

Week 6

Test on Chapter 4 and 5

What goal did he announce in his book *Principles of Physiological Psychology*? His goal was to promote psychology as an independent and new science. Even

Gedankenmesser: Wundt was fascinated by how observers were unable to focus their attention on two objects at the same time. His fascination led him to modify a pendulum clock, so that it presented both an auditory and a visual stimulus, a bell and a pendulum swinging past a fixed point. He called this instrument a Gedankenmesser. It means “thought meter” or “mind gauge,” and he used it to measure the mental process of perceiving the two stimuli.

What two important happened during the Leipzig years?

1. He began the longest and the most important phase of his career in 1875 when he became professor at the University of Leipzig, where he worked prodigiously for the next 45 years.
2. He established a laboratory at Leipzig shortly after arriving and in 1881 he founded the Journal Philosophical Studies, the official publication of the new laboratory and the new science.

What two parts did psychology get divided into? The experimental and the social.

What did Wundt believe that psychology should be the study of? Wundt believed psychology should be the study of conscious experience and could be studied by the method of analysis or reduction. He believed that consciousness actively organized its own content.

Voluntarism: The idea that the mind has the capacity to organize mental content into higher-level thought processes.

Mediate and immediate experience. Mediate experience provides information about something other than the elements of that experience. This is the usual form in which we use experience knowledge or learn about our world. Immediate experience is unbiased or untainted by any personal interpretations.

Introspection according to Wundt. Wundt described his psychology as the science of conscious experience and only the person having such an experience can observe it. Wundt declared the method of observation involves introspection: examining one’s own mental state. He referred to this as “internal perception” .

Wundt’s three goals of psychology.

1. Analyze conscious processes into their basic elements.

2. Discover how these elements are synthesized or organized.
3. Determine the laws of connection governing the organization of the elements.

Two elements of psychology.

1. Sensations are aroused whenever a sense organ is stimulated, and the resulting impulses reach the brain. Sensations can be classified by intensity, duration, and sense modality.
2. Feelings are the other elementary form of experience. Sensations and feelings are simultaneous aspects of immediate experience. Feelings are subjective elements of sensations but do not arise directly from a sense organ. Sensations are accompanied by certain feeling qualities; when sensations combine to form a more complex state, a feeling quality will result.

Doctrine of apperception is the process of organizing mental elements into a whole and is a creative synthesis (also known as the law of psychic resultants), which creates new properties from the building up or combining of the elements. To Wundt apperception is an active process. The mind acts on these elements in a creative way to make up the whole.

Wundt's legacy. Wundt opened the Institute for Experimental Psychology at the University of Leipzig in Germany. This was the first laboratory dedicated to psychology and was thought modern psychology. He is regarded as the father of psychology. He separated psychology from philosophy by analyzing the workings of the mind in a more structured way with the emphasis being an objective measurement and control.

Hermann Ebbinghaus (1850-1909)

The first to investigate learning and memory experimentally.

What did Ebbinghaus learn about nonsense syllables? Which revolutionized the study of syllables and the speed of memorizing materials. Byron's poem "Don Juan." He concluded that meaningless or unassociated material is about nine times harder to learn than meaningful material. He also studied the effect of the length of the material to be learned on the number of repetitions necessary for a perfect reproduction. He found the longer material requires more repetitions and more time to learn, the more we have to learn the longer it will take us. The significance of his work in his careful control of the experimental conditions, his quantitative analyses of the data, and his conclusion that learning time per syllables and total learning time both increase with longer lists of syllables. His invention of the nonsense syllables

Sentence completion exercise (still used in psychology today). His research with human learning, memory, and verbal intelligence is still used today. His development of sentence completion exercise was instrumental with memory studies and psychological evaluation.

Forgetting curve. His research on the effect of time yielded the famous Ebbinghaus forgetting curve, which shows that material is forgotten rapidly in the first few hours after learning and more slowly thereafter. People tend to continually halve their memory of newly learned knowledge in a matter of days or weeks unless they actively review the learned material.

Franz Brentano (1848-1936)

Contrast with Wundt. Brentano's most famous book *Psychology from an Empirical Standpoint* was published in 1874, the year in which the second part of Wundt's *Principles of Physiological Psychology* appeared. Brentano's book directly contradicted Wundt's views, attesting to the dissent already apparent in the new psychology. Whereas Wundt's psychology was experimental, Brentano's was empirical. He believed the primary method for psychology should be observation, not experimentation. He considered an empirical approach to

be broader in scope because it accepts data from observation and individual experience as well as from experimentation.

What did Brentano argue should be the proper subject matter of psychology? He argued that the proper subject matter for psychology is mental activity, such as the mental action of seeing rather than the mental content of what a person sees. Brentano's act psychology questioned the Wundtian view that mental processes involve contents or elements.

Carl Stumpf (1848-1936)

Stumpf was a major rival of Wundt's – what did he argue should be the primary data of psychology? Stumpf argues that the primary data for psychology are phenomena. Phenomenology, the kind of introspection he favored, refers to the examination of unbiased experience, experience just as it occurs. He disagreed with Wundt about breaking experience down into elements.

What is phenomenology according to Stumpf? Stumpf's introspective method that examined experience as it occurred and did not try to reduce experience to elementary components. Also, an approach to knowledge based on an unbiased description of immediate experience as it occurs, not analyzed, or reduced to elements. Stumpf believed that to analyze experience by reducing it to its mental contents or elements is to make that experience artificial and abstract and no longer natural.

