

## Chapter 05 – States of Consciousness

*Dualism* = belief that humans and the universe consists of 2 materials – thought and matter

*Monism* = belief that everything is the same substance, and thought is a by-product of brain processes and stops existing when the body dies

*Consciousness* = level of awareness about ourselves and our environment

*Mere-Exposure Effect* = phenomenon by which people tend to develop a preference for things merely because they are familiar with them

*Priming* = implicit memory effect in which exposure to a stimulus influences response to a later stimulus, even if there is no memory of being exposed to the stimulus the first time

*Blind Sight* = ability to respond to visual information without consciously seeing it

### Levels of Consciousness

Conscious Level = the information about yourself and your environment you are currently aware of

Nonconscious Level = body processes controlled by mind that one is not usually aware of, such as heartbeat, respiration, digestion, etc.

Preconscious Level = information about yourself or your environment that you are not currently thinking about but you could be

Subconscious Level = information that we are not consciously aware of but we know must exist due to behavior, where some parts may be accessible (demonstrated by mere-exposure effect and priming)

Unconscious Level = where the subconscious stores urges that it knows to be socially unacceptable, including various violent or sexual impulses

### Sleep Cycle

Circadian rhythm = biological process that displays an endogenous, entrainable oscillation of about 24 hours

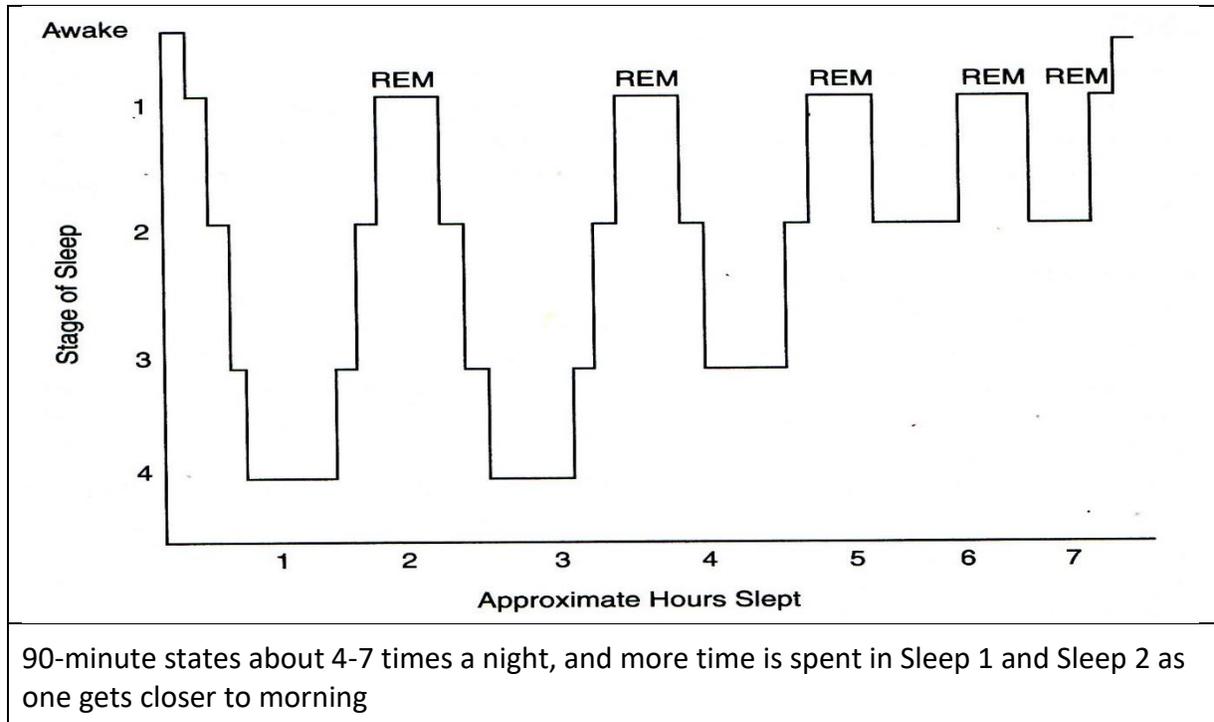
Sleep Onset = period when we are falling asleep

