International Social Sciences and Humanities Conference
Milan, Italy 10-12 October 2024

Unavoidable Bias in Interpretation and Translation: An NLP-Based Empirical Analysis Using Ancient Greek Terminology

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Abstract

In this research, we examine particular biases present in human translation of ancient texts, emphasising the importance of detailed interpretation over translation, when it comes to such material. This paper particularly focuses on ancient Greek's complexity as the language beams with “contextual meaning” and specific to the culture vocabulary. By analysing the semantic and cognitive biases ingrained in human translations, we emphasise the potential of NLP models to offer a more impartial analysis, in order to identify such bias as well as refine our understanding of its nature. The study examines the aspects in which different NLP models struggle and dependency of such limitations on the corpus of information the model was originally trained with. For instance, study finds that models like BERT, when subjected to comparative analysis often miss deeper philosophical meanings due to insufficient historical context, albeit scoring high in contextual understanding, while other transformer-based systems, such as T5, tend to heavily rely on given language trends when approaching such tasks, which proves to be a flawed method for understanding ancient greek vocabulary. This interdisciplinary approach allows us to acknowledge the importance of equally integrating historical context, linguistic theory, and computational methods into the process of understanding a no longer spoken language, which ultimately helps to enhance the accuracy of ancient text translations.

Keywords: Biases, human translation, ancient texts, ancient Greek, NLP models, semantic analysis, cognitive biases, BERT, T5, historical context, linguistic theory, computational methods, accuracy, translation.