

PSYC400-01  
History & Systems  
Thomas E. Van Cantfort, Ph.D.



Wilhelm Wundt

Wilhelm Wundt



### The Founding of Psychology Wilhelm Wundt

- The formal beginning of modern experimental psychology are traced to the year 1879,
  - when Wilhelm Wundt established a laboratory at the University of Leipzig.
  - Many of the conceptual and methodological tools for the new discipline had already been established by
    - Weber,
    - Fechner, and
    - Helmholtz.
- What remained was for someone with a vision, and with knowledge of the available tools,
  - to tackle the difficulty and risky business of agitating for institutional space and recognition. L

### The Founding of Psychology Wilhelm Wundt (continued)

- Wilhelm Maximilian Wundt (1832-1920)** had the requisite, vision, knowledge, and energy for such an undertaking.
  - Wundt's efforts were to have monumental consequences.
  - From a single laboratory room on the Leipzig campus, Wundt became the key player in launching a new discipline that was to be international in scope.
  - Who would have predicted, that within a century, a course in Psychology would be required for many university majors or that psychology as a major subject would be among the most popular on university campuses. L

### The Founding of Psychology Wilhelm Wundt (continued)

- In the *Principles of Physiological Psychology*, Wundt speculated about the evolution of mental function.
  - He rejected the extreme positions of **Hylozoism**
    - the view that mind is manifested in all material movement
    - for example, even the falling of a rock
  - and the Cartesian dualistic view that only humans have mental functions.
- Wundt believed that the lower limits of mental function are illustrated in movements that have a **voluntary basis**. L

### The Founding of Psychology Wilhelm Wundt (continued)

- He pointed out that voluntary movement, unlike simple reflexes or vegetative function (like respiration),
  - are varied to suit varying conditions, and brought into connection with sense-impressions previously secured.
  - He gave an unlikely example:
    - the amoeba, which is regarded morphologically as a naked cell, will sometime return after a short interval to the starch grains that it has come upon in the course of its wandering.
  - Wundt noted that such a phenomenon argues for continuity in mental processes.
  - He believed that the origin of mental processes dated to the origin of life itself. L

## The Founding of Psychology

### Wilhelm Wundt (continued)

- Wundt also speculated about the **metaphysical** or **ontological** status of mental processes.
- He recognized the popular assumption that the mind is a substance or a real being,
  - but he argued that such an assumption is unnecessary.
  - He noted that we do not treat virtue or honor as substance,
  - yet that does not prevent our doing intelligent and logical work on these topics.
  - In a similar manner, we may simply treat mind as the logical subject of internal experience. **L**

## The Founding of Psychology

### Voluntarism

- The name Wundt preferred for his system of thought was **voluntarism**.
- At the outset, it is important to point out that voluntarism is not the same thing as free will.
  - Wundt pointed out in his *Ethics* that to be free, an action must be voluntary.
  - It does not follow, however, that all voluntary acts are free.
  - Wundt specifically declared that **volition** was a necessary but not a sufficient condition for freedom.
    - Thus, an insane person may balance motives one against another, and proceed with thoughtful circumspection, yet do not call his decisions free. **L**

## The Founding of Psychology

### Voluntarism (continued)

- Wundt's voluntarism specifies what it is that psychologists study.
- We study those experiences and behaviors that are varied to meet changing circumstances on the basis of past learning.
  - Wundt argued that voluntary actions are not mechanical; rather,
  - they adapt in a flexible manner to changing circumstances.
- By such a definition, the quest for food in most species provides an example of voluntary behavior. **L**

## The Founding of Psychology

### Voluntarism (continued)

- The successful hunter must display a proper sense of camouflage, timing, inhibition, and appropriate speed.
- The hunting animal must be flexible and adapt quickly to subtle clues.
- Hunting behaviors are highly purposeful and goal directed, but not necessarily examples of free will.
- Such behaviors are varied, however, to meet changing circumstances and are thus examples of voluntary behavior. **L**

## The Founding of Psychology

### Wundt's Laboratory

- Wundt's laboratory research was focused largely on sensation, perception, and reaction time.
- Nevertheless, there were studies conducted on such topics as attention, emotion, association, and dreams.
- Further, many of the dissertations directed by Wundt were on topics in philosophy.
- Certain terms occur again and again throughout the corpus of Wundt's experimental work.
- Such terms represent themes in his thinking and are key to understanding the work of the laboratory. **L**

## The Founding of Psychology

### Wundt's Laboratory (continued)

- Definition of Psychology.**
  - As far as the laboratory is concerned, Wundt defined psychology as a science that consciousness investigates
    - "the facts of **consciousness**."
  - He pointed out that psychology has two tasks:
    - The first is to discover the elements of consciousness and
    - the second is to discover the combinations that elements undergo and the laws that regulate combinations.
  - He referred to a combination of elements as **psychic compound**. **L**

## The Founding of Psychology

### Wundt's Laboratory (continued)

#### Elements.

- Wundt believed that there are mental elements, or pure sensations such as the sensation of the beat of a metronome.
- However, he recognized that a single simple sensation on the psychological side
  - that is, a psychological element
- is by no means simple on the physiological side.
- Nevertheless, we may treat simple sensations
  - blueness, redness, sweetness, etc.
- as elements. L

