

Extended logistic models as a general solution for the method of constant stimuli

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Abstract

In defining the point of subjective equality using constant method, a comparison between traditional and alternative procedures based on simple and extended logistic models is presented (Rasch, 1960; Bock & Jones, 1968; Andrich, 1978; Masin & Vidotto, 1984). The comparison is based upon two different experimental conditions of stimuli presentation. The first condition (called concentricity) provides for variable stimuli with dimensions smaller than, equal to, or greater than the standard stimulus used for paired comparison. The second condition (called eccentricity) provides for variable stimuli with dimensions equal to, or greater than the standard one. While the difference in estimates of the point of subjective equality between conditions is verified, no relevant differences between results of the procedures are found. This information supports the use of an approach based on the rating scale model. An example of the advantages of the application of this procedure is shown by a data-set derived from an experiment where a forced choice method with three alternatives was used.

The main advantage of this solution compared to traditional psychophysical techniques is not related to better estimates of point of subjective equality. The improvement can be summarized in the available fit tests to verify the accord between the model and data both for stimuli and persons.

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