

“YOU SAY SO, WHO KNOWS IF IT IS TRUE” EFFECTS OF SPEAKER'S SOCIAL HIERARCHY ON THE SENTENCE COMPREHENSION

H. Santamaría García, A. Ayneto, N. Sebastián Gallés

Center for Brain and Cognition, Universidad Pompeu Fabra, Barcelona, Spain

Social hierarchies modulate cognitive processes. Nevertheless, the study of the influence of social hierarchy on sentence comprehension is scarce. We presented sentences with different levels of plausibility uttered by speakers with different hierarchical status (as previously established through a hierarchical video game) and measured the modulations of the N400 component. Participants heard three subsets of sentences with different plausibility value, depending on the last word (high, intermediate and low-plausibility). Sentences could be spoken by a superior or by an inferior status player. When listening to the superior player, the modulation of the N400 component followed the expected pattern (inverse relationship between amplitudes and sentence plausibility). However, when participants heard the inferior speaker the amplitude of the N400 in high plausible sentences matched that of intermediate plausibility (increased). This result indicated that participants' did not trust low rank speakers, even if sentences were high-plausible. We have observed specific personality traits modulating these hierarchical influences. The present research sets the ground for future studies exploring the influence of social hierarchies in other cognitive domains, specifically in relevant mental disorders where the social cognition is a nuclear field of symptoms such as the anxiety and other obsessive compulsive spectrum disorders.