

A cross-linguistic study of body-part metaphors and their cognitive basis

Introduction

Thus far, the cognitive foundation of lexicalized terms for object and landscape properties, which are retrieved from the body domain, have not been fully explored. A common assumption is that the conceptualization of these body-part metaphors is rooted in perceptual properties of objects and landscapes [1]. In my MA thesis, I conducted the first systematic typological study that investigates the following questions:

- How productively do languages use body-part terms to express parts of objects and landscapes?
- Of the three dimensions of similarity (*shape, spatial alignment, function*) is one used more productively than the others?
- How much variation do we find between languages with respect to 1) and 2)?

Body-part Metaphors

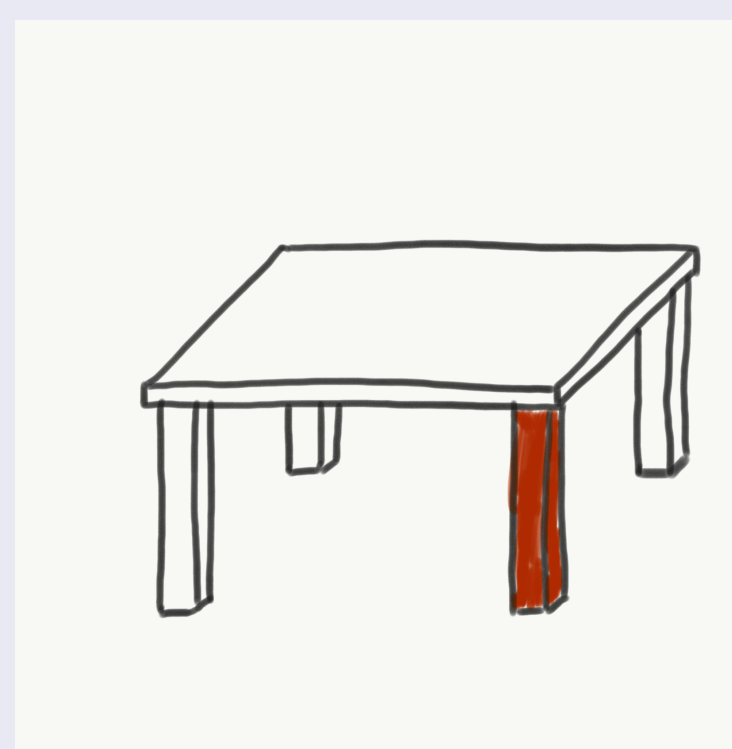
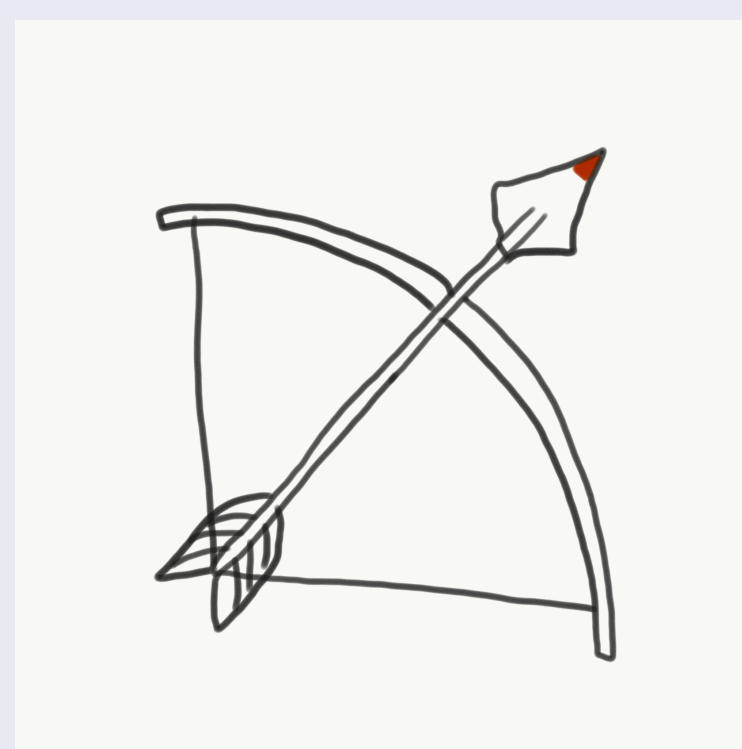
- A body-part term refers to an object or landscape feature: **leg of the table, foot of the mountain.**
- It is assumed that these metaphors are widespread in various languages [1, 2].
- Others argue that these expressions are based on a geometrical algorithm instead of a metaphorical mapping [3].

Dimensions of Similarity

- The similarity between a body-part and a property of an object or landscape determines the metaphorical mapping [3, 4, 5].
- In particular, the dimensions of **shape, function, and spatial alignment** seem to play a crucial role in the categorization of our environment.

