## **CHAPTER IV**

## Automatic Term Extraction Using Machine Translations

Asst. Prof. Dr. Edip Serdar GÜNER

## 1. Translator, Machine and Corpus

In today's world, the intensive need for translation has made the use of technology a necessity rather than an option or alternative to be applied within the translation process (Austermühl, 2014). Due to the expectation towards increasing quality and speed, translators have begun to use electronic tools as translation aids and thus to reach a more effective and functional translation process (Kiraly, 2014). The software and electronic resources used in the translation process and accepted as the components of the framework called "translator's workstation", are very diverse. According to their position in the translation process, the resources could be classified as,

- Resources already created before the translation task starts, and
- Resources to be created within the translation process.

For example; electronic dictionaries, available term banks and corpora are generally accessible to the translator prior to the We set out to propose a method that will enable the use of machine translations as efficient as possible, especially at lexical level, and the point we have arrived in this study seems quite promising in technical domains. We have developed a software which depends on the logic of verification or denial at lexical level by using machine translations from different systems. We think that, a translator who is able to use this tool efficiently in terminological issues, will highly benefit from n-grams and lattices extracted out of machine translations.

Our methodology also has the potential to guide future translators on how to take advantage of machine translation systems better if they are integrated into the curricula of Translation and Interpreting and Translation Studies departments.

## References

- Andrews, S., Orphanides, C., & Polovina, S. (2011). Visualising computational intelligence through converting data into formal concepts. In Next generation data technologies for collective computational intelligence (pp. 139-165). Springer, Berlin, Heidelberg.
- 2. Austermühl, F. (2014). *Electronic tools for translators*. Routledge.
- Baker, M. (1993). Corpus linguistics and translation studies: Implications and applications. *Text and technology: In honour of John Sinclair, 233*, 250.
- Brants, T., & Xu, P. (2009). Distributed language models. In Proceedings of Human Language Technologies: The 2009 Annual Conference of the North American Chapter of the Association for Computational Linguistics, Companion Volume: Tutorial Abstracts (pp. 3-4). Association for Computational Linguistics.
- Calude, A. S. (2002). Machine Translation of Various Text Genres. 7th Language and Society Conference of the New Zealand Linguistic Society. Hamilton, New Zealand.

- 6. Güner, E. S. (2015). "Makine Çevirisinde Yeni Bir Bilgisayımsal Yaklaşım", PhD Thesis, Trakya University.
- 7. Hentig von, H. (1972). Magier oder magister? über die einheit der wissenschaft im verständdigungsprozess. Klett.
- Johnson, M., Schuster, M., Le, Q. V., Krikun, M., Wu, Y., Chen, Z., ... & Hughes, M. (2016). Google's multilingual neural machine translation system: enabling zero-shot translation. arXiv preprint arXiv:1611.04558.
- 9. Jurafsky, D., & Martin, J. H. (2009). Speech and language processing: An introduction to natural language processing, computational linguistics, and speech recognition. *Prentice Hall series in artificial intelligence*, 1-1024.
- 10. Kiraly, D. (2014). A social constructivist approach to translator education: Empowerment from theory to practice. Routledge.
- Krüger, R. (2012). Working with corpora in the translation classroom. *Studies in second language learning and teaching*, 2(4), 505-525.
- 12. Laviosa, S. (2002). Corpus-based translation studies: theory, findings, applications (Vol. 17). Rodopi.
- 13. National Research Council (US). Automatic Language Processing Advisory Committee. (1966). *Language and machines: computers in translation and linguistics; a report* (Vol. 1416). National Academies.
- 14. Pekcoşkun Güner, S. (2018), "Derlem Tabanlı Yaklaşımların Çeviribilimdeki Yeri ve Önemi", PhD Thesis, Istanbul University.
- Wille, R. (1982). Restructuring lattice theory: an approach based on hierarchies of concepts. In *Ordered sets* (pp. 445-470). Springer, Dordrecht.
- Wille, R. (2005). Formal concept analysis as mathematical theory of concepts and concept hierarchies. In *Formal concept analysis* (pp. 1-33). Springer, Berlin, Heidelberg.