forming an identity
↳ one's sense of self

• intimacy - ability to form close, loving relationships

Parent and Peer influence

- adolescense = diminishing parent influence
increasing peer influence

EMERGING ADULTHOOD

- emotional ties with parents loosen

fluid intelligence - abstract
↳ decreases with age

SENSATION + PERCEPTION

sensory goes through stimul → transduction
↳ signals become neural impulse

stop feeling stimuli due to
1. sensory adaptation (decreasing responsiveness due to constant exposure)
☆ 2. sensory habituation (perception is due to how focused we are on them)

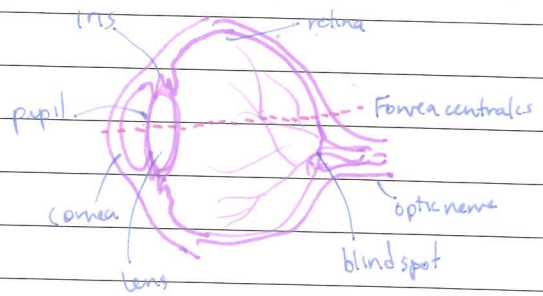
sensation = activation of our senses
perception = process of understanding these sensations

Energy Senses

vision

steps 1. gathering light
- light is reflected off objects and gathered by the eyes
- colour depends on: light intensity / wavelength

2. within the eye



- reflected light enters cornea (protection/focus)
- then, pupil (muscles around pupil aka iris dilate or tighten to control the amount of light)
- accomodation → light is focused by the lens
- image is flipped upside down and projected on the retina

bottom-up: data driven, perception directs cognition
top-down → behaviour is influenced by cognitive data
"agent in a dark"

3. transduction
- occurs when light activates neurons in retina
  ↳ several layers

first layer: cones + rods
↳ activate by colour ↳ cells that detect black & white

- more rods than cones 20:1
- cones are concentrated towards center (most at fovea)

second layer: bipolar
third layer: ganglion cells
↳ axons of these cells = optic nerve
↳ sends impulses to LGN (lateral geniculate nucleus)

☆ spot where optic nerve leaves retina has no rods/cones = blind spot
- optic nerve is split into two (left side → left hemisphere, right side → right hemisphere)
  ↳ spot where they cross = optic chiasm

4. in the brain
- visual cortex (occipital lobe) receives impulses from retina → activate "feature detectors"
- groups of neurons in visual cortex respond to different types of images (lines, curves, motion, etc...)

Colour Vision
trichromatic theory
- we have 3 types of cones (detect blue, green, red)
- cannot explain afterimages/color blindness

opponent process theory
- sensory receptors are in pairs
- missing one pair = color blindness

far sighted - focus behind retina
near sighted - focus in front of retina
parallel processing - separate colour, motion, form, depth

top down → behaviour is influenced by cognition
bottom up → data driven, perception directs cognition

threshold - minimum stimulus to detect stimuli 50% of the time
↳ signal detection theory - when do we detect faint stimuli?
difference threshold: minimum difference we can detect 50% of the time

subliminal → below one's threshold
priming → unconscious associations

Weber's law → to be different, stimuli must differ by min. percentage

Hearing → audition
stimulus: sound wave
frequency determines pitch
amplitude determines volume → loudness by # of activated hair cells in cochlea

cochlea: fluid filled tube ← transduction
basilar membrane
high place theory - different sound waves trigger activity along the membrane
low frequency theory - frequency of neural impulses
↳ auditory nerve
placement → stereophonic (3d dimensional)
inner ear → audition / vestibular
locate sounds through time lags

Touch: pressure, warmth, cold and pain → biological, psychological, social
- gate control theory: small fibers open neural gate to feel pain and large fibers close gate
- people remember peak moments + the end

Taste: sensory interaction (smell)
↳ chemical sense

Smell: chemical sense (molecules reach receptors in nasal cavity)

vestibular sense = balance
↳ semicircular canals

PERCEPTION

gestalt theory → integrate pieces into wholes

→ figure and ground: something against a background

grouping - tendency to organize stimuli into groups

perceptual constancy - enables us to perceive object as unchanging

perceptual set - mental predisposition to perceive one thing but not the other

Consciousness Ch. 7

circadian rhythm - biological clock (regular bodily rhythm)

stages of sleep

AWAKE

STAGE 1

STAGE 2 - sleep spindles (bursts of rapid activity)

STAGE 3

STAGE 4 delta waves slow

REM breathing is rapid, irregular, eyes dart, dreams

disorders

insomnia - can't fall asleep / trouble staying asleep

narcolepsy - periodic overwhelming sleepiness

apnea - tired/irritable (overweight men)

night terrors - children - talk incoherently, x2 heart/breathing rate, terrified - not dreams

Hypnosis - must be intelligent, must be willing

drugs - withdrawal/dependence

↳ receptor sites: dopamine high

LEARNING Ch. 8

associative learning → learning that 2 events occur together

↳ conditioning: process of learning associations

OPERANT - associate a response and its consequence

CLASSICAL - associate 2 stimuli to anticipate events