Oswald Kulpe (1862-19136)

How did Kulpe define psychology? He defined psychology as the science of the facts of experience that are dependent on the experiencing person.

What was Kulpe's systematic experimental introspection? This involved first performing a complex task (such as establishing logical connections between concepts), and then having the subjects provide a retrospective report about their cognitive processes during the task. Subjects undertook some mental process, such as thinking or judging, after which they examined how they had thought or judged.

What did Kulpe mean by imageless thought? Kulpe's idea that meaning in thought can occur without any sensory or imaginal component. Meanings in thought do not necessarily involve specific images.

History of Psychology - Chapter 5 Review

Edward Bradford Titchener (1867-1927) and Structuralism

Although he claimed to represent Wundt's ideas and theories in America, he did not do this - how exactly did he change Wundt's theories? Titchener professed to be a loyal follower of Wundt, but he dramatically altered Wundt's system of psychology when he brought it from Germany to the U.S. Titchener offered his own approach called structuralism which he claimed represented psychology as set forth by Wundt. Titchener focused on mental elements or contents and their mechanical linking through the process of apperception. Titchener work concentrated on the elements themselves.

What did Titchener view the central task of psychology to be? In Titchener's view, psychology's fundamental task was to discover the nature of the elementary conscious experiences to analyze consciousness into its component parts and thus determine its structure. He focused on mental elements or contents and their mechanical linking through the process of association.

During these years he wrote the four-volume *Experimental Psychology: A Laboratory Practice* why is this noteworthy? These manuals stimulated the growth of laboratory work in psychology in the United States and influenced a whole generation of experimental psychologists. His textbooks were widely used and translated into Russian, Italian, German, Spanish, and French.

Titchener's view of women. Titchener would exclude women from the Experimentalists' meetings, but he encouraged and supported their advancement studies at Cornell. More women completed doctoral degrees with Titchener than with any other male psychologist. In one instance he insisted on hiring a female professor despite the objection of the dean. Although he did not relent about permitting women to attend meetings of the Titchener Experimentalists, he did open doors to women that were kept closed by others.

What did he believe the subject matter of psychology should be? Titchener believed the subject matter of psychology is a conscious experience as that experience is dependent on the person who is actually experiencing it. He believed this type of conscious experience was the only proper focus for psychological research.

What was meant by stimulus error? Titchener warned against committing the stimulus error. The stimulus error confuses the mental process with the object we are observing. under study with the stimulus or object being observed. The object of our observations is not to be described in everyday language but rather in terms of the elementary conscious of the experience.

For Titchener what was meant by introspection? Titchener's form of introspection or self-observation relied on observers who were rigorously trained to describe the elements of their conscious state rather than reporting the stimulus by its familiar name. He realized that everyone learns to describe experience in terms of stimulus such as calling a red, shiny, and round object an apple and that in everyday life this is beneficial and necessary.

Titchener 's three essential problems of psychology

1. Reduce conscious processes to their simplest components.

2. Determine laws by which these elements of consciousness were associated.
3. Connect the elements with their physiological conditions.

Titchener's three elementary states of consciousness.

1. Sensations-are the basic elements of perception and occur in the sounds, sights, smells, and other experiences evoked by physical objects in our environment
2. Images-are the elements of ideas, and they are found in the process that reflects experiences that are not actually present in the moment, such as a memory of a past experience
3. Affective states-or afflictions are the elements of emotions and are found in experiences such as love, hate, and sadness.

Titchener presented a list of what he believed to be 44,500 elements of sensation – all of which he believed could be categorized according to four characteristics basic to all sensations.

1. Quality is the characteristic-such as “cold” or “red”- that clearly distinguishes each element from every other element.
2. Intensity refers to a sensation's strength, weakness, loudness, or brightness.
3. Duration is the course of a sensation over time.
4. Clearness refers to the role of attention in conscious experience, experience that is the focus of our attention is clearer than experience toward which our attention is not directed.

Criticisms of Structuralism. By the second decade of the 20th century the intellectual climate of thought in American and European psychology had changed radically, but the formal published statement of Titchener's system had not. Psychologists came to regard his structural psychology as a futile attempt to cling to antiquated principles and methods. When Titchener died so did the era of structuralism. One main criticism was its focus on introspection as the method by which to gain understanding of the conscious experience. Critics argued that self-analysis was not feasible since introspective students can not appreciate the processes or mechanisms of their own mental processes. Another criticism was Titchener's difficulty defining exactly what he meant by the introspection method. Another criticism was on his methodology involving the question of precisely what the structuralist inspectors were trained to do. Critics also charged that introspection was really a form of retrospection because some time had elapsed between the experience and the reporting of it. Another criticism was the argument that experience does not come to us in individual sensations, images, or affective states but rather in unified wholes.

Contributions of Structuralism. Structuralism played a role in making psychology an experimental science. Their subject matter, conscious experience, was clearly defined. Their research methods, based on observation, experimentation, and measurement, were in the highest traditions of science. The method of introspection, more broadly defined as giving a verbal report based on experience, continues to be used in many areas of psychology, involving cognitive processes such as reasoning. The significant contribution of structuralism was its service as a

target of criticism. It provided a strong, established orthodoxy against which newly developing movements in psychology could array their forces.