

## Generality of semantic processes: evidence from a typological study of polysemy

It is generally accepted that semantic change begins in polysemy. Hence a first step in understanding semantic change and the processes that underlie it can be obtained by examining the semantic relations among senses of a polysemous word. A number of typological studies of polysemy have been made (see Koptjevskaja-Tamm 2008 for a survey). However, none of them quantify the proportion of polysemies across the sample, which can provide a measurement of degrees of closeness of senses. Quantified degrees of closeness are useful both in semantic typology and in comparative linguistics, where it can provide a measurement of cognate likelihood among word forms that are not translation equivalents.

The results reported here emerged from a typological survey of 81 languages, all from distinct genera (Dryer 1989) and distributed across genetic families and geographical areas. Twenty-two concepts denoting natural phenomena in the Swadesh basic vocabulary list were selected. Data were drawn from good-quality dictionaries. All word forms expressing the 22 concepts were identified in the dictionaries. Polysemies were then identified for each of the word forms. The data were then analyzed to identify the number of languages which contained a semantic extension from the Swadesh concept to another concept (including another Swadesh concept).

The survey revealed that there are clear differences of great magnitude in semantic extensions. Closer examination shows that quantifying semantic closeness raises important questions about the nature of semantic change. Theories of semantic change invoke processes such as metonymy to account for semantic shifts, and these are employed by historical linguists to identify or evaluate possible cognates. However, instances of what appears to be the “same” metonymic shift have very different likelihoods of occurring based on the pilot study sample. For example, one might propose that a metonymy TIME INTERVAL  $\Leftrightarrow$  BEGINNING OF INTERVAL would account for both ‘night’  $\Leftrightarrow$  ‘evening’ and ‘day’  $\Leftrightarrow$  ‘dawn’, both of which occur in the sample. But ‘night, evening’ is found in 15 languages, while ‘day, dawn’ is found in only one language. This difference in magnitude indicates that other semantic factors than the metonymy TIME INTERVAL  $\Leftrightarrow$  BEGINNING OF INTERVAL account for most of the variance in likelihood. The metonymic relation tells us little about the actual likelihood of specific semantic shifts. Differences in magnitude were also found between instances of other metonymic extensions such as CELESTIAL OBJECT  $\Leftrightarrow$  TIME PERIOD OF CYCLE (‘moon, month’ vs. ‘sun, day’) and CELESTIAL OBJECT  $\Leftrightarrow$  LIGHT EMITTED BY OBJECT (‘sun, sunlight’, ‘moon, moonlight’, ‘star, starlight’).

On the other hand, the semantic extension LARGE LANDSCAPE FEATURE  $\Leftrightarrow$  SMALL LANDSCAPE FEATURE occurs with about the same likelihood for ‘mountain, hill’, ‘lake, pond’ and ‘river, stream’. Hence this extension appears to be independent of specific instances.

These results imply that semantic processes occur with greater or lesser degrees of generality. One cannot predict these differences in magnitude or differences in types of semantic processes without an empirical typological study.