<table>
<thead>
<tr>
<th>Approach</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral</td>
<td>How we learn observable responses</td>
</tr>
<tr>
<td>Cognitive</td>
<td>How we encode, process, store, and retrieve information</td>
</tr>
<tr>
<td>Humanistic</td>
<td>How we meet our needs for love and acceptance and achieve self-fulfillment</td>
</tr>
<tr>
<td>Social-cultural</td>
<td>How behavior and thinking vary across situations and cultures</td>
</tr>
<tr>
<td>Approach</td>
<td>Focus</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Biological</td>
<td>How the body and brain enable emotions, memories, and sensory experiences; how genes combine with environment to influence individual differences</td>
</tr>
<tr>
<td>Evolutionary</td>
<td>How the natural selection of traits promoted the survival of genes</td>
</tr>
<tr>
<td>Psychodynamic</td>
<td>How behavior springs from unconscious drives and conflicts</td>
</tr>
</tbody>
</table>
Experimental Design

Types of Variables

**Independent**
The one thing you change. Limit to only one in an experiment.
Example:
The liquid used to water each plant.

**Dependent**
The change that happens because of the independent variable.
Example:
The height or health of the plant.

**Controlled**
Everything you want to remain constant and unchanging.
Example:
Type of plant used, pot size, amount of liquid, soil type, etc.

Graph Setup

Y axis = Dependent Variable
X axis = Independent Variable

“Well, I guess we’re the control group.”

Control group = no treatment
Correlation Coefficient
Shows Strength & Direction of Correlation

Strong
-1.0
-0.5
Weak
0.0
Zero
Weak
Positive
Correlation
Correlation

Negative
Correlation

Positive
Correlation

http://www.PsychologyNotesHQ.Com

http://www.PsychologyNotesHQ.Com
IQ tests: mean = 100
Standard deviation = 15
Functional Areas of the Brain

Motor Area
- control of voluntary muscles

Sensory Area
- skin sensations (temperature, pressure, pain)

Frontal Lobe
- movement
- problem solving
- concentrating, thinking
- behaviour, personality, mood

Broca’s Area
- speech control

Temporal Lobe
- hearing
- language
- memory

Brain Stem
- consciousness
- breathing
- heart rate

Parietal Lobe
- sensations
- language
- perception
- body awareness
- attention

Occipital Lobe
- vision
- perception

Wernicke’s Area
- language comprehension

Cerebellum
- posture
- balance
- coordination of movement

*medulla*
Cerebral cortex
- passes information between the left and right hemispheres

Corpus callosum
- passes information between the left and right hemispheres

Ventricles
- contain cerebrospinal fluid

Thalamus
- passes sensory information to the cerebral cortex

Cerebellum
- controls co-ordination of movement

Pituitary gland
- regulates the body’s hormone production

Hypothalamus
- controls the pituitary gland in order to regulate temperature, blood pressure, appetite, wakefulness and sexual arousal

Brain stem
- includes the midbrain, medulla and pons, controlling breathing, heart rate, consciousness, blood circulation, basic motor responses, relaying sensory information and regulating the sleep-wake cycle
The Neuron

Cell body (the cell’s life-support center)

Dendrites (receive messages from other cells)

Axon (passes messages away from the cell body to other neurons, muscles, or glands)

Terminal branches of axon (form junctions with other cells)

Neural impulse (electrical signal traveling down the axon)

Myelin sheath (covers the axon of some neurons and helps speed neural impulses)
<table>
<thead>
<tr>
<th>Neurotransmitter</th>
<th>Function</th>
<th>Examples of Malfunctions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylcholine (ACh)</td>
<td>Enables muscle action, learning, and memory.</td>
<td>With Alzheimer's disease, ACh-producing neurons deteriorate.</td>
</tr>
<tr>
<td>Dopamine</td>
<td>Influences movement, learning, attention, and emotion.</td>
<td>Excess dopamine receptor activity is linked to schizophrenia. Starved of dopamine, the brain produces the tremors and decreased mobility of Parkinson's disease.</td>
</tr>
<tr>
<td>Serotonin</td>
<td>Affects mood, hunger, sleep, and arousal.</td>
<td>Undersupply linked to depression. Prozac and some other antidepressant drugs raise serotonin levels.</td>
</tr>
<tr>
<td>Norepinephrine</td>
<td>Helps control alertness and arousal.</td>
<td>Undersupply can depress mood.</td>
</tr>
<tr>
<td>GABA (gamma-aminobutyric acid)</td>
<td>A major inhibitory neurotransmitter.</td>
<td>Undersupply linked to seizures, tremors, and insomnia.</td>
</tr>
<tr>
<td>Glutamate</td>
<td>A major excitatory neurotransmitter; involved in memory.</td>
<td>Oversupply can overstimulate brain, producing migraines or seizures (which is why some people avoid MSG, monosodium glutamate, in food).</td>
</tr>
</tbody>
</table>
Nervous System

