Concreteness ratings (e.g., Altarriba et al. 1999; Brysbaert et al. 2014; Paivio et al. 1968; Spreen & Schultz 1966) are widely used in a variety of disciplines, including experimental psychology (e.g., Yap et al. 2015), psycholinguistics (e.g., Ferreira et al. 2015), and cognitive linguistics (Dunn 2015). Such ratings are typically collected by asking participants to rate the degree of concreteness of words on a 5- or 7-point Likert scale. The word banana, for instance, is rated as very concrete (5.0 on a 5-point scale in Brysbaert et al. 2014), while the word idea is rated as relatively abstract (1.61, ibid.).

Close inspection of these concreteness ratings, however, shows that words with 'average' concreteness ratings (i.e., around 3 on a 5-point scale) are typically accompanied by relatively high standard deviations (SD). Examples from Brysbaert et al. (2014) include deluge (M 3.48; SD 1.69), and gravity (M 2.86; SD 1.65). This may suggest that participants referred to different meanings of the word while rating (e.g., ‘heavy fall of rain’ versus ‘lot of things happening’, for ‘deluge’). In fact, one of the major drawbacks of concreteness studies is that words are typically presented in isolation, i.e., without context to disambiguate between the possible meanings of a word.

In this paper, we argue that concreteness ratings that display such high SDs might denote polysemous words for which a concrete and a more abstract meaning are available that get conflated in the ratings. More precisely, we connect this issue with metaphoricity, because metaphors typically align an abstract meaning to a more concrete one, packed within the same word (in ‘a body of evidence’, body means a collection of information, while in ‘the largest organ of the body is the liver’ body refers to the human physical parts). In this talk, we therefore investigate to what extent metaphoricity can explain the high SDs for specific nouns.

We collected new concreteness ratings for a total of 90 nouns that have both a metaphorical and a non-metaphorical meaning. Each of the 230 participants in our study provided concreteness ratings for all nouns. Half of the nouns were presented with a metaphorical definition, and half of them with a non-metaphorical definition. We calculated average concreteness scores for the metaphorical as well as the non-metaphorical meanings of all nouns.

Results demonstrate that, for most nouns in our dataset, the average concreteness scores differed significantly between the metaphorical versus the non-metaphorical meaning. We also found that, when we combined and averaged the ratings elicited for both definitions of a noun, our concreteness ratings highly correlated with Brysbaert et al.’s (2014) ratings for the same noun. We conclude that metaphoricity affects the perceived concreteness of a word, and suggest that metaphoricity should be taken into account in future concreteness rating studies.

References


