



## Taking Differences between Turkish and English Languages into account in Internal Representations

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It is generally assumed that the representation of the meaning of sentences in a knowledge representation language does not depend of the natural language in which this meaning is initially expressed. We argue here that, despite the fact that the translation of a sentence from one language to another one is always possible, this rests mainly on the fact that the two languages are natural languages. Using online translations systems (e.g. Google, Yandex translators) make it clear that structural differences between languages gives rise to more or less faithful translations depending on the proximity of the implied languages and there is no doubt that effect of the differences between languages are more crucial if one of the language is a knowledge representation language. Our purpose is illustrated through numerous examples of sentences in Turkish and their translation in English, emphasizing differences between these languages which belong to two different natural language families. As knowledge representations languages we use the first order predicate logic (FOPP) and the conceptual graph (CG) language and its associated logical semantics. We show that important Turkish constructions like gerunds, action names and differences in focus lead to representations corresponding to the reification of verbal predicates and to favor CG as semantic network representation language, whereas English seems more suited to the traditional predicates centered representation schema. We conclude that this first study give rise to ideas to be considered as new inspirations in the area of knowledge representation of linguistics data and its uses in natural language translation systems.

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