Central Nervous System (CNS)
- Brain: Receives and processes sensory information, initiates responses, stores, memories, generates thoughts and emotions
- Spinal cord: Conducts signals to and from the brain, controls reflex activities

Peripheral Nervous System (PNS)
- Motor Neurons: CNS to muscles and glands
- Sensory Neurons: Sensory organs to CNS

Somatic Nervous System
- Controls voluntary movements

Autonomic Nervous System
- Sympathetic Division: “Fight or Flight”
- Parasympathetic Division: “Rest or Digest”
Schema Explaining How Parasympathetic and Sympathetic Nervous Systems Regulate Functioning Organs
The Human Eye

Ring of muscle: controls the shape of the lens - controls accommodation of the eye. When relaxed the lens is least curved - least powerful.

Pupil: hole in the iris that lets the light in - like the aperture of a camera - automatically responds to light level.

Iris: coloured ring of muscle that controls the size of the pupil.

Jelly lens: to fine-focus rays on the retina by accommodation.

Retina: layer of light sensitive cells (rods and cones) - changes light energy into electrical signals.

Cornea: thick layer of transparent cells that protect the eye and are the principal means of focusing the rays by refraction on entering the eye. Fine tuning of this focusing is done by the lens.

Optic Nerve: carries electrical impulses to the brain, where the image information is processed.
Vision

Need to understand the nature of the physical stimulus (Light) as well as the transducing system (the Eye)

**Light** - is a form of electromagnetic radiation that travels as a wave

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Perceptual Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength</td>
<td>Hue</td>
</tr>
<tr>
<td>Amplitude (Intensity)</td>
<td>Brightness</td>
</tr>
<tr>
<td>Purity (Bandwidth)</td>
<td>Saturation</td>
</tr>
</tbody>
</table>
Color Vision

Trichromatic Theory

Opponent Process Theory
(*explains afterimage)
Parts of the Ear

- Outer ear
- Middle ear
- Inner ear
- Semicircular Canals
- Cochlea
- Eardrum
- Auditory Canal
- Eustachian Tube
## Properties of Sound

<table>
<thead>
<tr>
<th>Physical dimension</th>
<th>Perceptual dimension</th>
<th>Form of sound waves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplitude (intensity)</td>
<td>Loudness</td>
<td>Loud</td>
</tr>
<tr>
<td>Frequency</td>
<td>Pitch</td>
<td>Low</td>
</tr>
<tr>
<td>Complex sounds</td>
<td>Timbre</td>
<td>(Form of sound wave from a clarinet)</td>
</tr>
<tr>
<td>Sense</td>
<td>Stimulus</td>
<td>Sense Organ</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Sight</td>
<td>Light waves</td>
<td>Eye</td>
</tr>
<tr>
<td>Hearing</td>
<td>Sound waves</td>
<td>Ear</td>
</tr>
<tr>
<td>Skin sensations</td>
<td>External contact</td>
<td>Skin</td>
</tr>
<tr>
<td>Smell</td>
<td>Volatile substances</td>
<td>Nose</td>
</tr>
<tr>
<td>Taste</td>
<td>Soluble substances</td>
<td>Tongue</td>
</tr>
<tr>
<td>Vestibular sense</td>
<td>Mechanical and gravitational forces</td>
<td>Inner ear</td>
</tr>
<tr>
<td>Kinesthesis</td>
<td>Body movement</td>
<td>Muscles, tendons,</td>
</tr>
</tbody>
</table>
# Psychoactive Drugs

