

Cognitive psychology assignment

[Psychology](#)



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What is cognitive psychology? The study of mental processes such as perceiving, remembering, and reasoning. Analytic introspection- analyze current perception into its elementary parts. Structuralism-complex conscious experiences can be broken down to elemental structures (component parts) of sensation and feelings. Introspection-look at a stimulus and report sensations and feelings to create a description of conscious experience School of functionalism-learn how the mind produces useful behavior.

William James describes psychology as “ science of mental life” Gestalt psychology-organization is an essential feature of all mental activity.

Reaction against reductionism. The whole is greater than the sum of its parts. In the 1920s-1930s psychology became the “ science of observable behavior” (behaviorism) Cognitive revolution started in the 1950s and 1960s. Cognition refers to knowledge. Cognitive psychology- study of people's ability to acquire, organize, remember, and use knowledge to guide their behavior.

Neuron Cell body- cell's life support center Dendrites-receive messages from other cells Axon-passes messages away from the cell body to other neurons, muscles, or glands Neural impulse-electrical signal traveling down the axon Terminal branches-form Junctions with other cells Myelin sheath covers the axon of some neurons and helps speed neural impulses How a neuron fires-threshold: the minimal level of stimulation needed to trigger a neural impulse. There is an all or none response, either the neuron fires or it doesn't. Detect intensity by the number of neurons firing and how often they fire PET-positron emission tomography; first method of looking at the brain, metabolically demanding organ (20%), measures the variability of cerebral <https://assignbuster.com/cognitive-psychology-assignment/>

blood flow. Done with radioactive tracer glucose or oxygen with a rapid half life. Pros: detects metabolic changes, cons: poor spatial resolution, temporal resolution; somewhat invasive and expensive. Fem.- functional magnetic resonance imaging-an indirect measure of neuronal activity. Poor temporal rest.

Can't use if metal implants, indirect measure of neuronal activity, not for claustrophobic. Sensation-the process by which we transform the physical energy from the environment and encode it as neural signals. Transduction-inversion of 1 form energy into another(from stimulus energy into neural impulses) Opponent process theory-neurons were sensitive to red/green, blue/yellow, and black/white. After leaving receptor cells, the visual info is analyzed in terms of opponent colors-a neuron fires for red, inhibits when it sees green.

Grandmother cell theory- a single neuron responds only to a specific stimulus Distributed coding- an object is not represented by a single neuron, but rather by groups of neurons. A particular pattern of neurons firing allows us to perceive an object Bottom-up processing- processing that begins with stimulation of the receptors Taste-people average between 96-425 taste buds per square centimeter. 96= annotates, 184= taster, 425= superstar.

Simple cell respond only to a particular orientation, complex cell respond to movement at a particular orientation Monocular cues Relative height-objects that are higher up on the field are farther away Interposition- if 1 object partially blocks another, we perceive it as being closer Relative clarity-ha objects are farther away Texture gradient-objects that re farther away

appear smooth, we see the details of objects that are close Linear perspective-parallel lines appear to converge into the horizon Motion parallax- as we move closer objects appear to move past us, objects that are farther away appear to move with us Relative size-if we know that 2 objects are the same size, the 1 casting a smaller retinal image is farther away Light and shadow-nearby objects reflect more light to our eyes. Binocular cues Retinal disparity-each retina receives a slightly different input Convergence-neuromuscular cue Top-down processing- processing that involves a person's knowledge and past experience.

Law of similarity-similar things appear grouped together Law of proximity-things that are near together are grouped together Law of good continuation-lines are seen as following the smoothest path The effect of meaning- our perception is affected by past experiences. Knowledge influences what we tend to see as objects. Dark adaptation-increased sensitivity to light Attention-process of concentrating on specific features of the environment, or on certain thoughts or activities. The early selection model states that info is filtered before meaning is extracted. The sensory store holds info for a short period then suffers info to filter. The detector is where attended info is processed to determine meaning, processes all info given.

The late selection model states that info is filter after processed for meaning, in a study conducted by McKay (1973) subjects were presented with ambiguous sentences then asked to pick which unambiguous sentence was the closest in meaning to what they had heard previously. Attention- the parietal lobe shifts spatial attention around the scene; damage impairs <https://assignbuster.com/cognitive-psychology-assignment/>

ability to pay attention to the opposite of space. The neglect syndrome- usually associated with right parietal damage, inattention to the opposite side of space, not a primary sensory disorder, line cancellation; line bisection. Inattention blindness- shows us that attending to something may be causally linked to perceiving it Change blindness- shows us that changes in the visual scene must be attended to be detected Unilateral neglect- is an example of an attention deficit caused by unilateral brain damage.

Info can still be processed in the neglected field indicating that attention isn't necessary for some aspects of complex cognition. The hemispheres may be asymmetric in the way that they direct attention in visual space if 1 object partially blocks another, we perceive it as being closer Relative clarity-hazy meaning, processes all info given. The late selection model states that info is filtered the parietal lobe shifts spatial attention around the scene; damage impairs ability to pay attention to the opposite of space. The neglect syndrome-usually associated with unilateral brain damage. Info can still be processed in the neglected field indicating hemispheres may be asymmetric in the way that they direct attention in visual space.