The Study

- Participants:**
One native speaker of one of the following **13 languages**: Czech, Greek, Hebrew, Hungarian, Bahasa Indonesia, Japanese, Khoekhoe, Mandarin Chinese, Marathi, Persian, Turkish, and Vietnamese.
- Procedure:**
Elicitation study with **92 body-part metaphors** and **53 pictures**. Participants were asked whether or not they can refer to a certain object or landscape feature with a body-part term.
- Elicitation material:**



Results

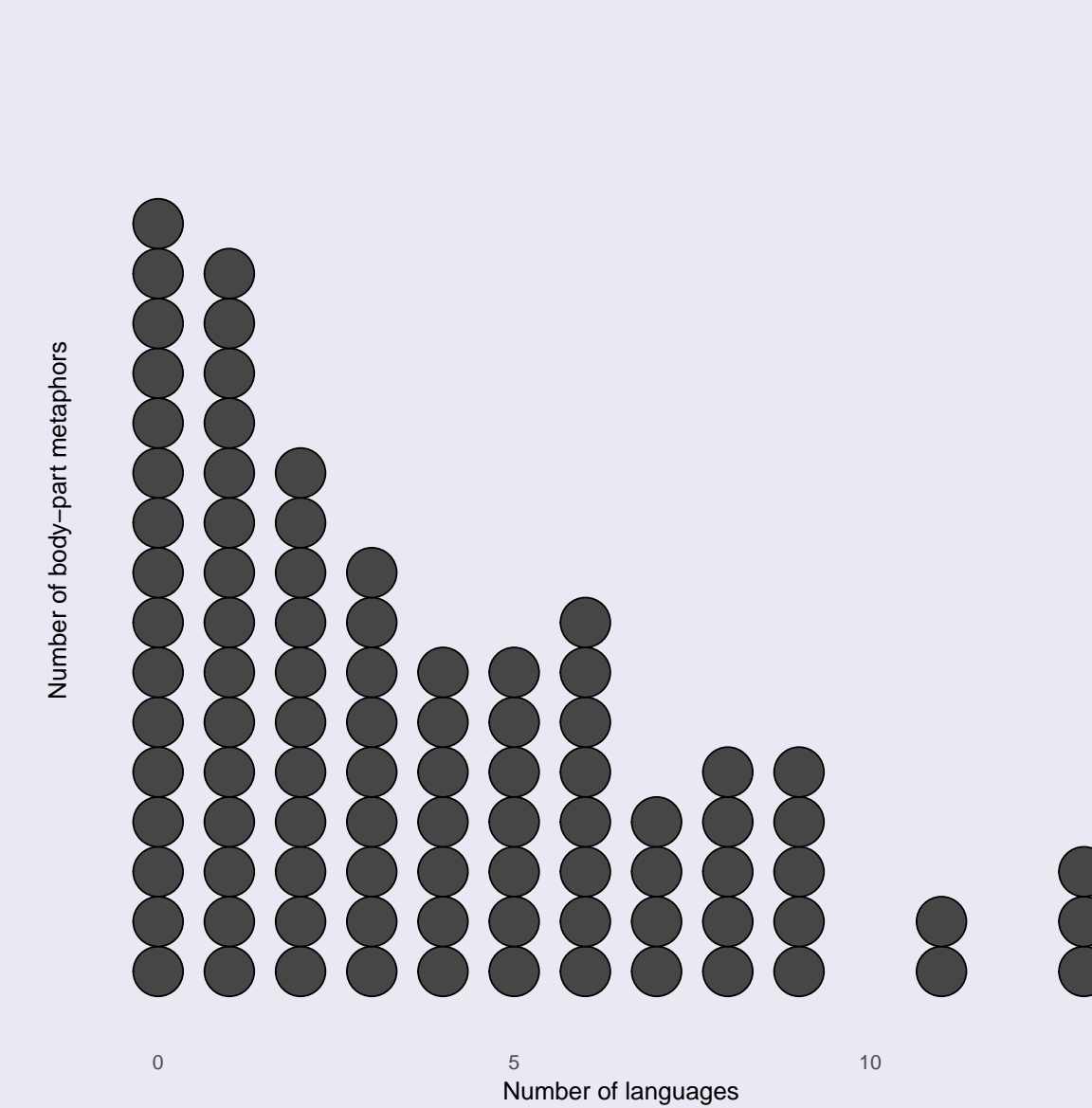


Figure: Frequency of each body-part metaphor.

