The *Heart* of the Problem: How Shall We Represent Metaphors in Wordnets?

Antonietta Alonge[1] and Birte Lönneker[2]

[1] Sezione di Linguistica, Facoltà di Lettere e Filosofia, Università di Perugia
Piazza Morlacchi, 11, Perugia 06100, Italy
Email: antoalonge@libero.it
[2] Institute for Romance Languages, University of Hamburg
Von-Melle-Park 6, 20146 Hamburg, Germany
Email: birte.loenneker@uni-hamburg.de

Motivated by the limits of EWN with respect to the treatment of metaphor and the consequences on the use of the database for WSD, we address the issue of the encoding of information on metaphors in wordnets. We assume as a starting point the theory of metaphor as a cognitive rather than a linguistic phenomenon, as proposed by [1] and [2]. According to this theory, metaphoric linguistic expressions are manifestations of 'conceptual metaphors', i.e. metaphorical structures which are present in our minds and relate a concrete *source domain* with a more abstract *target domain*. The adoption of this theoretical framework allows us to envisage devices to encode data both on conventional, well-established metaphoric expressions and on potential, novel metaphoric uses of words. We state that **1)** more information has to be encoded at the synset level, with the aims of confronting the lack of consistency and completeness of the database, and of adding data on sense relatedness, by means of a specifically defined new internal-relation (i.e., a new relation linking synsets within each language-specific wordnet); **2)** at a higher level, language-specific wordnets have to be linked to the ILI in a way that accounts for mappings between conceptual domains resulting in potential new metaphoric expressions. We thus propose to add an EQ_METAPHOR relation, pointing to new composite ILI units to account for regular metaphoric extensions of senses in EWN. Via the ILI links, the connection between specific synsets in a language would also be shown at the Top Ontology (TO) level as a connection (mapping) between top concepts (linked to different conceptual domains). On the other hand, the composite ILIs and the mappings at the TO level could be used to infer which words might *potentially* display a certain metaphorical sense extension, as this information can be derived through inheritance along taxonomies. Taking as a starting point domain-centered data from the Hamburg Metaphor Database, we discuss also non-taxonomic ways of "spreading" the information about potential metaphorical senses.

References

1. Lakoff, G., Johnson, M.: Metaphors we live by. UCP, Chicago/London (1980).
2. Lakoff, G.: The contemporary theory of metaphor. In Ortony, A., ed.: Metaphor and Thought. CUP, Cambridge (1993) 202–251.

Petr Sojka, Karel Pala, Pavel Smrž, Christiane Fellbaum, Piek Vossen (Eds.): GWC 2004, Proceedings, pp. 10–10.