

The influence of grammatical number on a congruency-effect between numbers (high,low) and nouns with implicit directional cue (roof,root)

Martin Lachmair

Knowledge Media Research Center, Tübingen, Baden Württemberg, Germany

Susana Ruiz Fernández

Knowledge Media Research Center, Tübingen, Baden Württemberg, Germany

HC Nuerk

University of Tübingen, Germany

Barbara Kaup

University of Tübingen, Germany

Abstract: In a recent study a strong congruency-effect has been shown between processing numbers (high/low) and nouns with an implicit up or down directional cue (e.g. roof/root). On this basis, the present study investigates the impact of grammatical number on this effect. Subjects processed number cues (2,3,8,9) followed by singular nouns with either up, down or none oriented cue in one condition and the same nouns in plural in the other. The results first replicate the congruency effect between number value (high/low) and implicit directional cue of the words (up/down). Second we observed a strong main effect of grammatical number with faster RT in the singular condition in all noun-categories. Third, we found no evidence for an influence of grammatical number on the congruency-effect. We conclude that number cues facilitate the processing of nouns with implicit up or down oriented cue, but do not influence the simulation of their references' number.