## Conceptual domain disambiguation for metaphor identification and interpretation

## Mojca Brglez<sup>1</sup>, Kristina Pahor de Maiti Tekavčič<sup>1,2</sup>

<sup>1</sup> Faculty of Arts, University of Ljubljana, Slovenia, <sup>2</sup>Institute of Contemporary History, Slovenia

mojca.brglez@ff.uni-lj.si, kristina.pahordemaiti@ff.uni-lj.si

Metaphor provides an excellent entry point to explore culture-specific conceptualizations, but its detection and interpretation is often complex and laborious. The most reliable identification of metaphors is currently still achieved by time-consuming manual annotation (Steen et al., 2010). To speed up the process, several automated approaches have also been proposed (Ptiček & Dobša, 2023), but these approaches which are generally not available for smaller or less-resourced languages, like Slovene, a gap which we address in this study.

We propose a new lexico-semantic resource that exploits semantic, affective and distributional features, and is tailored to the analysis of metaphors in Slovene. Our work builds on two ideas: semantic incongruity between the source and target domains, and the contrast in concreteness of words and domains. While most previous metaphor identification approaches have operated on the level of lexical units, our approach operates on the level of semantic fields. In our algorithm, we capitalize on existing knowledge resources (Rayson et al. 2004; sloWNet, Fišer, 2015), word embeddings (Ljubešić and Erjavec, 2018) and concreteness ratings (Köper and Schulte im Walde, 2022). The algorithm provides a good starting point for identifying and interpreting metaphors, as well as the flexibility to incorporate words that are not covered in existing dictionaries.

**References:** • Steen, G., Dorst, A. G., Herrmann, J. B., Kaal, A., Krennmayr, T., & Pasma, T. (2010). A method for linguistic metaphor identification. Amsterdam: Benjamins.

- Ptiček, M., & Dobša, J. (2023). Methods of Annotating and Identifying Metaphors in the Field of Natural Language Processing. *Future Internet* 15(6), Article 201. https://doi.org/10.3390/fi15060201.
- Rayson, P., Archer, D., Piao, S. L., McEnery, T. (2004). The UCREL semantic analysis system. *Proceedings of the workshop on Beyond Named Entity Recognition Semantic labelling for NLP tasks*, p. 7-12.
- Ljubešić, N., & Erjavec, T. (2018). Word embeddings CLARIN.SI-embed.sl 1.0. Slovenian language resource repository CLARIN.SI. http://hdl.handle.net/11356/1204.
- Fišer, D. (2015). Semantic lexicon of Slovene sloWNet 3.1. Slovenian language resource repository CLARIN.SI. http://hdl.handle.net/11356/1026.
- Köper, M., Schulte im Walde, S. (2017). Improving Verb Metaphor Detection by Propagating Abstractness to Words, Phrases and Individual Senses. *Proceedings of the 1st Workshop on Sense, Concept and Entity Representations and their Applications*, p. 24-30.