The Effect of Metaphor on Reading Processing.

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“Time is Money, you must not waste it.”
  - Time is very important...

“Her smile was like a Mask, we couldn’t talk to her.”
  - Her smile was so frightening...
Why do we use metaphors?

- Because metaphor can help us acquire information…
  - Many important concepts are abstract, and we need metaphors in order to grasp them (Lakoff & Johnson, 1980).
  - Metaphor gives benefits to those who need information.
What is the Function of Metaphor?

- Text Comprehension
  - Memorability for passages
  - Accessibility to memory
Relationship of Metaphors to Text Comprehension

• How do we acquire information?
  - The memorability of passages is increased when the concluding statement is metaphorical rather than literal (Reynolds and Schwartz, 1983).

• How do we access acquired information?
  - Elements related to the same metaphor-based schema are more closely linked to each other (Allbritton, McKoon, and Gerrig, 1995).
Predication

- How do we comprehend?
  - The process of acquiring information has not been studied enough (previous studies shows the result).

- A reading task would help to reveal how this process works.
Experiment
Method

- Participants
  - 27 Kyoto University undergraduates.

- Materials
  - 8 familiar metaphors (ex. Time is Money) and 8 unfamiliar metaphors (ex. Smile is Mask).
  - The metaphors are embedded in 10- to 12 sentence passages.
Sample. Smile is Mask

I was in the laboratory. There were a few other people who were talking about their joint research results. It seemed that they were experiencing some difficulties. After a while, Nozomi, the research leader, smiled.

When I saw her, I thought her smile was like a mask.

Her smile was momentary. She and the others continued to talk as if nothing had happened. I felt that her smile did not express her real feelings. After she smiled, her co-workers seemed to be frightened, because her smile was unnatural. Since there were ongoing problems with the research, Nozomi said, “We must re-collect data now,” and the meeting was over.
Result
The Effect on Relevant Sentences

Reading time of one word per sentence (msec)

<table>
<thead>
<tr>
<th></th>
<th>Metaphor-Use</th>
<th>No Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar</td>
<td>58.56</td>
<td>59.41</td>
</tr>
<tr>
<td>Unfamiliar</td>
<td>72.63</td>
<td>61.39</td>
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</tbody>
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Reading time in the condition of Unfamiliar Metaphor Use increased significantly more than the other conditions.
The Effect on Irrelevant Sentences

There were no significant differences...
Conclusion

- Familiar metaphor would...
  - access to the stored meaning.

- Unfamiliar metaphor would...
  - require finding related information.
Reference