

Categorical Perception - Identification

All answers should be clearly identified (i.e., which question you are responding to) and must be typed. If you choose to do this lab, please hand in a paper copy on the day of the second exam, along with your chosen lab assignment.

Introduction

The perception and identification of various categories is an essential starting point for many cognitive processes like memory; visual and auditory perception; thinking and language. The purpose of the lab was to demonstrate how to identify the border between two categories of stimuli. This category boundary is where the identification of stimuli on a continuum is labeled one way on one side of the boundary and is labeled another way on the other side of the same boundary. In a perceptual task, such as this one, identification of categories should be greatest at the endpoints of a continuum and have a sharp boundary region of abrupt change in categorical perception around the midpoint. This is considered to be an example of bottom-up processing, where one goes from physical stimuli to the psychological perception, however learned categories can also be explained with top-down processing or that experience can influence our perceptual abilities.

Please answer 2 of the following:

- 1) Write a research paper or just research if and how animals (human and non-human) form categories through learning or by innate capabilities.
Think about the following issues:
 - a. What kinds of categories have been found to be innate in humans? Are these purely innate or is there a cultural influence present?
 - b. Look into animal and infant research concerning categorical perception. What does it mean if animals and babies can identify different categories of stimuli?
 - c. Why would it be adaptive to be able to learn categories quickly or to have the innate ability to form them?
 - d. Give examples of categories that are directly related to culture.
- 2) Besides colors and sounds, where else can categorical perception, specifically identification of distinct categories be seen, even when the stimulus changes continuously (gradually)?
 - a. Evaluate the usefulness of this perceptual phenomenon for each example.
 - b. Think about non-human examples and evaluate them.
- 3) Pretend you are a psychologist trying to identify a patient's disorder from a range of symptoms they are displaying. According to the DSM, there are 2 possible disorders, but further tests need to be done. How could Categorical Perception play a role in your ability to identify which disorder their client may have?
 - a. Think about whether or not the nature of the 2 disorders could play a role in your decision.
 - b. What if these 2 disorders demanded 2 different types of drugs to alleviate the symptoms - would this affect your decision?