

## **Psych 401: Exam 1 Review**

Below are major points to know for your exam. Exam questions will come from both lecture and the text book (Chapters 1-4). There will likely be an essay question related to the terms listed under Chapter 1, and an essay about Gustav Fechner (see book questions about Gustav Fechner).

Be familiar with the role of philosophy and physiology in the development of psychology

When proper names are mentioned, be sure to know each in terms of their assumptions, ideas, methods, and major contributions to the field of psychology.

### **Chapter 1 – history**

- School of thought
- Zeitgeist
- Paradigm

### **Chapter 2 – Philosophical influences on psychology**

- The spirit of mechanism
- The clock metaphor
- Determinism
- Reductionism
- Automata
- People as machines
- The calculating engine
- Empiricism
- Positivism

#### Rene Descartes (and his ideas)

- Definition of mind vs. body
- The mind-body problem
- Function of mind, function of body, mind-body interaction (how interact, what results from this interaction)
- Reflex action theory
- The doctrine of innate ideas
- Derived ideas
- Innate ideas
- Stance on nature/nurture
- Stance on monism/dualism

#### John Locke (and his ideas)

- What is substance and function of mind
- Can have mind without experience?
- Association (how do we learn?)
- Simple ideas
- Complex ideas
- Primary qualities
- Secondary qualities

### Locke continued...

- Subjective vs. objective reality
- Knowledge based on sensation
- Knowledge based on reflection
- Stance on nature/nurture
- Stance on monism/dualism
- How do we gain knowledge? Does it reflect reality in the objects?
- How views differ from Descartes (e.g., in terms of innate/derived ideas; substance of mind)
- How views differ from George Berkeley and David Hume

### George Berkeley (and his ideas)

- Mentalism
- Primary and secondary qualities (what are his beliefs regarding qualities of objects?)
- Subjective vs. objective reality
- Stance on monism/dualism
- Stance on nature/nurture
- How do we gain knowledge? Does it reflect reality in the objects?
- How views differ from John Locke and David Hume
- The association of sensations
- Views on depth perception (learned or innate?)

### David Hume (and his ideas)

- Hume's skepticism (related to concept of causality)
- Stance on primary & secondary qualities
- How differ from John Locke and from George Berkeley
  - Is there an objective reality? Does causality exist?
- Impressions and ideas
- Hume's laws of association for mental operations
  - Resemblance
  - Contiguity
  - Causality

### Emanuel Kant (and his ideas—see handout)

- How does he handle Hume's skepticism?
- What do we know *a priori*?
- What inborn capacities do we have according to Kant? What logic does he use to define inborn capacities?

### David Hartley (Associationist)

- Association by contiguity and repetition; what results from this?
- Stance on monism/dualism
- Stance on nature/nurture
- How mind & brain interact
  - Psychophysical parallelism

### James Mill (Associationist)

- Idea of mental physics
- Can complex ideas be reduced back into simple ideas?
- What school of psychology does he later influence?

### John Stuart Mill (Associationist)

Mental Chemistry

Creative synthesis

Can complex ideas be reduced back into simple ideas?

What school of psychology does he latter influence?

The Mechanists: Their assumption of brain and brain function; How differ from the Associationists (in terms of monism/dualism; idea of mind)

### La Mettrie

Views on brain function

Stance on monism/dualism

Stance on nature/nurture

How is knowledge obtained

Brain function—in terms of areas

Brain damage/mental ailments

### Cabinis

Views on brain function

Stance on monism/dualism

Stance on nature/nurture

How is knowledge obtained

Brain function—in terms of areas

Brain damage/mental ailments

Vitalism

How differ from La Mettrie

## **Empiricism's contributions to psychology**

### **Chapter 3 – Physiological Influences on Psychology**

Research on Brain Functions (see text and notes—all!)

Internal mapping of brain functions

External mapping of brain functions

Law of specific nerve energies

Bell-Magendie Law

### Johannes Muller:

Doctrine of Specific Nerve Energies

Extirpation method

Clinical method

Electrical stimulation

Phrenology – Francis Gall, Spurzheim

Procedure used to identify different localized functions of brain

Flaws in assumptions/procedure

What type of research did phrenology inspire?

### Pierre Flourens

What method did he use?

His opposition to phrenology

Pigeon experiments: How did he use them to depose phrenology?

### Broca

What method did he use?

Localization of function

### Gustav Fritsch and Eduard Hitzig

Electrical stimulation of the brain

### Wernicke

Wernicke's Area (discussed in class—not of this period)

### Herman von Helmholtz (and his ideas)

Helmholtz's contributions to psychology: Neural impulse, vision, color vision, attention, and audition.

Young-Helmholtz theory of color vision

### Ernst Weber (and his ideas)

Two-point threshold

Just noticeable difference (JND) and Weber's Law

How ideas influenced Fechner

### Gustav Fechner (and his ideas and contributions to psychology)

Founder of psychophysics

\*\* What was **Fechner's original goal**? Was he successful in achieving this goal? Why was his work so important in establishing Psychology as a separate discipline from philosophy?

(see text book and notes)

\*\* Fechner's Law-- Relationship between intensity of stimulus and intensity of sensation (logarithmic relationship)

Mind and Body as a Quantitative relationship

Status of psychophysics today and psychophysical methods developed by Fechner?

Absolute threshold

Differential threshold

Method of average error

Psychophysics as defined today... how different than how Fechner conceptualized originally?

## **Chapter 4 – The New Psychology**

### Wilhelm Wundt, his assumptions, ideas, goals, and his contributions to psychology

Why considered "Father of Experimental Psychology"

- How did he get Experimental Psychology established as a separate discipline?

Cultural psychology

Wundt's study of conscious experience, conscious contents, what are the 2 dimensions of consciousness? Relationship between consciousness and sensations

Voluntarism

Mediate experiences

Immediate experiences

The method of introspection "experimental introspection"

Experimental methods

Reliability of measures

Elements of conscious experience

Sensations (quality & intensity)

Feelings

Tridimensional theory of feelings

Apperception

Organizing the elements of conscious experience

Wundt's legacy

According to Wundt: What was the focus of psychology, what were the methods, and what were the goals

Herman Ebbinghaus and Elias Muller: their ideas and contributions to psychology

Research on learning and memory

Higher mental processes

How differ from Wundt's assumptions of what we can study (higher vs. lower mental processes)

Nonsense syllables

Forgetting Curve, savings, etc.

How conduct studies

How quantify learning/memory

How results hold up today

How did Muller expand on Ebbinghaus' ideas

Franz Brentano

Act psychology

The study of mental acts

Carl Stumpf

Phenomenology

Oswald Kulpe

How Kulpe's methods differed from Wundt's (higher vs. lower mental processes)

Systematic experimental introspection

Assumptions, methods, findings

Mental set

Imageless thought

The Wurzburg School (Laboratory)