states
- ◆ **Mind:** individual sensations, perceptions, memories, thoughts, dreams, incentives, emotions & subjective experiences
- ◆ **Behaviour:** wide variety of actions that can be observed

****BRAIN DISCOVERIES****

Egyptians:

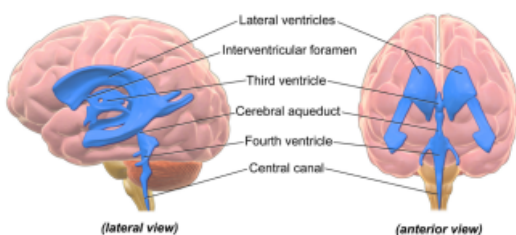
Heart was seat of soul - feelings, thinking etc. came from heart, not brain → heart stayed in body but liver, kidney, lungs, stomach placed back/stored in jars next to body

Edwin Smith Papyrus - Imhotep (proposed author) → about head wounds of soldiers

- Brain lesions lead to distal symptoms, brain is responsible for speech, left side of brain controls right side of body & vice versa, touching brain can lead to epileptic seizures
- **Overall:** Egyptians understood that specific functions are localised in the brain - there are areas that seem to be highly specialised in a specific task

Discovery of the ventricles:

- **Ventricles** = cavities full of fluid (4 cavities) - lateral ventricle 1 & 2 (left & right); 3rd ventricle in centre; 4th below (discovered later) → gave rise to 3 cell doctrine
- Leonardo da Vinci → First to find out what they looked like - filled cavities with warm wax



3-cell theory:

- **cell 1:** collection of information from senses
- **cell 2:** cognition/thinking