

## Sensation and perception

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Tripathi P. Sensation and perception. *J Behav Neurosci Res.*2021;4(3):10.

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### EDITORIAL

Sensation-Sensory receptors have specialized neurons that respond to certain stimuli. Sensation occurs when sensory information is detected by a sensory receptor. Light entering the eye, for example, produces chemical changes in the cells that line the back of the eye. These cells send messages to the central nervous system in the form of action potentials (as you learned in biopsychology). Transduction is the process of converting sensory stimulus energy into an action potential. Since elementary school, you've surely heard that we have five senses: vision, hearing (audition), smell (olfaction), taste (gustation), and touch (somatosensation). It turns out that the five senses concept is oversimplified. Sensory systems also offer information about balance (the vestibular sense), body position and movement (proprioception and kinesthesia), pain (nociception), and temperature (thermoception) (thermoception). An absolute threshold can be used to indicate the sensitivity of a sensory system to the relevant inputs. The absolute threshold is the smallest amount of stimulus energy required for a stimulus to be detected 50% of the time. Another approach to consider this is to consider how dim or soft light or sound can be and yet be detected half of the time. Subliminal communications are messages that are conveyed below the level of conscious consciousness and may be received by humans. When a stimulus is strong enough to stimulate sensory receptors and send nerve impulses to the brain, it has reached a physiological threshold: this is an absolute threshold. Subliminal messages are those that we receive but are not aware of because they are below that threshold. As a result, the message has been received, but it has not been picked for processing in working or short-term memory for whatever reason. Subliminal messages in advertising, rock music, and self-help audio programs have all been the subject of much inquiry. People may process and respond to information outside of awareness in laboratory conditions, according to research. However, this does not imply that we

follow these signals as if we were zombies. Outside of the laboratory, hidden messages have little impact on behavior.

Perception, while our sensory receptors are continually collecting data from the environment how we interpret that data ultimately determines how we interact with the world. The way sensory information is organized, analyzed, and consciously experienced is referred to as perception. Bottom-up and top-down processes are both involved in perception. Perceptions are built from sensory input, which is referred to as bottom-up processing. Our accessible knowledge, experiences, and thoughts, on the other hand, influence how we perceive such sensations. This is referred to as top-down processing. When you're alone, your brain uses bottom-up processing. Two broad vertical lines and three thin horizontal lines are present. Because there is no context to give it meaning, there is no top-down processing. Your perception is influenced by your cognitive expectations when presented with a context. You're processing the shape from the top down. A concept can be seen as a physical process, whereas perception is a psychological activity. The sense of going into a kitchen and smelling the scent of baked cinnamon rolls is the scent receptors recognizing the odour of cinnamon, but the perception is "Mmm, this smells like the bread Grandma used to bake when the family gathered for holidays." Although feelings are the foundation of our perceptions, not all sensations result in perception. Stimuli that remain relatively consistent over long periods are commonly overlooked. This is referred to as sensory adaptation. Consider walking into a classroom and seeing an old analog clock. When you initially walk into the room, you can hear the clock ticking; however, as you converse with classmates or listen to your lecturer greet the class, you become less aware of the ticking. The clock continues to tick, and that information continues to affect auditory sensory receptors. The fact that you no longer feel the sound exhibits sensory adaptation and proves that, while sensation and perception are closely related, they are distinct.

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Received: March 12, 2021; Accepted: March 19, 2021; Published: March 26, 2021



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