

## Psych Reading for February 4<sup>th</sup>

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### Consciousness: Expanding the boundaries of psychological inquiry

- Sleep Paralysis- A strange experience of being unable to move just after falling asleep or immediately upon awakening.
- Consciousness- Our subjective experience of the world and ourselves

### The Biology of Sleep

- We spend as much as one-third or more of our lives in one specific state of consciousness.
- Circadian Rhythm- A fancy term for changes that occur on a roughly 24-hour basis in many of our biological processes.
- Biological Clock- Neurons located in the suprachiasmatic nucleus in the hypothalamus make us feel drowsy at different times of the day and night.
- Melatonin – Triggers feelings of sleepiness; increase after dark
- Jet Lag- The result of a disruption in our body's circadian rhythms
- Most people need 10 hours of sleep
- Newborns need 16 hours of sleep
- Pass through five stages of sleep every night; each lasts about 90 seconds, and each stage is clearly distinguishable from awake states:
  - o Stage 1 Sleep – Light stage of sleep; lasts for five to 10 minutes; brain activity powers down by 50% or more, producing *theta* waves which occur four to seven times per second.
    - *Beta Waves*- Occur 13 or more times per second; produced during active alert states
    - *Alpha Waves* – Occur 8-12 times per second; when we're quiet and relaxed.
    - *Hypnagogic Imagery*- Scrambled, bizarre, and dreamlike images that flit in and out of consciousness.
  - o Stage 2 Sleep – Brain waves slow down even more; 65% of sleep in this stage
    - Sleep Spindles
    - K-Complexes
  - o Stage 3 and 4 Sleep – Deeper slow-wave sleep; need to experience this to feel fully rested
    - *Delta Waves*- Slow as one to two cycles a second.
  - o Stage 5 Sleep – REM sleep; hyped brain waves, increased heart rate, and blood pressure, as well as rapid and irregular breathing; 20-25% of our nights sleep
    - REM Rebound- The amount and intensity of REM sleep increases when humans are deprived of REM for a few nights.
- Lucid Dreaming- Dreaming and knowing that you're dreaming
- Sleep Disorders

- o Insomnia
  - Having trouble falling asleep
  - Waking too early in the morning
  - Waking up during the night and having trouble returning to sleep
- o Narcolepsy – A dramatic disorder in which people experience episodes of sudden sleep lasting anywhere from a few seconds to several minutes and as long as an hour.
- o Sleep Apnea- Blockage of the airway during sleep
- o Night Terrors- Harmless events that occur almost exclusively in children.
- o Sleepwalking – Walking while fully asleep; usually occurs during non-REM

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#### Drugs and Consciousness

- Psychoactive Drugs- Contain chemicals similar to those found naturally in our brains and that their molecules alter consciousness by changing chemical processes.
- Mental Set- Beliefs and expectancies about the effects of drugs; account for people's responses to them.
- Drugs are substances that change the way we think, feel, or act.
- Depressants – Decreased activity of the central nervous system.
  - o Sedative – Calming
  - o Hypnotic- Sleep-inducing
  - o Alcohol
  - o Sedative-Hypnotics
    - Barbiturates
    - Nonbarbiturates
    - Benzodiazepines
- Stimulants- Increased activity of the central nervous system
  - o Nicotine
  - o Cocaine
  - o Amphetamines
    - Meth
  - o Narcotics – Relieve pain and induce sleep
    - Heroin
- Opiates/Hallucinogenic- Sense of euphoria, decreased pain
  - o Marijuana
  - o LSD
  - o Mescaline
  - o PCP
  - o Ecstasy

- Psychedelics – Dramatically altered perception, mood, and thoughts
- Substance Abuse- Experience recurrent problems associated with a drug.
- Substance Dependence- More serious pattern; leading to clinically significant impairment, distress, or both.
  - Tolerance – Key feature of dependence and occurs when people need to consume an increased amount of drug to achieve intoxication.
  - Withdrawal- Symptoms vary with drugs, occurs when people cut down or stop use.
  - Physical Dependence- Continue to take it to avoid withdrawal symptoms.
  - Psychological Dependence- Continued use of a drug is motivated by intense cravings.
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