

## Projects and research groups

### **Contrast in language, memory and thought**

This is an interdisciplinary collaborative project at Lund University funded by the Swedish Research Council. The members are Dr Caroline Willners, Dr Joost van de Weijer and Professor Carita Paradis from the Centre for Languages and Literature and Associate Professor Magnus Lindgren from Psychology. The main thesis of the project is that CONTRAST is an extremely powerful construal in human thinking, important to both the organization of coherent discourse and to the mental organization of the vocabulary, and CONTRAST is also part and parcel of evaluative polarity of negative and positive attitude. There is widespread consensus among linguists that CONTRAST is a robust semantic relation, but in spite of this, relatively little empirical research has been carried out to substantially support the claim. The aim of the project is to make up for this shortcoming. To get a firm grasp of the complexities of CONTRAST, our project builds on textual (corpus-driven as well as corpus-based), psycholinguistic and neurolinguistic foundations. The languages under investigations are English and Swedish. This research is important for any theory of mental models. It is also of great importance to language technological applications such as further development of semantic webs, lexicology, applied teaching and learning and cross-linguistic lexical typology. Last but not least, research on language and cognition calls for evidence from different sources and cross-fertilization of scientific techniques.

### **NetWordS – The European Network on Word Structure. Cross-disciplinary approaches to understanding word structure in the languages of Europe**

I am a member of the steering committee for NetWordS funded by the European Science Foundation (2011–2015) investigating word structure in European languages ([www.networks-esf.eu](http://www.networks-esf.eu)). Morphologically complex words are common to all European languages. They represent a fundamental part of what we mean by human language knowledge and the basic building blocks of language productivity. Nonetheless, words remain a challenging realm of scientific inquiry, at the interface between lexicon and grammar, requiring integration of a number of orthogonal disciplines and approaches, ranging from psycho- and neuro-linguistics, to theoretical, variationist and historical linguistics, to memory processes and computational models of (sub)symbolic processing.

Scientists all over Europe are currently pursuing important lines of work on word structure, mostly supported by nationally-funded projects or bi-lateral cooperation programmes. There nonetheless seems to be a growing need for a larger-scale integrated European effort, focusing on common medium-term objectives, to promote interdisciplinary cross-fertilization and synergy, and optimize research investments in terms of more convergent and complementary efforts. The European research scenario is particularly conducive to these goals, due to the robustly empirical character of its methodological stance and the unique range of relevant scientific domains where European scientists appear to have, at present, a huge potential for major breakthroughs.

By bringing together experts of various scientific domains and different theoretical inclinations, this Research Networking Programme intends to advance our current awareness of the theoretical, typological, psycholinguistic, computational and neurophysiological evidence on the structure and processing of words, with a view to promoting novel methods of research and assessment for grammar architecture and language physiology. This will be achieved through knowledge networking and dissemination and scientific meetings organized over a four year period. Moreover, the NetWordS will have a highly interdisciplinary profile, will promote training and development of young scientists through short visits and exchange grants, and will encourage

the integration of new partners. The programme will also have a clear global dimension with collaborations with the Mental Lexicon Research Group in Canada.

### **The meaning of actions: motor functions, intentions and the brain**

This is an interdisciplinary project funded by the Pufendorf Institute for advanced studies at Lund University (<http://www.pi.lu.se/>). The project runs 2011–2012, involving researchers from linguistics, psychology, cognitive science, logopedics and neuroscience. The area of research is closely related to the program of the Linnaeus project Cognition, Communication and Learning (CCL) ongoing at Lund University.

### **The Complexica Project**

*The Comparative Lexical Relations Group* is an international collaborative enterprise between Professor Carita Paradis and Dr Caroline Willners at Lund University in Sweden, Dr Lynne Murphy and Dr Steven Jones at the Universities of Sussex and Manchester in England and Dr Victoria Muehleisen at Waseda University in Japan. Our homepage with previous work by the members is <http://www.f.waseda.jp/vicky/complexica/index.html>.

### **Sensory perceptions in text and discourse**

This Spanish-Swedish collaborative enterprise started with the study of *Wine speak* between myself, my then doctoral student Charlotte Hommerberg (now Dr Homemrber), Dr Maria del Rosario Caballero Rodríguez and Dr Ernesto Suárez Toste, Universidad de Castilla-La Mancha and Professor Margarita Goded Rambaud, UNED Madrid. It was concerned with the structure of the vocabulary of winespeak in tasting notes, the semantics of wine descriptions as well as the discourse of wine reviews - of particular interest is how sensory perceptions such as VISION, SMELL, TASTE and MOUTHFEEL are talked about in wine descriptions in English and Spanish. Such descriptions of a wine's qualities are linguistically interesting since several different sensory perceptions are involved and communication about each of these is highly subjective and constitutes a challenge for successful understanding. Our research has developed in different directions over the years and the topic has broadened to include also other domains than wine and has taken on cross-scientific collaboration on my part with information visualization and computer science.

Descriptions of sensory perceptions typically rely on meaning structures referring to concrete entities from other perception domains, e.g. the smell of a wine may be described as 'white chocolate', 'spice box' and 'tobacco leaf'. This research centres on the following questions:

- What ontological domains are involved when we talk about the colour, taste, smell and mouthfeel of wine?
- What are the synaesthetic patterns of the linguistic expressions?
- What are the lexical resources?
- The rhetoric of taste authorities – discourse analysis

Interdisciplinary collaboration in the field of winespeak is carried with Professor Andreas Kerren (<http://homepage.lnu.se/staff/akemsi/>) at Mathematics and Systems Engineering at Linnaeus University on *Visualization of Sensory Perceptions* in text and discourse.