

Sensation and Perception

sensation stimulation fo sense organs

perception selection, organization and interpretation of sensory input

Information Processing in the Retina

receptive field of visual light the retina area that when stimulated affects firing of that cell

light in the center of receptive field increases firing rate

light in the outside of receptive field decreases firing rate

lateral antagonism occurs when neural activity in a cell opposes activity in surrounding cells

Perceiving Forms, Pattern and Objects

Feature Analysis process of detecting specific elements in visual input and assembling them in to a more complex form

bottom up individual to whole

top down whole to elements

phi phenomenon illusion of movement created by presenting visual stimuli in rapid success

gestalt principles how the visual system organizes a scene into discreet forms

Theories of Hearing

place theory perception pitch corresponds to the vibration of different places along the basilar membrane

frequency theory perception of pitch corresponds to the rate/ frequency at which the entire basilar membrane vibrates

Taste and Smell

cilia receptive for smell in nose

Psychophysics

psychophysics study of how physical stimuli are translated into psychological experience

Signal Detection Theory the detection of stimuli involves decision processes along as sensory processes which are both influenced by a variety of factors besides stimulus intensity

Vision and the Brain

two channels magnocellular and parvocellular

Perceiving Depth or Distance

binocular depth cues clues about distance based on the differing views of hte two eyes

retinal disparity refers to the fact that object within 25 feet project to slightly different locations on the right and left retinas so each eye sees a slight different view of the object

convergence involves sensing the eye converging towards each other as they focus on closer objects

monocular depth cues clues about the distance move across the retina at different rates

motion parallax images at different distances move across the retina at different rates

pictorial depth cues cues about distance that can be given i na flat picture

Other Senses

kinaesthetic system monitors the position of the various parts of the body

vestibular system responds to gravity and keeps you informed of your body's location in space

Sight

amplitude brightness

wavelength perception of color

Information Processing in the Visual Cortex

feature detectors neurons that respond selectively to a very specific features of more complex stimuli

viewing the world in color

wavelength hue

amplitude brightness

purity saturation

subtractive color mixing works by removing some wavelngth of light, leaving less light than originally there

additive color mixing works by superimposing lights, putting more light in the mixture than exists in any one light by itself

trichromatic theory color vision holds that the human eye has 3 types of receptors with differing sensitivities to different light wavelengths

opponent process theory color vision holds that colour perception depends on receptors that make antagonistic responses to three pairs of colour



Hearing

wavelength	frequency or hertz
amplitude	decibels
external ear	vibrations of air
middle ear	vibration of movable bones
inner ear	waves in a fluid
pinna	sound collecting cone

Perceiving Sources of Sound

most important for finding source of sound	loudness and timing
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Touch

receptive field for touch	when touched neurons fire to the brain alerting it
pain has two pathways to the brain	slow and fast
gate control theory	incoming pain sensations must pass through a "gate" in the spinal cord that can be closed, thus blocking ascending pain signals

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