

History of Psychology

- **What are the academic disciplines that psychology was built upon?**

Some of the most important academic disciplines that have influenced the development of psychology are:

1. **Philosophy:** Many of the earliest ideas about the mind and human behavior came from philosophers such as Aristotle, Plato, and Descartes.
2. **Physiology:** The study of the workings of the body and the nervous system has been important in understanding the biological basis of behavior and mental processes.
3. **Biology:** The study of genetics and evolutionary processes has helped to explain how behavior and mental processes have evolved over time.

- **Define the term Zeitgeist and name three factors that are part of it.**

Zeitgeist is a German term that refers to the spirit of the times, or the cultural, intellectual, and social climate of a particular period in history. It encompasses the prevailing attitudes, beliefs, values, and norms that shape the way people think and act.

Three factors that are often part of the Zeitgeist of a particular era or culture include:

1. **Historical events and developments:** The events and changes that occur within a society or culture can shape the Zeitgeist of a particular period. For example, the economic and social upheavals of the Great Depression in the 1930s had a profound impact on the Zeitgeist of that era.

2. Art and culture: Artistic and cultural movements can also shape the Zeitgeist by reflecting and influencing the attitudes and values of a society. For example, the countercultural movements of the 1960s helped to shape the Zeitgeist of that era.
3. Technological and scientific advancements: The development of new technologies and scientific discoveries can also have a significant impact on the Zeitgeist of a particular period. For example, the widespread adoption of the internet and social media in recent decades has had a profound impact on the way people communicate and interact with each other, shaping the Zeitgeist of the digital age.

- **Define determinism and empiricism.**

Determinism refers to the belief that all events, including human behavior and mental processes, are determined by prior causes or factors. In other words, determinism suggests that free will is an illusion and that everything that happens is the result of a chain of causation that goes back to the beginning of the universe. This idea has important implications for psychology, as it suggests that our behavior and mental processes are determined by a combination of genetic, environmental, and situational factors.

Empiricism is a philosophical approach that emphasizes the importance of evidence and experience in the acquisition of knowledge. Empiricists argue that knowledge should be based on observation and experimentation, rather than abstract reasoning or speculation. In psychology, empiricism has been an important influence in the development of research methods that allow scientists to gather objective data about

human behavior and mental processes. Empiricism has also led to the development of evidence-based treatments and therapies that are grounded in scientific research.

- **What are the differences between John Locke and Rene Descartes in terms of how they believed humans gained knowledge?**

- John Locke was an empiricist who believed that all knowledge comes from experience. According to Locke, the mind is a blank slate or tabula rasa at birth, and all knowledge is acquired through sensory experience and reflection. He argued that the mind actively processes sensory information and experiences to create knowledge and ideas.
- Rene Descartes, on the other hand, was a rationalist who believed that knowledge comes from innate ideas that are already present in the mind. According to Descartes, the mind is capable of understanding abstract concepts and ideas that are not based on sensory experience. He argued that the mind possesses certain innate ideas, such as the idea of God, and that it is capable of using reason and deduction to discover additional knowledge.

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- **Define the Spirit of Mechanism and explain why it was important.**

The Spirit of Mechanism is a term used to describe a philosophical and scientific perspective that emerged in the 17th and 18th centuries. This perspective emphasized the mechanical nature of the universe and suggested that all natural phenomena,

including human behavior and mental processes, could be explained in terms of physical laws and mechanisms.

The Spirit of Mechanism was important because it paved the way for the development of modern science and technology. By emphasizing the idea that the universe was governed by physical laws that could be studied and understood through experimentation and observation, scientists were able to make significant advances in fields such as physics, chemistry, and biology.

In psychology, the Spirit of Mechanism led to the development of the mechanistic model of behavior, which suggested that all behavior and mental processes could be explained in terms of physical and chemical processes in the brain and nervous system. This perspective was an important influence on the development of behaviorism, a school of psychology that emphasized the study of observable behavior and rejected the study of subjective mental experiences.

- **What was unique about the way that James Mill viewed the human mind and what was his goal?**
 - What was unique about Mill's view of the human mind was his belief that all mental phenomena could be explained in terms of the association of ideas. According to Mill, the mind was like a machine that processed and combined sensory experiences to produce complex mental phenomena. He believed that all mental processes, from simple perception to complex reasoning, could be explained in terms of the associations formed between ideas in the mind.

- Mill's goal was to create a comprehensive theory of the mind that could be used to explain all human behavior and mental processes. He believed that by understanding the principles of associationism, psychologists could develop a better understanding of human behavior and improve social and economic conditions. His work laid the groundwork for the development of behaviorism, a school of psychology that emphasized the study of observable behavior and rejected the study of subjective mental experiences.

