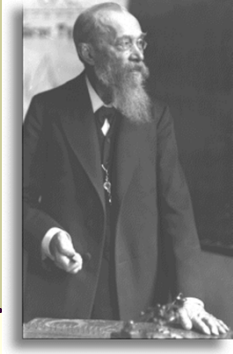



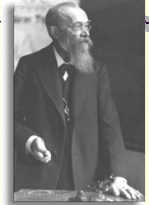
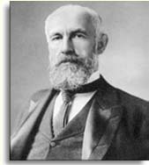
Psychology's Early "Schools"

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A New Science is Born

- Although humans have been interested in "what makes their fellow humans tick" since recorded history began; and,
- ...although philosophers wrote about our *mind* for centuries;...
- ...it took the creation of a psychology lab in **Leipzig, Germany** by **Wilhelm Wundt** in **1879** to *officially* mark the beginning of modern scientific psychology.
- Four years later (**1883**), the first such lab in the U.S. was created by **G. Stanley Hall** at **Johns Hopkins University**.

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Wundt's Psychology

- Wundt's psychology focused exclusively on the *human mind*, on *human consciousness*.
- Psychology's goal, for Wundt, was:
 - ...the *analysis of mind* into its *elements*, into its most basic components;
 - ...determining how the *elements* were connected; and, finally
 - ...determining the laws governing those connections.

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Wundt's Psychology's Goals

- Wundt wanted psychology to be more like the physical sciences...
 - ...and to disconnect discussions of mind from their historical roots in philosophy.
- He used the same *brass instruments* to study the mind that he had used in his physiological research ...and, thus,
- ...his psychology came to be known as "*brass instrument psychology*."
- He also employed a unique technique called *introspection*...
 - ...during which experimental subjects would be asked to "report verbally" whatever might be going on in their mind under different experimental conditions.

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Structuralism

- The chief proponent of Wundt's form of psychology in the United States known as *Structuralism* was **Edward Bradford Titchener**.
 - Titchener, born in Britain, studied with Wundt at Leipzig & earned his Ph.D.; he then...
 - ...emigrated to the United States; and,
 - ...joined the faculty at Cornell in 1892, taking over the psychology lab founded there the year before.



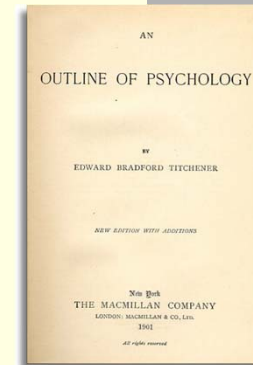
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Structuralism

- In his *Outline of Psychology...*
 - ...still in use at Brown in 1901...
- Titchener defined psychology as follows:
 - "Psychology may be defined as the *science of mental processes*."
- ...a definition much more restrictive than the one I gave you earlier.



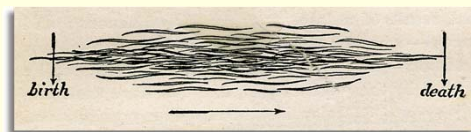
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Structuralism

- *Mental Processes*, for Titchener, are *experiential events of our consciousness* such as seeing the color red, having an idea, hearing a bell, feeling sad; and,
- ...*mind*, is thereby defined by Titchener as "*the sum total of mental processes experienced by the individual between birth and death.*"
- His psychology text had few illustrations. One was of our MIND.
- The illustration is intended to illustrate that our mind, when awake, is filled with "mental processes," *experiential events*, flying into and out of our awareness at a rapid clip.



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Structuralism

- For Titchener, psychology needed to focus its attention exclusively on:
 - the study of the NORMAL, ADULT, HUMAN, MIND.
 - Abnormal minds were out of bounds;
 - ...so were children and animals.
- He was completely opposed to turning psychology into an applied science too early...
- ...and felt that it had to remain focused on the task at hand, namely, ...
 - ...identifying which basic *mental elements* could include under their wing all the mental processes we humans experience in our conscious minds...
 - ...said another way, which *mental elements* were *absolutely the most basic*.
- In short, the purpose of structuralism was to dissect the human mind and examine its STRUCTURE ...
 - ...in a manner similar to what an anatomist does when she dissects a body part, e.g., a human liver, to discover its components.

