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TUTORIAL

# The very first step to start psychophysical experiments

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This tutorial article aims to guide the reader to learn about three types of psychophysical methods: the method of adjustment, the method of limits and the method of constant stimuli. The article explains how to estimate the point of subjective equality and the just noticeable difference with each method. It also explains about pitfalls that one may encounter when designing experiments. Results could be distorted by some bias effects that are due to technical procedures adopted for experiments. One should know where these effects are likely to occur.

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1.3.1 The Psychophysical Approach. The relationship between stimulus and perception can be measured in three different ways. There are two ways of measuring it qualitatively. The above gives a few extensively used methods used for psychophysical experiments. But, several other methods are used or are being devised to find the relationship between stimulus and perception. 1.3.2 The Physiological Approach. Recording of Electrical Signals in Neurons: Neurons carry electrical signal in a very different way than the wires that carry electricity to our homes. Neurons are immersed in a solution rich in ions, molecules that carry electrical charge. So to start an experiment, the researcher begins with a stimulus. The next step is to determine the question to be asked using the stimulus in question. Detection. Press Start Experiment and give it a try. The results will be plotted in an identical fashion to the data from the absolute threshold experiment. There are several observations to be made about these data. This simple demonstration is a slight modification of the very first illustration that was used in this chapter. The third feature of psychophysical research comes right out of the first two features of the study. The need for careful control of stimuli is the result of both the simple questions asked of the subjects, and the intensive studies.