The MetaNet Wiki: A collaborative online resource for metaphor and image schema analysis

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In this paper we introduce the MetaNet Wiki, a collaborative online interface for the new MetaNet metaphor repository and database, intended as a tool for metaphor analysts. The MetaNet Wiki provides a familiar Semantic MediaWiki (Krötzsch et al. 2007) interface to a repository of metaphors and schemas (e.g., frames and image schemas) represented in Semantic Web-compatible formalisms. Implementing this repository motivates a newfound commitment to formalism in conceptual metaphor theory. In this paper, we outline the ways in which the existing as well as emerging aspects of the theory of conceptual metaphors and its underlying deep semantics is represented in the MetaNet Wiki.

We highlight three main aspects of the database in light of how metaphors and schemas are conceptually organized according to the principles of frame semantics (Ruppenhofer et al. 2006) and Embodied Construction Grammar (Feldman, Dodge and Bryant 2009). First, the complexity of shared conceptual structure, from composed complex frames to conceptual primitives, is modeled via definitions-based linkages which form a schema network. For instance, the relationship between a specific schema (e.g. Driving_a_car), which works by activating a more general schema (e.g. Controlling_vehicular_motion), is captured via a subcase relation. In such cases, the roles defined at more general levels are accessible at specific levels, where additional specification is often accomplished through bindings to roles of other related schemas. Each schema is individually represented; its relationships to other schemas are specified both via a related schema entry and a list of bindings from the roles of that schema to those of related schemas. An example of this is the Driving_a_car frame, whose structure can be traced through successively more general schemas, to Motion_along_a_path:

(1) Driving_a_car → Controlling_vehicular_motion → Self_motion → Motion_along_a_path

These relationships can be fully visualized throughout the Wiki, both on individual pages for a given particular schema or metaphor and on profiled sections of the database that illustrate via automatically-generated graphs the full complexity of the interconnected lattice. This allows the researcher to investigate previously-unanalyzed relations as well as highlight inconsistencies or gaps in the analysis.

Second, we discuss the assignment of schemas to the source and target domains of the metaphor mapping. Metaphors also have their own pages, and are also organized into a relational network according to structural relations and schema roles defined for their source and target domains. Thus, GOVERNING A COUNTRY IS DRIVING A CAR and GOVERNING A COUNTRY IS STEERING A SHIP are both subcases of GOVERNING IS CONTROLLING VEHICULAR MOTION, which in turn depends on still more general metaphors such as PURPOSEFUL ACTION IS MOTION TO A DESTINATION and CHANGE OF STATE IS CHANGE OF LOCATION. Both metaphoric and non-metaphoric relations between schemas are explicitly defined at the level of individual roles.

Finally, inferential structure is defined for schemas, and these inferences are maintained as entailments in target domain metaphoric mappings. As with roles, schemas have both unique and inherited inferences, which are mapped into a target domain. For example, the inference that little progress has been made in *The government put the brakes on trade negotiations* is motivated by the entailed metaphor RATE OF PROGRESS IS SPEED OF MOTION.

The MetaNet Wiki is already a sizable database with several hundred metaphors and growing. It is adaptable to cross-linguistic analysis, with Spanish, Russian, and Persian Wikis currently in development utilizing the same formalisms. The Wiki can act as a reference and pedagogical tool for metaphor theorists, frame semanticists, and other interdisciplinary scholars.

References

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