## The Founding of Psychology

### Wundt's Laboratory (continued)

#### Sensation and Perceptions.

- Wundt defined sensation as an element of consciousness.
- In addition to sensations there are **perceptions** and **ideas**.
  - He noted that the term perception generally refers to combinations of outward sense impression
    - An object of a particular shape and color may be called an apple.
  - An idea, by contrast, generally refers to combinations that may come from memory, previous association, and so on. L

## The Founding of Psychology

### Wundt's Laboratory (continued)

#### Association and Apperception.

- Wundt believed that compounds or combinations of elements may be passive or active.
- He described passive combinations as **associations** and active combinations as **apperception**.
- The distinction between association and apperception is important in Wundt's thought and carries implications for his larger psychological system.
  - Wundt pointed out that a simple series of words such as school, house, garden, build, stones, ground, hard, soft, long, see, harvest, rain, move and pain illustrate association. L

## The Founding of Psychology

### Wundt's Laboratory (continued)

- Compare this with the context from the seventh book of Goethe's *Wilhelm Meister*:
  - Spring had come in all its glory. A spring thunderstorm, that had been threatening the whole day long, passed angrily over the hills.
- What is the essential difference between these series?
- The first illustrates associations, but they are haphazard, aimless, not well connected, and moderately intelligent.
- The second illustrates apperception marked by intelligent direction within a larger context.
- Apperception is characterized by activity with intelligent direction and inner unity - these are lacking in association. L

## The Founding of Psychology

### The Tridimensional Theory of Feeling

- In addition to concern with the more cognitive concepts such as sensation, perception, ideas, associations, and apperceptions, Wundt was deeply interested in feelings.
- One of the most obvious observations we can make about sensations or perceptions is that they may be pleasant or unpleasant, agreeable or disagreeable.
- Wundt warned that feelings must not be overlooked because they are involved in other psychological processes such as memory, imagination, perception, and cognition. L

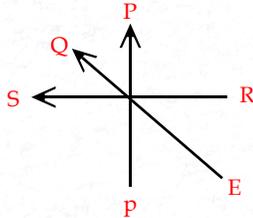
## The Founding of Psychology

### The Tridimensional Theory of Feeling (continued)

- Wundt identified three fundamental dimensions of feelings:
  - pleasure and pain,
  - strain and relaxation, and
  - excitation and quiescence.
- Certain sensations reliably result in specific feelings.
- Thus, a taste like bitter or a smell like ammonia is unpleasant almost to the point of pain, whereas
  - sweetness is usually pleasurable.
- Wundt noted that red is exciting and blue is quieting.
  - Colors, like music, may produce relaxation or strain. L

## The Founding of Psychology

### The Tridimensional Theory of Feeling (continued)



## The Founding of Psychology

### The Tridimensional Theory of Feeling (continued)

- Rarely are feelings isolated or partial with respect to the dimensions specified by Wundt.
- Instead, they combined to form a compound.
  - Thus, a given sensation may be pleasurable and exciting or pleasurable and relaxing.
  - Varieties of combinations are possible.
    - < So-called emotions such as joy or hope represent pleasurable tied to a particular cognitive content.
    - < Anger or fear may represent feeling of strain and unpleasantness tied to particular cognitive content. L

## The Founding of Psychology

### The Principle of Creative Synthesis

- While Wundt hoped to identify the elements of consciousness and to discover the laws that govern connections of elements,
  - he nevertheless believed that there was inherent indeterminations in psychic compounds.
  - In other words, there is real novelty and real creativity in higher mental operations.
  - Wundt's term for such novelty is the **Principle of Creative Synthesis**.
  - He wrote that this principle refers to the fact that in all psychical combinations,
    - the product is not a mere sum of the separate elements that compose such combinations,
    - but it represents a new creation. L

## The Founding of Psychology

### The Principle of Creative Synthesis (continued)

- Wundt noted that one of the major manifestations of creative synthesis is illustrated in the principle of the **heterogeneity of ends**.
  - This principle is exemplified in the emergence of new motives during the course of a chain of activities.
    - < For example, one may accept the invitation of a friend to attend an art show.
    - < Initially, the motive is simply the anticipation of a pleasant evening in good friendship.
    - < But in the course of the evening, one encounters a highly desirable work of art and wishes to purchase it. L

## The Founding of Psychology

### The Principle of Creative Synthesis (continued)

- < A whole new set of motives now enters the picture and now exist alongside and in addition to the original motive.
- Heterogeneity of End - Wundt's position that an ongoing behavioral sequence must often be understood in terms of an ever-shifting patterns of primary and secondary goals.
  - < For example, a cat chasing a mouse may suddenly find it necessary to compete with a partner,
  - < overcome an unexpected barrier, or avoid a danger.
  - < Ends, goals, and purposes keep changing. L

## The Founding of Psychology

### Wilhelm Wundt

- If there is one central dominating figure in the history of psychology, it is Wilhelm Wundt.
- Under his leadership, psychology gained status as a separate discipline in a major institution of learning.
- Moreover, the new discipline was successful in term of institutional evaluative criteria.
- Undergraduates packed into classrooms and graduate students from around the world flocked to the Leipzig laboratory. L

## The Founding of Psychology

### Wilhelm Wundt (continued)

- Under Wundt's guidance, the new discipline was soon on a firm footing and the Leipzig experiment proved a viable model for other universities.
- Psychology quickly gained recognition in other major universities. **M**