- **What was the significance of David Kinnebrook's mistake?**
 - David Kinnebrook was an astronomer who worked at the Greenwich Observatory in the 18th century. He was responsible for recording the positions of stars in order to calculate their location and movement. However, he was known for making errors in his observations, which resulted in a phenomenon known as the "personal equation."
 - The significance of Kinnebrook's mistake was that it drew attention to the fact that human perception and cognition can vary from person to person, and even within the same person at different times. This idea challenged the prevailing view at the time that perception and cognition were objective and consistent across all individuals. The personal equation was later recognized as a broader phenomenon that applies to many areas of human perception and performance, and has become an important concept in the fields of psychology and neuroscience.

- **Why were the early developments in physiology important to the field of psychology?**

- The early developments in physiology were important to the field of psychology because they helped to establish a scientific basis for the study of behavior and mental processes. In particular, the work of physiologists in the 18th and 19th centuries helped to establish the idea that mental processes could be studied as a natural phenomenon, subject to the same scientific principles that governed other aspects of the natural world. The early developments in physiology provided a scientific foundation for the study of behavior and mental processes, and helped to establish psychology as a discipline that was grounded in empirical evidence and scientific inquiry.

- **What was extirpation and of what value was it to psychology at that time?**

- Extirpation, also known as ablation, was a method used in the early days of neuroscience to study the functions of different parts of the brain. It involved the surgical removal of a specific part of the brain in order to observe the effects on behavior and mental processes. The use of extirpation helped to establish the idea that different areas of the brain were responsible for different functions, and that these functions could be studied through experimental methods. It provided an early method for studying the relationship between brain function and behavior, and laid the

groundwork for more sophisticated methods such as brain imaging and electrophysiology.

- **Why did so many of the early developments in psychology happen in Germany?**

There were several reasons why so many of the early developments in psychology happened in Germany. Some of these factors include:

1. Strong scientific tradition: Germany had a long tradition of scientific research and innovation, particularly in the fields of physics, chemistry, and biology. This tradition of scientific inquiry made Germany an attractive place for researchers interested in studying the human mind.
2. University system: Germany had a well-established university system, with many of its universities dating back to the 14th and 15th centuries. These universities provided a rich intellectual and cultural environment that encouraged the development of new ideas and innovative research.
3. Philosophical tradition: Germany was also home to a rich philosophical tradition that emphasized the importance of rational inquiry and scientific method. This tradition helped to create a climate of intellectual curiosity and openness to new ideas, which was conducive to the development of new theories and methods.

- **What was Hermann Helmholtz's major contribution to psychology?**

- Hermann von Helmholtz (1821-1894) was a German physician and physicist who made significant contributions to several fields, including

psychology. One of Helmholtz's major contributions to psychology was his research on perception and sensation.

- Helmholtz developed a theory of perception known as the "unconscious inference," which proposed that perception is not simply the passive reception of sensory information but is an active process that involves making inferences based on prior knowledge and experience. He also developed an understanding of the relationship between physical stimuli and the sensations they produce, which he called the "psychophysics of sensation."
 - Helmholtz's work on perception and sensation laid the groundwork for the study of perception in psychology and neuroscience. He also made significant contributions to other fields, including optics, electrodynamics, and thermodynamics, and is considered one of the most influential scientists of the 19th century.
- **What is the two-point threshold?**
 - The two-point threshold is the smallest distance at which two points of contact on the skin can be perceived as two distinct points rather than a single point. It is a measure of the sensitivity of the skin to tactile stimulation, and it varies depending on the part of the body being tested.
 - **What is the just noticeable difference?**
 - The just noticeable difference (JND) is the smallest detectable difference between two stimuli that can be detected by a person. It is a measure of the sensitivity of the human senses to changes in stimulation, and it varies

depending on the sense being tested and the specific characteristics of the stimuli.

- The JND was first studied in the field of psychophysics by the German psychologist Ernst Weber in the 19th century. Weber observed that the JND between two stimuli is proportional to the magnitude of the stimuli, and he developed a formula known as Weber's Law to describe this relationship.

- **What two ways did Fechner propose for measuring sensation?**

Gustav Fechner, a German psychologist and physicist, proposed two methods for measuring sensation: the method of limits and the method of adjustment.

1. Method of limits: In this method, a series of stimuli is presented to the person being tested, starting with a very weak stimulus and increasing in intensity until the person can just detect it. Then, the stimuli are presented in the opposite direction, starting with a very strong stimulus and decreasing in intensity until the person can just no longer detect it. The point at which the person can first detect or no longer detect the stimuli is recorded as the threshold of sensation.
2. Method of adjustment: In this method, the person being tested adjusts the intensity of the stimulus until it is just detectable or no longer detectable. This method is more flexible and allows the person to adjust the stimulus continuously, rather than in steps. The threshold of sensation is calculated by averaging the stimulus intensities at which the person reports detecting or not detecting the stimulus.

- **According to Fechner what does a change in sensation depend on?**

- According to Gustav Fechner's theory of psychophysics, the change in sensation depends on the change in the intensity of the physical stimulus. He proposed that the relationship between the physical stimulus and the resulting sensation is not a linear one, but rather a logarithmic one. This means that the subjective experience of sensation does not increase at the same rate as the physical intensity of the stimulus. Instead, as the physical stimulus increases in intensity, the increase in subjective sensation is less and less noticeable.