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Structuralism

- Using the research method called *analytic introspection* with trained *introspectionists*, and,
- ...by means of extensive research, Titchener, and other structuralists, ultimately concluded that the most basic classes of *elements of conscious experience* were three in number:
 - Sensations
 - Images
 - Affections

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Sensations

- **Sensations** are the *elements of perception* and arise from our senses.
 - *Sensations*, like *images* and *affections*, possess the attributes of *quality*, by means of which we name the sensations, e.g., *pink, warm, sour, B-flat*;
 - *...intensity* by means of which we recognize the strength of a sensation, e.g., a tone may be loud or faint, an odor weak or strong, etc.
 - *...duration*; and,
 - *...clearness*.

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Images

- **Images** are the *elements of ideas*
 - *Images* are viewed as similar to *sensations* in consciousness BUT they occur when a sensory stimulus is withdrawn or absent.
 - Furthermore, *images*, like *sensations*, can be associated with every sense; but, unlike *sensations*,...
 - ...they may also be described uniquely as
 - *recurrent*,
 - *hallucinatory*,
 - *dream-like*, or
 - *associated with memory*.

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Affections

- **Affections** are the *elements of emotions*
 - Affections always have only one of two qualities, *pleasantness* or *unpleasantness*.
 - Furthermore, *affections* are distinguished from *sensations* by the fact that *they lack vividness* and *extension*...
 - ...meaning they lack the physical dimensionality associated with sensed objects in the external world.

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America and Functionalism

- For more than two decades the Leipzig-Cornell psychology product, Titchener's interpretation of Wundt's psychology,...
 - ...was the model against which all other psychology's were compared.
- Titchener's monopoly on what was appropriately studied by psychologists,
 - ...his dogmatic insistence that no applied psychology was possible until more was learned about our "mental elements,"...
 - ...was resented by Americans who wanted their science to DO something to improve society...
 - ...and so structuralism was challenged.
- The challenge came from no single person, however, but, rather from a disconnected group of American psychologists fed up with being told what to do by the overbearing Germanic professor from Cornell.


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Functionalist Psychologists


- Among those who rose to the challenge were:
 - [John Dewey](#)
 - [James Angell](#)
 - [Harvey Carr](#)
 - [William James](#)
- Dewey & Carr were at the University of Chicago.
- Angell was president of Yale.
- James was at Harvard.



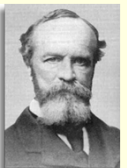
Dewey



Angell



Carr



James

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Subject Matter & Research Goals

- Whereas the *structuralists* were interested in discovering the mind's elemental structures like an anatomist dissecting a human liver...
- ...the *functionalists* were not only interested in why we have a mind in the first place, what its evolutionary purpose was; but,
- ...like a physiologist who is interested in how a human liver works, the *functionalists* were interested in HOW THE MIND WORKS, how it functions!

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Subject Matter & Research Goals

- The early *functionalists* were also practical-minded and wanted their psychology to find the means to improve society.
 - Titchener, by contrast, wished his psychology to stand clear of anything purely *useful*.
- They were influenced by Darwin's evolutionary theory, and sought to learn why the mind evolved the way it did.
- And, in contrast to Titchener's *structuralism*, *functionalists* wanted their psychology to make room for research on...
 - ...children...
 - ...abnormal minds...
 - ...animal "minds"...
 - ...and other emerging psychological areas of interest in the early years of the 1900's.

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Subject Matter & Research Goals

- For the *functionalists*, the subject matter for psychology should be “*mental activity*” which they took to mean...
 - thinking
 - feeling
 - imagining
 - perceiving and the like...
- ...not, Titchener’s *elementary mental processes* such as sensing red, sweet, B-flat, warmth, and so on.

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Subject Matter & Research Goals

- Finally, while structuralists spent their research time mainly in the laboratory,
 - ...functionalists such as Hall and Dewey wished to investigate practical subjects such as:
 - mental testing
 - child development
 - the effectiveness of educational practices; and,
 - behavioral differences between the sexes...
 - ...the latter interest serving to attract women to the field.