## TABLE 7.2

### A GUIDE TO SELECTED PSYCHOACTIVE DRUGS

<table>
<thead>
<tr>
<th>Drug</th>
<th>Type</th>
<th>Pleasurable Effects</th>
<th>Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Depressant</td>
<td>Initial high followed by relaxation and disinhibition</td>
<td>Depression, memory loss, organ damage, impaired reactions</td>
</tr>
<tr>
<td>Heroin</td>
<td>Depressant</td>
<td>Rush of euphoria, relief from pain</td>
<td>Depressed physiology, agonizing withdrawal</td>
</tr>
<tr>
<td>Caffeine</td>
<td>Stimulant</td>
<td>Increased alertness and wakefulness</td>
<td>Anxiety, restlessness, and insomnia in high doses; uncomfortable withdrawal</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>Stimulant</td>
<td>Euphoria, alertness, energy</td>
<td>Irritability, insomnia, hypertension, seizures</td>
</tr>
<tr>
<td>(“speed,” “crank,” “ice”)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine</td>
<td>Stimulant</td>
<td>Rush of euphoria, confidence, energy</td>
<td>Cardiovascular stress, suspiciousness, depressive crash</td>
</tr>
<tr>
<td>Nicotine</td>
<td>Stimulant</td>
<td>Arousal and relaxation, sense of well-being</td>
<td>Heart disease, cancer (from tars)</td>
</tr>
<tr>
<td>Marijuana</td>
<td>Mild hallucinogen</td>
<td>Enhanced sensation, relief of pain, distortion of time, relaxation</td>
<td>Lowered sex hormones, disrupted memory, lung damage from smoke</td>
</tr>
</tbody>
</table>
Sleep Cycle

Awake
- Low voltage
- High frequency

Stage 1
- Low voltage
- Mixed frequency

Stage 2
- Sleep spindles
- K complexes

Stage 3
- Mostly slow waves

Stage 4
- Slow waves

REM
- Low voltage, mixed frequency
- Rapid eye movement & muscle atonia

Time of Sleep

0 1 2 3 4 5 6 7 8

After Rechtschaffen & Kales, 1968; Kalat, 2005; Weiten 2004
## Dream Theories

<table>
<thead>
<tr>
<th>Theory</th>
<th>Explanation</th>
<th>Critical Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freud's wish-fulfillment</td>
<td>Dreams provide a “psychic safety valve” — expressing otherwise unacceptable feelings; contain manifest (remembered) content and a deeper layer of latent content — a hidden meaning.</td>
<td>Lacks any scientific support; dreams may be interpreted in many different ways.</td>
</tr>
<tr>
<td>Information-processing</td>
<td>Dreams help us sort out the day’s events and consolidate our memories.</td>
<td>But why do we sometimes dream about things we have not experienced?</td>
</tr>
<tr>
<td>Physiological function</td>
<td>Regular brain stimulation from REM sleep may help develop and preserve neural pathways.</td>
<td>This may be true, but it does not explain why we experience meaningful dreams.</td>
</tr>
<tr>
<td>Activation-synthesis</td>
<td>REM sleep triggers impulses that evoke random visual memories, which our sleeping brain weaves into stories.</td>
<td>The individual’s brain is weaving the stories, which still tells us something about the dreamer.</td>
</tr>
<tr>
<td>Cognitive theory</td>
<td>Dream content reflects dreamers’ cognitive development — their knowledge and understanding.</td>
<td>Does not address the neuroscience of dreams.</td>
</tr>
</tbody>
</table>
Pavlov's Classical Conditioning

1. Before Conditioning
   - Unconditioned Stimulus: Food
   - Unconditioned Response: Salivation
   - Response: Salivation

2. Before Conditioning
   - Neutral Stimulus: Bell
   - No Response: No Salivation

3. During Conditioning
   - Conditioned Stimulus: Bell + Food
   - Conditioned Response: Salivation

4. After Conditioning
   - Conditioned Stimulus: Bell
   - Conditioned Response: Salivation
Watson’s Little Albert Experiment (Classical Conditioning)
Skinner’s Operant Conditioning

4 Consequences of Behaviour

Positive Reinforcement: Consequence adds something; future likelihood of behaviour increases

Behaviour: Studied for test
Consequence: Got an A+
Impact: Will study for the next test

Positive Punishment: Consequence adds something; future likelihood of behaviour decreases

Behaviour: Attempted the half-pipe
Consequence: Sustained a head injury
Impact: Realized you’re too old for this! Won’t try again.

