

## **A categorical colour effect in the brown-orange boundary.**

J. Lillo<sup>1</sup>, A. Al-Rasheed<sup>2</sup>, H. Moreira<sup>3</sup>.

<sup>1</sup>Dep. Psicología Diferencial y del Trabajo. Universidad Complutense de Madrid. Spain

<sup>2</sup>Dep. Psychology. University of Surrey. Guilford. United Kingdom

<sup>3</sup>Dep. Psicología. Universidad Cardenal Cisneros. Madrid. Spain

A colour categorical effect appears when, for similar inter-stimuli distance, it is detected a bigger perceptual change for stimuli belonging to different categories (inter-category change) than between stimuli belonging to the same category (intra-category change).

Our research framework was the brown-orange transition. All the stimuli we used had the same chromatic co-ordinates ( $u' = 0.32$ ;  $v' = 0.53$ ), but varied in luminance. In the first experiment stimuli were named using brown or orange (forced choice) and were presented on two different backgrounds (articulated or non-articulated). Background type influenced the luminance value where the brown-orange transition appeared. Its value was bigger for the articulated background. Such result agrees with the predictions derived from the Gilchrist's anchoring theory on lightness perception and indicates that  $L^*$  calculus must consider the background type where a stimulus is presented.

A second experiment detected a categorical perception effect using a visual searching task. Such task required observers to localise (right or left) a target stimulus. Shorter times and fewer errors appeared when target and distractors belonged to different categories (inter-category change). On the other hand, and differing with other works results, no evidence of laterality was found (the categorical effect appeared both for stimuli on the right and on the left).

Supported by PSI2008-04166