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Trouble in the “Schools”

- Although *structuralists* relied completely on *analytic introspection* to gather their data...
- ...*functionalists* used the method occasionally as well even though their methodology went beyond it.
- However, problems soon arose with *introspection* due to its obvious *subjectivity*, a characteristic that has no place in an *objective* science.
- Mental processes, which are ultimately private events, are inherently subjective and worse, unverifiable.
- This realization led to disillusionment within psychology and a dramatic proposal for a new model.

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The “Behaviorist Manifesto”

- In 1913 a milestone technical article entitled *Psychology as the Behaviorist Views It*,
- ...*John B. Watson* turned the psychology of his time completely on its head!



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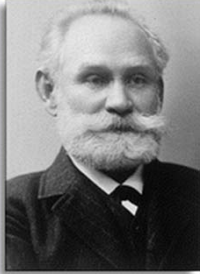
The “Behaviorist Manifesto”

- He wrote:
 - “Psychology as the behaviorist views it is a purely objective experimental branch of natural science.
 - Its theoretical goal is the prediction and control of behavior.
 - Introspection forms no essential part of its methods,...
 - nor is the scientific value of its data dependent upon... interpretation in terms of consciousness.
 - The behaviorist [,furthermore,]... recognizes no dividing line between man and ...[animals].

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Psychology Changes Direction

- Watson’s challenge to psychology was taken up enthusiastically by many of his contemporaries.
- His proposal for an objective psychology, seeking to *describe*, *understand*, *predict*, and sometimes *control* observable behavior caught on.
- And, it was *Ivan Pavlov’s* classical conditioning model that Watson would adopt as his own.
- Watson’s *behaviorism* focused on studying how behavior was *learned*;
- ...on how classical conditioning could explain it all; and,
- ...why the environment, our *nurture*, was the *all important controlling source* for human behavior and not our *nature*, our heredity.



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Psychology Changes Direction


- Watson’s behaviorist position set the entire field of psychology on its head after 1913 and dominated the science for the next 60 years.
- Research on mental processes decreased immediately and did not attract psychologists again until interest in mental processes reemerged in the 1970’s in association with the rise of the then new field of cognitive psychology.
- But there were a few who held on to “mind” as a valuable object of study after Watson.
- They were the members of the *Gestalt School*.


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Gestalt Psychology

- The *Gestalt Psychologists* who held out for continuing to study mind and mental processes despite Watson’s new “behaviorism” were:
 - *Max Wertheimer*,
 - *Wolfgang Köhler*, and,
 - *Kurt Koffka*.







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Gestalt Psychology

- Like *functionalism* and *behaviorism*, *Gestalt psychology* arose in the form of a complaint.
- *Functionalism* complained about *structuralism*...
- *Behaviorism* complained about *functionalism* and *structuralism*...
 - ...*Gestalt psychology* found fault with all three.

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Gestalt Psychology

- The Gestalt position in psychology is highly complex given the fact that they found fault with all the then dominant "schools."
- However, their principle gripe was against what they called the *elementarism in psychology*...
 - ...which they leveled mainly at the *structuralists*.
- By *elementarism* they meant the view, mainly of the *structuralists*, that the mind...
 - ...is a mere collection of elementary units.
- Titchener's *sensations*, *images*, and *affections* were NOT the raw materials of mind; but, rather, they believed, were...
 - ...only the byproducts of their method, introspection.

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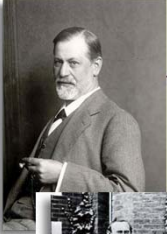

Gestalt Psychology

- The mind, the Gestalt school believed, when engaged in complex activities such as
 - ...thinking, reasoning, perceiving, or remembering...
- ...was not demonstrating activities that were the mere additive products, the sums, of its collective elemental parts,
- ... but instead demonstrated a mind...
 - ... functioning on a higher unitary *Holistic* level.
- For *Gestalt psychology*, THE WHOLE [mind] IS GREATER THAN THE SUM OF ITS PARTS.

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Psychoanalysis

- During the last decade of the 19th century **Sigmund Freud** was formulating a completely unique view of personality & mind.
- Then, in 1909, **G. Stanley Hall**, president of Clark University in Worcester, MA ...
- ...invited Freud to Worcester to a conference celebrating Clark's 20th anniversary...
- ...and now a 5th "school" entered the scene!

