



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

Dipartimento di Psicologia Generale

Conferenza Prof. Juan Lupianez

Center of Cognitive Neuroscience - Granada University

“Semantic incongruity attracts attention at a pre-conscious level: evidence from a TMS study”

Unpredicted objects, i.e., those that do not fit in a specific context, have been shown to quickly attract attention as a mean of extracting more information about potentially relevant items. Whether the required semantic processing triggering the attraction of attention can occur independently of participants' awareness of the object is still a highly debated topic. In the present study we make use of a change detection task in which we manipulate the semantic congruity between the to-be-detected object and the background scene. We applied inhibitory repetitive Transcranial Magnetic Stimulation (rTMS) over the right temporo-parietal junction (right TPJ) and a control location (vertex) to test the causal role of the former in the processing of objects at a preconscious level. Our results clearly show that semantic congruity can impact detection and identification processes in opposite ways, even when low level features are controlled for. Incongruent objects are quickly detected but poorly identified. rTMS over the right TPJ effectively diminishes contextual guidance effects on attention. These results suggest that at least some high order category processing takes place before conscious detection to direct attention towards the most informative regions of space. Moreover, here we show that rTMS over right TPJ also impacts object identification, which calls for a re-evaluation of right TPJ's role on object processing.

19 Aprile 2018

dalle 9.00 alle 10.00

Aula 2A (Psico 2), Via Venezia, 16