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Discriminability

Michael S. Worden

Department of Neuroscience, Brown University,
Providence, RI, USA

Discriminability is the extent to which two stimuli or classes of stimuli may be distinguished by an observer. In the case where one stimulus class is the absence of a stimulus, it is commonly termed detection. Discriminability depends both on the strength of the stimulus and on the degree of noise or variability present. Noise may be external (e.g.,

background noise) or internal (e.g., variability in stimulus processing or decision-making by the observer). Discriminability is typically measured by d' (d prime), which may be calculated as the difference between the proportion of hits and the proportion of false alarms after these have been converted to Z scores. Larger values of d' indicate a greater degree of discriminability.

References and Readings

Macmillan, N. A., & Creelman, C. D. (2004). *Detection theory: A user's guide*. Mahwah: Lawrence Erlbaum.