PREPOSITION SEMANTIC ANALYSIS VIA PERSIAN TEXT CORPUS

Parvaneh Khosravizadeh[1]*, Zahra Kowsarifard[2], Moharram Eslami[3]

[1]Assistant professor of Linguistics, Languages and Linguistics Centre, Sharif University of Technology, Tehran,
[2]MA graduate student in Computational Linguistics, Languages and Linguistics Centre,
Sharif University of Technology, Tehran,
[3]Associate professor of Linguistics, Persian language and literature center,
University of Zanjan, Zanjan **(IRAN)**
*Corresponding author: khosravizadeh@sharif.edu

ABSTRACT

Prepositions are considered as frequent linguistic units, whose role in computational linguistics cannot be neglected. These units are often thought to have functional meaning. On the other hand, in some cases, the substitution of one particular preposition with another onewould changethe meaning ofa sentence. This paper argues that prepositions are not meaningless units, which are only used for the purpose of sentence cohesion. The central goal of the research is to show that prepositions are meaning distinguishingelements.In order to achieve this goal, five Persian prepositionsare examined in a Persian text corpus. Firstly, 1000 sentences consisting of these prepositions are extracted randomly from a text corpus. Next, the meaning of each prepositionis assigned based on the linguistic context. Finally, each preposition is replaced by other prepositions in order to examine any change in the sentence meaning.The findings indicate that approximately 53% of prepositions, when replaced by other prepositions can cause a great change in themeaning of the whole sentence. Besides, it is argued that the resulting change in the meaning of sentences is systematic. That is, the semantic change after prepositions substitution is predictable.

Key words: Preposition, Text Corpus, Computational Linguistics

1. INTRODUCTION