Freud at Clark University, Worcester, Massachusetts in 1909
Sigmund Freud, G. Stanley Hall, Carl Jung
Back row Abraham A. Brill, Ernest Jones, Sandor Ferenczi

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Psychoanalysis

- Psychoanalysis was complex and is actually three theories in one. It is...
 - ...a unique theory of personality;
 - ...a specific type of psychotherapy; and,
 - ...a specific, though unflattering, theory of human nature.
- Its dominant feature is *unconscious determinism* and...
- ...it holds the view that our adult persona is due to a combination of *instinctual drives* and *developmental events* that occurred principally during the first six years or so of our life.


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Psychoanalysis

- Psychoanalysis, a theory based on *case studies* and not lab research, ...
 - ...postulated that the mind was composed of multiple levels of consciousness;
 - ...that our personality was composed of multiple parts;
 - ...that we evolved and were influenced by events in specific psychosexual developmental stages early in life; and, that
 - ...we are largely NOT master's of our own domain, i.e.,
 - ...our behavior occurs largely as a result of *unconscious forces* beyond our conscious control.


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Women Pioneers in the History of Psychology



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Mary Whiton Calkins (1863-1930)



MARY WHITON CALKINS

- A student of William James at Harvard, Calkins founded one of the first psychology labs at Wellesley College in 1891.
- She invented a widely used technique for studying memory and...
- Became the first woman to serve as president of the *American Psychological Association*.
- Ironically, she never received her Ph.D. in psychology.
- Because she was a woman, Harvard only reluctantly allowed her to take classes as a "guest student."
- Upon completion of her studies, Harvard offered her a degree from its sister school, Radcliffe.
- She told them to "keep it" since she believed it perpetuated the unequal treatment of the sexes.

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Margaret Floy Washburn(1871-1939)



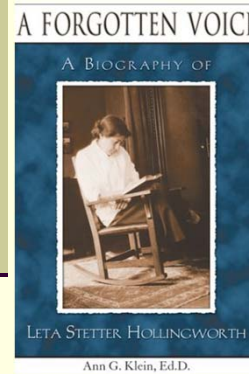
- Washburn was the first woman to receive a Ph.D. in psychology.
- In 1908, furthermore, she wrote the highly influential book, *The Animal Mind*, which served as an impetus to the subsequent emergence of *Behaviorism* and...
 - ...it became standard reading for several generations of psychologists.
- In 1921 she became the second woman to serve as president of the *American Psychological Association*.
- She studied under James McKeen Cattell at Columbia, but like Mary Calkins, she attended only unofficially as a "hearer."
- She ultimately obtained her Ph.D. from Cornell.
- Like Mary Calkins at Wellesley, Margaret spent her whole professional career at a women's college, Vassar.

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Leta Stetter Hollingworth(1886-1939)



- Hollingworth did pioneering work on adolescent development, mental retardation, and gifted children.
- In fact, Hollingworth was the first person to use the word "gifted" to refer to youngsters scoring exceptionally high on IQ tests.
- She was also instrumental in debunking then popular theories supporting the claim that women were inferior to men in certain respects.
- She found no evidence that sex differences limited women's intellectual and career abilities, attributing any such differences to sociological limitations.
- Her careful collection of objective data on gender differences forced other scientists to subject other popular untested beliefs about the sexes to skeptical, empirical examination.
- She earned her Ph.D. in 1916 under Edward L. Thorndike at Columbia University.

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Concluding Statement

- Throughout the 20th century **Psychoanalysis** and **Behaviorism** would remain influential while...
 - **Functionalism** would drift off center stage and be "absorbed" by **Behaviorism**.
- **Structuralism** & **Gestalt Psychology** would diminish in importance early on only to reemerge late in the 20th century as the modern field of **Cognitive Psychology**...
 - which then took center stage.
- **Behaviorism** would go beyond J. B. Watson's Classical Conditioning model to include other models, particularly B.F. Skinner's Operant Conditioning; and,
- Freud's unique theory would be modified by a others who disagreed with one or more of his original points of view.

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