Lexical Diachronic Semantic Maps
Thanasis Georgakopoulos (athanasios.georgakopoulos@ulg.ac.be)
Stéphane Polis (s.polis@ulg.ac.be)
University of Liège – F.R.S.-FNRS

International Summer School on Typology and Lexicon (TyLex), Moscow, 2-7 September, 2017

INTRODUCTION
The Project: Le Diasema

Main objectives
• To incorporate the diachronic dimension into semantic maps of content words
• To create an online platform for automatically plotting diachronic semantic maps based on polysemy data from the languages of the world
• To extend the method so as to also include information about the cognitive and cultural factors behind the development of the various meanings

What are semantic maps?
‘A semantic map is a geometrical representation of functions (…) that are linked by connecting lines and thus constitute a network’ (Haspelmath, 2003). It constitutes a ‘model of attested variation’ (Cysouw, 2007).

• Meaning distinctions are based on cross-linguistic evidence and designed to have cross-linguistic validity
• They combine the onomasiological and the semasiological perspective
• Multifunctionality: No commitment to a particular claim about conventionalization of senses

Visualization tools
Visualization techniques and actual semantic analysis will be inseparable in the future of the semantic map model (cf. Malchukov, 2010: 177)

We provide an implementation of our automatic plotting approach in the online platform Le Diasema (Haspelmath, 2003: 213, 215)

Figure 1. Semantic map of typical native functions, with the boundaries of English u and French a (based on Haspelmath, 2001: 213, 215)

Figure 2. Main loop of the inference algorithm

A diachronic semantic map of the functions of indefinite pronouns (light) [rare]

3. Convert the polysemy patterns into a lexical matrix (Python script)

4. Plot a weighted semantic map with an adapted version of the algorithm suggested by Regier et al. (2013) that computes weighted edges (Python script β)

5. Visualize the diachronologically weighted semantic map of time-related senses

6. For a diachronic investigation
• Remove articulation points in the DARK/NIGHT semantic domain
• Get rid of poorly attested patterns of polysemy
• Keep meanings that are connected in at least 8 different languages

7. Select languages with diachronic data
• Ancient Greek (8th – 1st c. BC)
• Ancient Egyptian (26th c. BC – 10th c. AD)

8. Add diachronic information based on the attested material

SELECTED REFERENCES