4 Types of Waves:

- Beta Wave = highest frequency, lowest amplitude → day to day wakefulness
- Alpha Wave = high frequency, low amplitude → relaxation and peacefulness
- Theta Wave = low frequency, high amplitude → between relaxing and Sleep 1 to Sleep 2
- Delta Wave = lowest frequency, highest amplitude → Sleep 3 and Sleep 4 (deep sleep), difficult to wake up and important in replenishing body's chemical supplies, releases growth hormones and fortifies immune system

## Two Classes of Sleep:

- Slow-Wave Sleep (SWS)
- Rapid Eye Movement (REM) Sleep
  - Also known as *paradoxical sleep*, since brain waves appear as active and intense as when awake
  - Dreams usually occur in REM sleep
  - Individuals deprived of REM sleep will experience *REM rebound* – the lengthening and increasing frequency and depth of REM sleep



## Sleep Disorders

Insomnia = characterized by difficulty falling and/or staying asleep, affects 10% of the population, usually treated by changes in behavior, and sometimes sleeping pills

Narcolepsy = characterized by periods of intense sleepiness and may fall asleep at unpredictable and inappropriate times, affects 0.001% of the population, treated by medication and changing sleep patterns

Sleep Apnea = characterized by pauses in breathing or periods of shallow breathing during sleep – more common in overweight men and can be fatal, affects 10% of the population and can be treated with a respiration machine that provides fresh air

Sleep Terrors = episodes of screaming, intense fear and flailing while still asleep, usually affect children (most who do not remember the episode after waking up)

Somnambulism = sleepwalking, usually occurs during first few hours of the night in Sleep 4

## **Dreams**

Lucid Dreams = dream during which the dreamer is aware of dreaming

Activation-Synthesis Theory = dreams are nothing more than the brain's interpretation of what is happening physiologically during REM sleep

Information-Processing Theory = stress during the day will increase the number and intensity of dreams during the night, and dream content relates somehow to daily concerns – the function of REM may be to integrate the information processed during the day into our memories

## **Hypnosis**

Posthypnotic Amnesia = forgetting events that occurred while they were hypnotized

Posthypnotic Suggestion = a suggestion made by the hypnotist that a hypnotized person behave in a certain way after being brought out of hypnosis

Role Theory = hypnosis is not an altered state of consciousness; rather some people are simply more easily hypnotized than others, a characteristic called *hypnotic suggestibility*. Such people tend to have richer fantasy lives, follow directions well, and be able to focus intensely on a single task for a long time

State Theory = hypnosis meets some parts of the definition for an altered state of consciousness

Disassociation Theory = hypnosis causes us to divide our consciousness voluntarily – one part responds to the suggestions of the hypnotist, while the other part retains awareness of reality

## **Drugs**

- Psychoactive drugs are chemicals that change the chemistry of the brain and induce an altered state of consciousness
- Psychoactive drugs cross the blood-brain barrier, going from bloodstream into the brain
- Brain produces less of a specific neurotransmitter if it is being artificially supplied (or mimicked) by a psychoactive drug

Agonists = drugs that mimic neurotransmitters, fitting onto receptor sites on a neuron that normally receive the neurotransmitter and functions like the neurotransmitter

Antagonists = drugs that block neurotransmitters, fitting onto receptor sites but preventing the proper neurotransmitter from being used properly

Tolerance = physiological change that produces a higher demand for more of the same drug to achieve the same effect

Sensitization/Reverse tolerance = the increased reaction and escalating effect of a drug resulting from repeated administration

Withdrawal = rebound reaction to elimination of drug from system; typically opposite of the drug's action