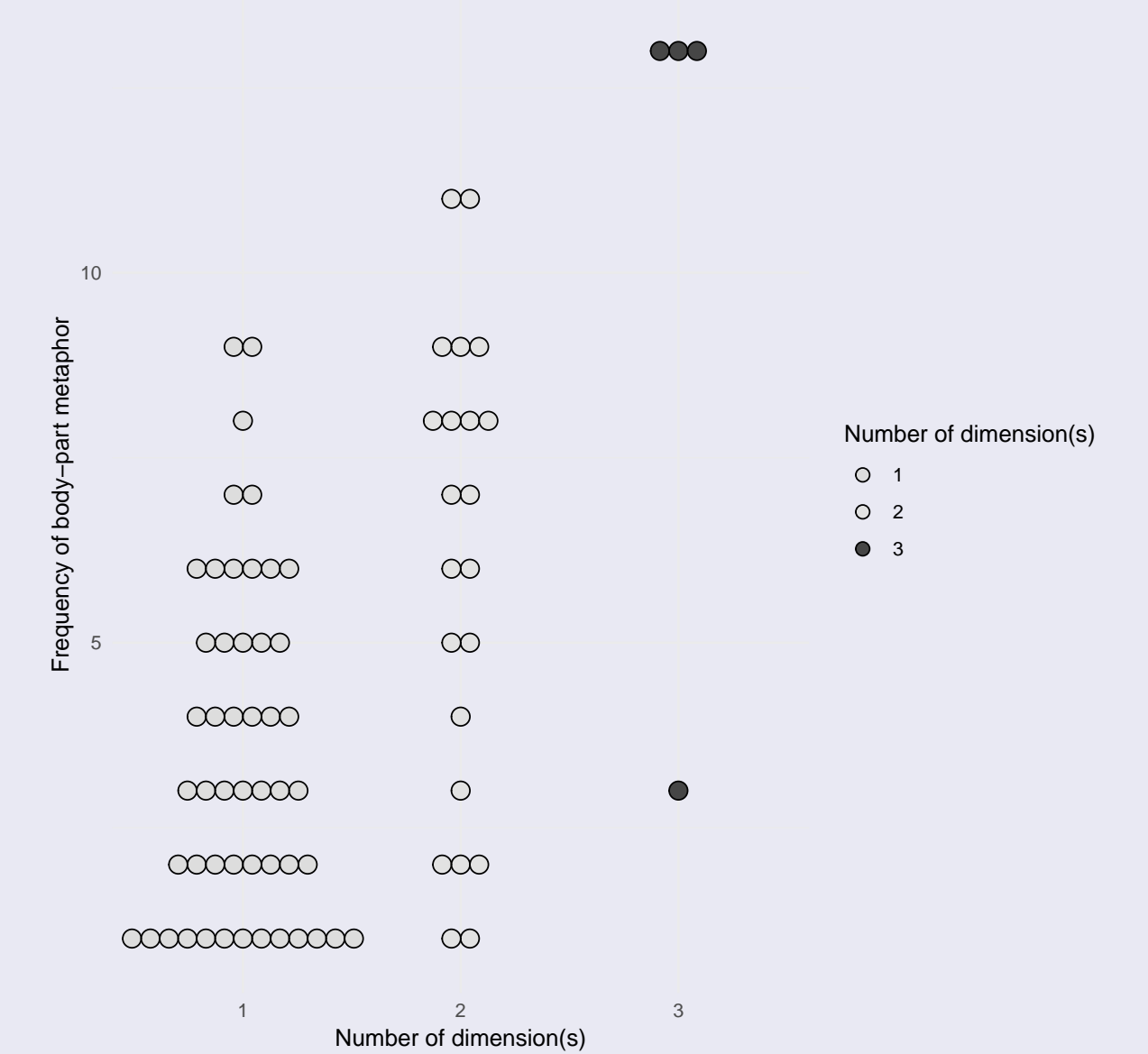


Figure: Correlation between frequency and dimension.

The occurrence of a body-part metaphor in many languages seems to rely on the number of dimensions it relates to.

Examples

(1) Khoekhoe

||gau-b am-s
arrow-M mouth-F
'tip of the arrow'
(lit. 'arrow mouth')

(2) Turkish

sarımsa -ın di i
garlic-GEN tooth
'garlic clove'
(lit. 'garlic tooth')

Conclusion

- Only a few body-part metaphors seem to occur in a wide range of languages, e.g., *leg of the table/bed/chair*.
- Languages differ in terms of which dimension they prefer to map body-part terms to object and landscape features.
- Factors such as *similarity in color* could also play a role in the choice of a certain body-part term.
- Body-part metaphors that are categorized in more than one dimension seem to be more frequent.

References

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- [4] Iraide Ibarretxe-Antuñano. The importance of unveiling conceptual metaphors in a minority language. In Anna Idström, Elisabeth Piirainen, and Tiber Falze, editors, *Endangered metaphors*, pages 253–273. 2012.
- [5] Timothy James Tilbe. *Parts and Wholes in Mesoamerican Language and Cognition*. State University of New York at Buffalo, 2017.