



Sonderforschungsbereich/Transregio 31 "Das aktive Gehör"

EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

Freitag, 12. November 2010, 14 Uhr c.t.

im Raum W2 1-143 der Universität Oldenburg und
Medical Campus, Magdeburg, H28 / R 2.31 (Video Conference Room)
(per Videoübertragung)

"Order effects in 2AFC tasks: Data and model"

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Trials in a two-alternative forced-choice (2AFC) experiment consist of two sequential intervals each of which presents a stimulus that differs from the stimulus in the other interval as to magnitude along some continuum. The observer is asked to report in which interval the stimulus had a larger magnitude. In detection tasks, one of the intervals presents a blank stimulus (the "null" stimulus); in discrimination tasks, one of the intervals presents a stimulus with a fixed magnitude (the "standard" stimulus); in both cases the magnitude of the stimulus presented in the other interval (the "test" stimulus) typically varies from trial to trial, and pairs of test and standard (or test and null) involving the same test magnitude are typically presented a large number of times so as to fit a psychometric function to proportion data at each test magnitude. Fechner noted that the order of presentation of the stimuli in a discrimination task affects the results of the comparison, yielding what he referred to as a "constant error." The same effect occurs in detection tasks, yielding what has been referred to as "interval bias." I will present data from visual contrast detection and discrimination experiments in which the sign and magnitude of interval bias and constant errors vary in an orderly manner with the design of the trials (length of the inter-stimulus and inter-trial intervals) and the strategy that the observers use on trials in which both stimuli appear to be subjectively identical. I will also present a formal model incorporating Fechner's "interval of uncertainty" into a Signal Detection Theory framework that accounts for the empirical characteristics of interval bias and constant errors in 2AFC detection and discrimination tasks.