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Towards reliable gestural metaphor identification procedure

Multimodal metaphors in conversation are products of the process of creating metaphoricity by both communicants (Cienki and Müller 2008). Additionally, metaphors expressed in words and gestures reveal people's creativity and dynamism in conceptualisation (Chui 2011). Moreover, metaphorical gestures can provide salient, additional information about the aspect of the conceptualisation which is the speaker's focus of attention in real-time multimodal communication (Chui 2011). The gestural metaphor is thought to be significant empirical evidence for the contemporary theory of metaphor (Lakoff 2014; McNeill 1992).

However, systematic annotation of metaphorical gestures in conversation with reliability measurement is rarely reported. Thus making reproducibility of the research debatable. The metaphor identification procedure for verbal modality (Pragglejaz 2007) is well established and tested in various languages (Pasma 2012; Steen et al. 2010; Badryzlova et al. 2013; Marhula and Rosiński 2014), but the procedure for gestural metaphor is still being developed (Cienki 2016). Reliability of gesture annotation depends on unit segmentation and precise kinesic criteria for gesture identification (Lausberg 2013). Finding the abstract referent for the gesture needs an interpretation of larger parts of the discourse.

To address these issues annotation of metaphorical gestures can be based on MIP-G assumptions (Cienki 2016) and NEUROGES coding system (Lausberg and Sloetjes 2009). According to MIP-G, the gestural metaphor is the hand movement with stroke phase and abstract referent (Cienki 2016). Using NEUROGES coding system, potential metaphorical gestures can be identified as hand movements with abstract referent and performed in one of the following functions: egocentric deictic or egocentric direction, form presentation, motion quality presentation and spatial relation presentation (Lausberg 2013). Additionally, a metaphorical gesture is known to have vague trajectory and relaxed hand shape since the form of the gesture is not as clearly articulated as in gesture with the material referent. Consequently, any Source Domain concept being depicted is more vague (Cienki 2016). Finally, metaphoricity can be established if the non-material referent identified within the verbal expression share a "resemblance in experience" with the form indicated with the gesture (Cienki 2016).

Material for annotation was chosen from career coaching conversations recorded in Polish. Almost 500 minutes were annotated by two trained raters supervised by a certified rater in NEUROGES.

Annotation was performed in two phases. Firstly, functions and types of hand movements were annotated on muted videos. Secondly, referents were annotated on videos with sound and previously transcribed text of conversations. Interrater agreement was calculated in ELAN using EASYdiag algorithm (Holle and Rein 2015) on 25% of the material. Discussions about controversial examples have helped to lower the number of disagreements. Considering unit segmentation and function annotation, average Kappa is 0,6. Applying NEUROGES coding system and MIP-G assumptions to the identification of metaphorical gestures allows for quantitative and qualitative analysis of metaphorical expressions at the larger scale. Combining identification of metaphorical gestures with metaphor identification procedure used for verbal modality will enhance interpretation of multimodal metaphor and its role in conversation and conceptualisation.

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