

# The Effect of Conceptual Metaphor on Text Comprehension

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Cognitive linguistics shows that metaphor is pervasive not just in language but in thought and action (Lakoff & Johnson, 1980). This suggestion is so important when we consider how we think and understand.

In the field of cognitive psychology, it is suggested that figurative expression changes the conceptual structure and assists understanding and memory (Gibbs, 1990; Reynolds & Schwartz, 1983). But most of those researches dealt with comprehension at offline processing, by memory task after reading metaphor and its contexts. The relationships between reading process and conceptual metaphor were not studied mostly (Allbritton, McKoon, & Gerrig, 1995). In this psychological experiment, we tested previous studies, and dealt with comprehension at online processing by using reading task. We used two conceptual metaphors, "AN ARGUMENT IS A BUILDING" and "SCHOLASTIC ABILITY IS MONEY" in Japanese. The former is highly conventional, the latter is low conventional.

The experiment was consisted of three phases. First, the participants read some sentences. One group read with metaphorical expression, and the other with literal one (literal control). After the reading phase, subjects were given comprehension test, which consisted of ten questions; five is relevant with metaphor and sentences, and the other five is irrelevant. Subjects were required to respond as to whether the target question was or was not correct as quickly as possible. Finally, they were required to write an essay about their reading of the sentences. We tested reading time at the reading phase, reaction time during the test phase, and word frequency at the writing phase. Our predictions are that (a) reading processing and accessibility to memory is promoted, and (b) conceptual structure is changed by metaphorical expression.

The results of this study show that the participants with high-conventional metaphorical expression read the sentences and respond the targets faster than literal control. On the other hand, the participants with low-conventional metaphorical expression read and respond slower. As a results of correspondence analysis of the essay, both high and low conventional metaphors product more metaphor-relevant words than literal expressions. This suggests, first, that metaphors have promoting or suppressing effects on online reading processing and accessibility to memory; promoting or suppressing depends on the conventionality of metaphor. Second, metaphors have effects on conceptual structure to change it.

These results support our predications partially, but also suggest that metaphors do not always promote comprehension process. Metaphor and comprehension are related to many variables, such as conventionality, and performed and by the medium of them. It is necessary to reveal and model these relations more correctly.

## References:

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