

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
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light in the center of receptive field	increases firing rate
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light in the outside of receptive field	decreases firing rate
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lateral antagonism	occurs when neural activity in a cell opposes activity in surrounding cells
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Perceiving Forms, Pattern and Objects

Feature Analysis	process of detecting specific elements in visual input and assembling them in to a more complex form
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bottom up	individual to whole
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top down	whole to elements
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phi phenomenon	illusion of movement created by presenting visual stimuli in rapid success
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gestalt principles	how the visual system organizes a scene into discreet forms
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Theories of Hearing

place theory	perception pitch corresponds to the vibration of different places along the basilar membrane
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frequency theory	perception of pitch corresponds to the rate/ frequency at which the entire basilar membrane vibrates
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Taste and Smell

cilia	receptive for smell in nose
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Psychophysics

psycho-physics	study of how physical stimuli are translated into psycho-logical experience
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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
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Vision and the Brain

two channels	magnocellular and parvoc-ellular
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Perceiving Depth or Distance

binocular depth cues	clues about distance based on the differing views of hte two eyes
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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
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conver-gence	involves sensing the eye converging towards each other as they focus on closer objects
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monocular depth cues	clues about the distance move across the retina at different rates
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motion parallax	images at different distances move across the retina at different rates
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pictorial depth cues	cues about distance that can be given i na flat picture
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Other Senses

kinaes-thetic 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 select-ively to a very specific features of more complex stimuli
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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
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additive color mixing	works by superimposing lights, putting more light in the mixture than exists in any one light by itself
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trichromatic theory	color vision holds that the human eye has 3 types of receptors with differing sensitivities to different light wavelengths
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opponent process theory	color vision holds that colour perception depends on receptors that make antago-nistic responses to three pairs of colour
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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	loudness
source of sound	and timing

Touch

receptive field for touch when touched neurons fire to the brain alerting it

pain has two pathways to the brain

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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