## Pictorial expression of sadness: Metaphor, metonymy, and causal relations

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Emotion metaphors have been extensively studied in Conceptual Metaphor Theory (Lakoff and Johnson 1980, 1999, Kövecses 2000). The main thesis of the theory, that metaphor is not only instantiated by surface linguistic expressions but it also resides in the level of cognitive or conceptual structure, has been confirmed especially by the studies of multimodal representation of metaphors (Forceville 1994, 2005, 2006). Recently, we (Shinohara and Matsunaka 2009) have investigated how emotion is visualized in Japanese comics, reporting metonymic and metaphoric instances, and argue that pictorial and verbal representations of emotions tend to share the same conceptual metaphors. In this previous study, we conducted an experiment to see how Japanese speakers visualize anger in pictures. Participants were asked to draw something on a picture of a person with an angry face, so that the person in the picture will look angrier. The result shows that conceptual metaphors of anger play important roles in visual representations of anger as well as metonymies of anger.

Building upon these previous studies, we further conducted another experiment with the following research questions:

- (1) Can we find the same multimodality in other emotions such as sadness? Are metaphorical (verbal) expressions of sadness also observed in drawings?
- (2) Are the same metonymic relations manifested both in language and in the visual domain of drawing?

In our experiment, 170 Japanese speakers were asked to draw any lines or marks that they want on an illustration of a person with a sad face, so that the person in the illustration will look sadder. They were given five minutes to complete their drawings. By analyzing what they drew, we found: (1) visual representations of the metaphor SAD IS DOWN (squatting down, lying down, etc.), (2) visual representations of the metaphor SAD IS DARK (e.g., dark background), (3) visual representations of the metaphor EMOTIONS ARE METEOROLOGICAL PHENOMENA (e.g., rain, cloud, etc.), (4) metonymic representations of sadness (e.g., tears, crying, etc.), (5) causes of sadness (death, breaking one's valuables, bullying, etc.). About two-thirds of participants drew various kinds of crying in their illustrations, while we also found metaphoric images of conceptual metaphors of sadness attested in the Japanese language.

In sum, we have found that (i) conceptual metaphors of sadness play important roles in visual representations of sadness: the same conceptual mappings underlie both verbal and pictorial expressions of emotion, (ii) metonymies are also frequently used in expressing sadness visually. Overall, major cognitive models attested in language play important roles in visual representations of sadness.

## References

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