

## **Perceptual learning in humans: the use of same/different tasks**

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Perceptual learning refers to discrimination improvement between two very similar stimuli seen after non-supervised preexposure to these stimuli. Moreover, if two similar stimuli are preexposed in several alternated trials discrimination is maximized, compared to several blocked preexposure of each stimulus – the intermixed/blocked effect. Recent studies in this area have used same/different tasks – in which the preexposed stimuli are shown in succession and participants have to classify them as being the same or different stimuli – to evaluate the effect of preexposure in stimuli discrimination by human subjects. Following this kind of experiments, Mitchell, Nash, & Hall (2008) propose a model of attention modulation and differential codification of features in memory as the framework for the intermixed/blocked effect. Inserted in a broader study with the objective of testing this hypothesis, the experiment presented here, using one such task, demonstrates that: (a) the analysis of the learning that might take place during test seems to demonstrate an effect of preexposure in the increase of discriminability from trial to trial, regardless of preexposure condition; (b) overall performance in this kind of task is no different after blocked preexposure versus no preexposure; and (c) discrimination between stimuli, one preexposed in block and another preexposed intermixed is worse than discrimination between two intermixed stimuli. Possible implications for the use of this kind of task in perceptual learning studies in humans are discussed.

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