Negative Reinforcement: Consequence removes something; future likelihood of behaviour increases

Behaviour: Took out the trash
Consequence: Foul smell in house went away
Impact: Will continue to discard smelly trash

Negative Punishment: Consequence removes something; future likelihood of behaviour decreases

Behaviour: Driving recklessly
Consequence: License taken away
Impact: Less likely to drive recklessly in future
Bandura’s Observational Learning
Memory

The Memory Model: the way we process and retrieve information

1. **Sensory Memory**
   - Environmental stimuli
   - Information lost if not encoded

2. **Short-Term Memory**
   - Selective attention
   - Information lost if not encoded

3. **Long-Term Memory**
   - Storage
   - Retrieval
   - Information lost due to retrieval failure, interference, decay
Projective Tests

Rorschach Inkblot

Thematic Apperception Test
Theories of Emotion

**Commonsense**
- "I tremble because I feel afraid"
- Stimulus: Dog
- Conscious feeling: Fear
- Autonomic arousal

**James-Lange**
- "I feel afraid because I tremble"
- Stimulus: Dog
- Conscious feeling: Fear
- Autonomic arousal

**Cannon-Bard**
- "The dog makes me tremble and feel afraid"
- Stimulus: Dog
- Subcortical brain activity
- Fear
- Conscious feeling
- Autonomic arousal

**Schachter**
- "I label my trembling as fear because I appraise the situation as dangerous"
- Stimulus: Dog
- Conscious feeling: Fear
- Autonomic arousal
- Appraisal

*Figure 10.23 Theories of emotion*
Selye’s General Adaption Syndrome (response to stress)

Remember: Selye’s 3 stages ARE a GAS

Three reactions or stages of stress
Piaget’s Stages of Cognitive Development

**Stage 1: Sensorimotor Period**
- Coordination of sensory input and motor responses; development of object permanence
- Birth to 2 years

**Stage 2: Preoperational Period**
- Development of symbolic thought marked by irreversibility, centration, and egocentrism
- 2 to 7 years

**Stage 3: Concrete Operational Period**
- Mental operations applied to concrete events; mastery of conservation, hierarchical classification
- 7 to 11 years

**Stage 4: Formal Operational Period**
- Mental operations applied to abstract ideas; logical, systematic thinking
- Age 11 through adulthood
No object permanence

No conservation

No object permanence

egocentrism
Piaget’s Assimilation + Accommodation

A. Banging is a favorite scheme used by babies to explore their world . . .

B. ... And assimilation occurs when they incorporate new objects into the scheme.

C. Accommodation occurs when the new object doesn’t fit the existing scheme.
Stages of Psychosocial Development

- Infant
- Toddler
- Pre-schooler
- Grade-schooler
- Teenager
- Young Adult
- Middle-age Adult
- Older Adult

Proposed by Erik Erikson
## Baumrind’s Parenting Styles

<table>
<thead>
<tr>
<th>Parenting Styles</th>
<th>Supportive</th>
<th>Unsupportive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demanding</strong></td>
<td><strong>Authoritative</strong></td>
<td><strong>Authoritarian</strong></td>
</tr>
<tr>
<td>Parent expects much of child</td>
<td>Relationship is about building mutual trust and respect, both perspectives honored, communication flows both ways</td>
<td>Relationship is about control, differing perspectives are not allowed, meaningful communication generally flows one way</td>
</tr>
<tr>
<td><strong>Undemanding</strong></td>
<td><strong>Permissive</strong></td>
<td><strong>Uninvolved/Neglectful</strong></td>
</tr>
<tr>
<td>Parent expects little of child</td>
<td>Relationship indulges the child, entitlement, little control exercised</td>
<td>Relationship is non-existent, no communication, no parenting</td>
</tr>
<tr>
<td>Trait</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Openness</td>
<td>Being curious, original, intellectual, creative, and open to new ideas.</td>
<td></td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Being organized, systematic, punctual, achievement oriented, and dependable.</td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>Being outgoing, talkative, sociable, and enjoying social situations.</td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>Being affable, tolerant, sensitive, trusting, kind, and warm.</td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>Being anxious, irritable, temperamental, and moody.</td>
<td></td>
</tr>
</tbody>
</table>
Rotter’s Locus of Control

Which is your locus of control?

Internal locus of control
You make things happen.

External locus of control
Things happen to you.
Freud’s Components of Personality

IN PSYCHOLOGY, IT'S

Freud’s theory of the personality

I NEED TO DO A BIT OF PLANNING TO GET IT.
YOU CAN'T HAVE IT. IT'S NOT RIGHT.
I WANT IT NOW!

