Consciousness and Its Variations

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Psych for Your Life: Overcoming Insomnia
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**Consciousness**
- The immediate awareness of internal and external stimuli

**William James** (1842–1910)
- Described subjective experience of consciousness as ongoing stream of mental activity

**Attention**
- The capacity to selectively focus awareness on particular stimuli
- Has limited capacity
- Disrupted by inattentional blindness, change blindness, multitasking

**Cycles of Consciousness**

**Circadian rhythms**
- Daily fluctuations in biological and psychological processes
- **Suprachiasmatic nucleus**
  - Responds to light and triggers pineal gland to release melatonin

**Sleep**

**Sleep onset**
- Alert wakefulness (beta brain waves)
- Drowsiness (alpha brain waves)
- Hypnagogic hallucinations

**NREM sleep**
- Stage 1: transition from drowsiness to light sleep
- Stage 2: sleep spindles; K complexes
- Stage 3 (slow-wave sleep): delta brain waves; deep sleep

**REM sleep**
- Rapid eye movement
- Dreaming
- Heightened brain and body activity

**Functions of Sleep**
- Evolutionary adaptation
- Memory formation
- Mood regulation, immune system functioning, and metabolism

**Sleep patterns**
- Nightly: five 90-minute NREM/REM cycles with longer REM episodes as sleep progresses
- Lifespan: typical cycles emerge by age 5; total sleep time, slow-wave sleep, and REM decrease through late adulthood

**Significance of dreams**

**Sigmund Freud** (1856–1939)
- Psychoanalytic theory of dreams
  - Dream images symbolize repressed wishes and urges

**Activation–synthesis model of dreaming**
- Dreams are subjective awareness of internally generated signals during sleep

**Neurocognitive model of dreaming**
- Emphasizes continuity of waking and dreaming cognition
**Sleep Disorders**

- **Dyssomnias**: Disruptions in amount, quality, or timing of sleep
  - Insomnia
  - Obstructive sleep apnea
  - Narcolepsy

- **Parasomnias**: Undesirable physical arousal, behaviors, or events during sleep
  - Sleep terrors
  - Sleepwalking
  - Sleep-related eating disorder
  - Sleepsex
  - Exploding head syndrome

**Hypnosis**

A cooperative social interaction in which the participant responds to suggestions made by the hypnotist.

**Effects of hypnosis**:
- Sensory, perceptual changes
- Posthypnotic suggestions
- Memory changes, including posthypnotic amnesia
- Dissociation

**Explaining hypnosis**:
- Hypnosis as a special state of consciousness: Ernest Hilgard (1904–2001) proposed neodissociation theory of hypnosis and a hidden observer
  - The social cognitive view: hypnosis is due to ordinary psychological processes
  - The imaginative suggestibility view: hypnosis is due to capacity to imagine and heightened suggestibility

**Limitations of hypnosis**:
- Not all people are capable of being hypnotized.
- Cannot hypnotize a person against his or her will.
- Cannot hypnotically induce immoral or criminal acts

**Meditation**

Mental or physical techniques used to induce a state of focused attention and heightened awareness.

**Forms of meditation**:
- Focused awareness
- Open monitoring, including mindfulness

**Effects of meditation**:
- Improves attention, concentration, memory, and emotional control
- Reduces physiological arousal and stress

**Psychoactive Drugs**

- **Depressants**: Addictive drugs that inhibit central nervous system activity
  - Alcohol
  - Barbiturates

- **Opioids**: Addictive drugs that relieve pain and produce feelings of euphoria
  - Opium
  - Morphine
  - Codeine
  - Heroin
  - Methadone
  - Prescription painkillers

- **Stimulants**: Addictive drugs that increase brain activity
  - Caffeine
  - Nicotine
  - Amphetamines
  - Cocaine
  - Methamphetamines

- **Psychedelic drugs**: Create perceptual distortions, alter mood and thinking
  - Mescaline
  - LSD
  - Marijuana

- **"Club" drugs**: Synthetic drugs used at dance clubs, parties, and "raves"
  - MDMA (ecstasy)
  - Dissociative anesthetics include PCP and ketamine