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The Effect of Metaphor Familiarity on Semantic Activation of Topic and Vehicle

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When we understand the metaphors, the metaphor vehicles enhance the metaphoric meanings, but suppress the literal meanings (Gernsbacher, Keyser, Robertson, & Werner, 2001). In this process, the familiarity of the metaphors is considered to have some effects. Blasko & Connine (1993) shows that the familiarity of metaphor reflects the activation of metaphoric meaning, and that high familiar metaphors activate its metaphor-related words, but low familiar ones does not. However, these studies show only the familiarity effect on the activation of the words related to the vehicles. In this research, we will investigate the familiarity effect on topic and vehicle comprehension related to the metaphors.

Method

Materials The materials were 16 Japanese metaphors (8 High familiar similes and 8 Low familiar similes).

Procedure The experiment was consistent of two parts; Reading Task and Meaningfulness Decision Task (MDT; Iseki, 2003). In the Reading Task, the participants are required to read some sentences as possible as quickly. At the end of the task, the priming probes were presented in the form of complete or incomplete similes (e.g. Words are like Weapons / Words are like XXX). Immediately after the Reading Task finished, MDT started. In this task, the topic or the vehicle of the similes was presented as the subject ("Words / Weapons") in 2000 msec. After that, the predicate was presented ("hurts someone."), and the participants were required to decide whether the sentence composed by the subject and the predicate was meaningful or not in 2000 msec.

Participants Forty-two Kyoto university students participated in the experiment. All were native Japanese speakers. In the MDT, twenty students participated in the condition of topic presentation, and the other twenty-two did in the condition of vehicle presentation.

Results and Discussion

The decision time data in the MDT was analyzed with a two-way ANOVA (Familiarity: High vs. Low x Priming Similes: Complete vs. Incomplete). Figure 1 shows the results of the decision time in each condition. In the condition of the vehicle presentation, the main effect of Familiarity ($F(1,21)=6.176$ $p<.05$) was significant, and the marginally significant interaction was found ($F(1,21)=3.231$ $p<.10$). Ryan's multiple comparison procedure revealed that the complete similes priming activated the high familiar metaphor meaning more than the low familiar significantly ($F(1,42)=8.901$ $p<.01$).

On the other hand, in the condition of the topic presentation, only the main effect of Familiarity was significant ($F(1,19)= 15.269$ $p<.01$). These results show that the metaphor familiarity effects on the sentence processing related to metaphor vehicles, not metaphor topic. However, we should consider and investigate the baseline probe in this research carefully. More-detailed researches are required to clear these points.
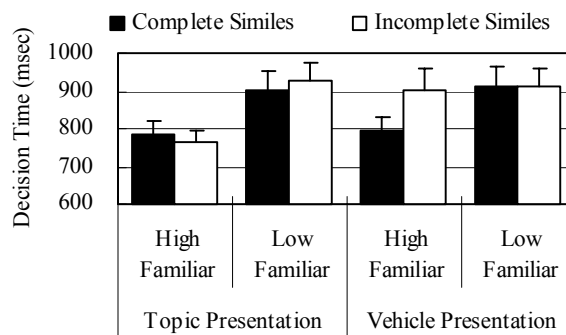

Figure 1: Decision Time in the MDT. The error bars show SEs.

Acknowledgments

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