

EXPLORATION OF INTERACTION OF SEMANTICS AND SYNTAX THROUGH SEMANTIC AND SYNTACTIC AMBIGUITY

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Polysemy is the type of lexical ambiguity where one word can have multiple related senses. Word *paper* could refer to the writing paper, i.e., paper as the material, but also to scientific paper, and even a daily paper. Polysemous words are a complex phenomenon, whose processing is affected by number of senses, probability distribution of those senses, and degree of relatedness among the senses (Filipović Đurđević & Kostić, 2009; 2017; 2021; Klepousniotou, 2002; Rodd et al., 2002).

Additionally, in Serbian, words can take up to seven inflected forms. Syntactic ambiguity of an isolated inflected form is reflected in the multitude of syntactic roles the given inflected form can take in the sentence. For example, inflected masculine noun *konja* (horse) can indicate the subject in the sentence (*Dva konja su trčala / Two horses were running*), but also the object (*Jahao sam konja / I rode the horse*). It has been demonstrated that different aspects of syntactic ambiguity affect lexical processing as well: information load based on relative frequency of the inflected form within its inflectional class and the number of syntactic functions and meanings (Kostić, 1991), inflectional entropy (Baayen et al., 2006), relative entropy (Milin et al., 2009), etc.

The interactive approach in the modularity-of-syntax debate suggests that we *simultaneously* process this vast amount of information regarding both semantic and syntactic meaning of a word. When we add to the consideration the ubiquity of ambiguity phenomena such as polysemy, the information that most words convey seems quite demanding. Therefore, in this research we wanted to investigate whether this interaction between semantics and syntax could be observed. We relied on two different approaches from which we derived measures to predict behavior: an information-theoretic approach and error-driven learning approach (Baayen et al., 2011; Rescorla & Wagner, 1972) to explore the interaction between two ambiguity types.

From the information-theoretic standpoint, we observed the interaction, but it could not be fully captured by tested measures. However, measures derived from the learning approach did offer more in-depth answers regarding processing inflected polysemous words. Finally, we attempted to simulate the emergence of semantic-syntactic interaction from the simple learning mechanism by attempting to predict the correct inflected form of a polysemous word based on both orthographic and semantic cues.