Id  Ego  Superego
## Defense Mechanisms

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repression</td>
<td>Repression is an unconscious mechanism employed by the ego to keep disturbing or threatening thoughts from becoming conscious.</td>
<td>During the Oedipus complex aggressive thoughts about the same sex parents are repressed</td>
</tr>
<tr>
<td>Denial</td>
<td>Denial involves blocking external events from awareness. If some situation is just too much to handle, the person just refuses to experience it.</td>
<td>For example, smokers may refuse to admit to themselves that smoking is bad for their health.</td>
</tr>
<tr>
<td>Projection</td>
<td>This involves individuals attributing their own unacceptable thoughts, feeling and motives to another person.</td>
<td>You might hate someone, but your superego tells you that such hatred is unacceptable. You can 'solve' the problem by believing that they hate you.</td>
</tr>
<tr>
<td>Displacement</td>
<td>Satisfying an impulse (e.g. aggression) with a substitute object.</td>
<td>Someone who is frustrated by his or her boss at work may go home and kick the dog.</td>
</tr>
<tr>
<td>Regression</td>
<td>This is a movement back in psychological time when one is faced with stress.</td>
<td>A child may begin to suck their thumb again or wet the bed when they need to spend some time in the hospital.</td>
</tr>
<tr>
<td>Sublimation</td>
<td>Satisfying an impulse (e.g. aggression) with a substitute object. In a socially acceptable way.</td>
<td>Sport is an example of putting our emotions (e.g. aggression) into something constructive.</td>
</tr>
</tbody>
</table>
Abraham Harold Maslow (April 1, 1908 - June 8, 1970) was a psychologist who studied positive human qualities and the lives of exemplary people. In 1954, Maslow created the Hierarchy of Human Needs and expressed his theories in his book, Motivation and Personality.

**Self-Actualization** - A person’s motivation to reach his or her full potential. As shown in Maslow’s Hierarchy of Needs, a person’s basic needs must be met before self-actualization can be achieved.
BIPOLAR DISORDER

It is a complex illness. There are several different types and many different symptoms that range from mild to severe.

Bipolar Primary Symptoms:
Dramatic and unpredictable mood swings.

**Mania Symptoms**
- excitement
- restlessness
- increased energy
- racing thoughts
- tendency to make grand and unattainable plans.

**Depression Symptoms**
- irritability
- less need for sleep
- high sex drive
- excessive happiness
- sadness
- irritability
- uncontrollable crying
- change in appetite causing weight loss or gain
- increased need for sleep
- difficulty making decisions
- thoughts of death or suicide.

## Systematic Desensitization

### Table 1

<table>
<thead>
<tr>
<th>Activity</th>
<th>Fear level (0 - 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letting several large dogs lick my face</td>
<td>90</td>
</tr>
<tr>
<td>Petting several dogs in an enclosed space</td>
<td>85</td>
</tr>
<tr>
<td>Letting a large dog lick my face</td>
<td>80</td>
</tr>
<tr>
<td>Giving a large dog a treat</td>
<td>75</td>
</tr>
<tr>
<td>Petting a large dog</td>
<td>70</td>
</tr>
<tr>
<td>Going inside the dog park and letting dogs brush up against me</td>
<td>65</td>
</tr>
<tr>
<td>Going to a dog park and standing outside the park</td>
<td>60</td>
</tr>
<tr>
<td>Watching Animal Planet dog shows</td>
<td>55</td>
</tr>
<tr>
<td>Watching a real-life dog children’s movie</td>
<td>40</td>
</tr>
<tr>
<td>Watching a cartoon dog movie</td>
<td>35</td>
</tr>
<tr>
<td>Looking at pictures of small and large dogs</td>
<td>30</td>
</tr>
</tbody>
</table>
Milgram Experiment

*unethical - coercion
conformity

- to be or become similar in behavior, form, nature, or character
- the act of changing oneself to fit agreed upon social expectations, established customs, and ideals; to avoid standing out

*Asch experiment*
Social Loafing

GROUP PROJECT?

THEY GOT THIS

Just loafing around
In a problem situation, the average person only helps 20% of the time when others are around.
Fundamental Attribution Error

Attributions
"Why is Aurelia behaving like a dork?"

Situational
"She's under pressure."

Dispositional
"She's self-involved and clueless."

(may lead to)

Fundamental attribution error
Ignoring influence of situation on behavior and emphasizing personality traits alone

WHY ARE YOU ALWAYS SO ANXIOUS TO CRITICIZE ME?
I JUST THINK I HAVE A KNACK FOR SEEING OTHER PEOPLE'S FAULTS.
WHAT ABOUT YOUR OWN FAULTS?
I HAVE A KNACK FOR OVERLOOKING THEM..

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