

## Psych Study Guide- Chapters 1,2,3 and 10

Psych—> soul / mind (greek) But what is the mind? mind-brain problems

“Psychology is the systematic study of behavior and experience”

Science is the study of all matter and energy.

Dualism- mind is separate from the brain but controls the body through it (USED TODAY)

Monism- conscious experience is generated by and inseparable from the brain

\*\*\*Study of behavior and experience cant be measured or quantified\*\*\*

People study psych to control people (i.e. military—> sleep)

Free Will- behavior is caused by ones own decision making (runs because theres a car coming)

Determinism- everything has a cause (round ball)

Nature vs. Nurture- genes or environment? what % of each?

Does the environment mess with your head or prove genes wrong? (each row GPA test—> would it work?)

\*\*\*It depends\*\* What does it depend on?

Good measurements= good research

correlation does not indicate causation (i.e. washes car—> rains, woman= bad drivers...doing more driving?)

Immanuel Kant= perception—> observations through senses. things couldn't be categorized without senses. reasoning cant be studied or measured. thinking about thinking changes thinking and you cant study something that is constantly changing.

William Wundt= 1800s physician, physiologist (research). \*\*1st experimental lab—> back to a science. **Introspection**- You should measure your own thoughts and report with senses—> 1. quality (shapes) 2. intensity 3. feeling/tone (tension, pleasant vs unpleasant, activity). there is a breakdown— cant just say chalk, have to say why is it chalk? What are thoughts/ conclusions made up of?

Edward B. Titchener= Wundt's grad student—> USA. **Structuralism**- Adults mind's breakdown but there was no true measurement so it stopped.

William James- book “The Principles of Psychology”. Influenced John Dewey (individualized education) What the mind does not what is is. **Functionalism**- how people produce useful behaviors and thoughts that help us survive/adapt.= why are they different? mental thought makes you FUNCTIONAL.

### **Structuralism**

Analyze consciousness with the building blocks of experience (senses, feelings) and how they form a whole

(Introspection)

Wundt and Titchener

**Vs.**

### **Functionalism**

The purpose of consciousness and behavior —> adapting

James and Darwin

John B. Watson= behaviorism—> measurable behaviors, not the mind. Mind= black box. People by experiences ONLY, not by genes. thought he could train kids to be whatever he wanted If I do this, than they'll learn—> predict and control behaviors. cat & can opener... probably will happen but not 100%

Freud= (The couch) not that important in today's theories (sex) unconscious mind—> animal origins= unscientific. singled out one culture

**Structuralism—>**

**Breakdown of mind**

**Functionalism—>**

**Actions/ Survival**

**Behaviorism**

**Actions only**

Galton= heredity, rich parents= successful kids b/c genes. Eugenics. Failed intelligence test

Alfred Binet- intelligence test (1905) = template for many other tests (IQ) contrary to his wishes

Clark Hull= Rats in mazes—> too complicated

Today, culture is taken into account. Example—> some people think fish go with water but we say it doesn't matter—> trained to think differently= misunderstandings with intelligence

Darwin= Descent of Man, Origins of Species. Comparative Psych—> species to species. principles of reward vs. punishments.

- Scientists had to consider basic features held in common by animals, such as thinking and emotions
- Comparative psychologists specialists who compare behavior across species, use this perspective

Health Psych—> influences behaviors (smoking, drinking, sex, diet)

Positive Psych- happiness and positivity

Sport Psych- goals/training

Mary Calkins= Harvard's best psych grad but didn't earn a PhD because she was a woman. Became president of American Psychology Association. so did Margaret Washburn.

Psychologists have stringent limits (disabilities, ethics, ect...)

Psych is a science. nothing is 100%. Somethings are "we don't know YET". science= study of matter and energy—> observation and experiment

Hypothesis—> testable prediction. want as close to the truth as possible which = a fact. theory.

Replicable results— anyone can obtain, at least approximately, by following the same steps

Meta-analysis— combines the results of many studies and analyzes them as one large one

Theory— broader than hypothesis. makes accurate predictions about reality. starts with assumptions, not a guess.

Karl Popper= purpose of research is to prove theories wrong

Falsifiable— so clear that we can see what could count against it...if anything. example- nothing has proven gravity wrong. saying all objects fall is falsifiable, saying some objects fall is not.

Burden of proof is put on the person trying to prove it. trying to prove all objects fall

Parsimony- SIM= simple. occams razor. hans the horse parsimonious to say he was using cues

Anecdotes peoples reports that may happen to come true. not true evidence. selective memory. prophet Nostradamus made really accurate but vague predictions.

Operational definition- gives a numerical value to things like emotion. frowns per min- sadness.

Convenience sample- group chosen because of its ease to study

Representative sample- resembles the population

Random sample- everyone has an equal chance of being selected. hardest to achieve but best

Cross-cultural sample- people from at least two cultures, language barriers ect. but necessary

Naturalistic observation- unchanged environment, but might know you're there. Jane Goodall

placebo control

Double blind- instructor for the teacher doesn't even know the test

Blind experiment- not knowing the test when giving it.

Case study- feral children— study when its already happened to someone because would never be able to make a study for it. Feral Children. history of it is unknown but very rare research

Surveys & Interviews - Kinsey. fast and convenient but surveyor might influence results/ not represent well

Correlation coefficient- 0= no relationship +1= both increase, -1= one increasing, one decreasing.

Illusory Correlation- seems as they have a relationship due to weakly related events (i.e. sugar) correlation doesn't= causation (i.e. seatbelt sign does not cause turbulence) (depression, sleep)

descriptive statistics- mathematical summaries of results

mode- most frequent

range- highest from lowest

standard deviation- amount of variation. less variation=lower SD. how spread out the scores are

Inferential statistics- based on a small pop making assumptions about a large similar one

$p < .05$  —> random results have less than 5% chance of being actual results. Statistically significant— less than .05... unlikely to have come by chance

95% confidence interval-

we want a small p value and a small 95% confidence.

quasi- experiment- natural (i.e. hurricanes, girls vs. boys)

Institutional Research Board Approval- review research proposals.

APA Standards

IACUC- animal research

confound- something that cant be controlled but can get in the way of an experiment (i.e. mood, introvert, sleep, attitude, beliefs, weather, patience, ect...)

Glia- cells that support neurons (insulating them, synchronizing them, removing waste)

Neurons (communication)—3 parts

1) cell body (nucleus) 2) dendrites (tree)- branches talking to other neurons 3) axon (long thin fiber) covered with myelin (fat)—speeds impulses along axon

axons transmit, dendrites receive

we constantly grow and shed dendrites and axons due to experience and learning

action potential- excitation that travels along an axon at a constant strength - on or off— membrane needs to change

sodium enters a cell (excitation)—> potassium leaves (resting)

novocain=clogging sodium gates = resting= not reaching brain

mouse will react faster than giraffe because smaller