B4: The role of lexical information in word-formation and the semantics of sentence and discourse
Planning for phase 3

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Review of Phase 2

Main achievement (B4/B1/B6):

**DM/DRT** [Roßdeutscher, 2012b]

- DM/DRT is a general architecture of a syntax-semantics-interface
- Combines principles of Distributed Morphology, Discourse Representation Theory and Minimalist Syntax
- DM/DRT will be our main tool for investigations in Phase 3
- The development of a fragment of DM/DRT has already become increasingly relevant during Phase 2
Review of Phase 2: Main Topics

We developed a fragment of a representation language and constructions algorithms for the compositional computation of the semantics of verb projections, starting from their roots. This fragment was the basis for investigations of:

- **UNG** German *ung*- nominalizations, formation and interpretation
- **PRE** Prefix- and particle-verbs
- **STAT** Data-intensive approaches to lexical meaning
- **AMB** Case studies on ambiguity pointing towards a general methodology of incremental specification in context (B3/B4/B5)
Phase 2: Some Case Studies

UNG Theory of *ung*-formation confirmed on verbs with P-element; [Roßdeutscher, to appear]

UNG Underspecified representation of sortally ambiguous *ung*-Nominalizations; [Pross, 2012]

PRE Compositional theory of verb formation with P-elements; [Roßdeutscher, 2011, Roßdeutscher, 2012a]

PRE Comprehensive and in-depth theory of *nach*-particle verbs; [Haselbach, 2011], Haselbach Diss

PRE Case theory for German PPs; [Haselbach, 2012], Haselbach Diss
Phase 2: Some Case Studies

STAT WeKa Tool J48 tree decision algorithm for an-verbs; [Springorum et al., 2012] (cooperation with Schulte-im-Walde)

STAT Hierarchical clustering of auf-particle verbs; [Rued, 2012]

STAT Corpuslinguistic investigations of nach; [Haselbach et al., 2012, Haselbach et al., submitted] (B3/B4)

AMB DRT-based case study on a classical ambiguity in attitude reports; [Pross, submitted]
Phase 3: Dynamic Lexical Semantics

Central goal: Flesh out the DM/DRT architecture to a dynamic theory of lexical semantics

- Three-level hypothesis about the organization of meaning:
  A. 'Semantic Representations': Derivation of Truth-Conditions at the Syntax-Semantics-Interface
  B. 'Conceptual Structure': Contribution of conceptual and ontological primes to meaning; e.g. sortal selection restrictions, restrictions on spatial configurations,...
  C. 'Model Theory and Evaluation': Two-stage evaluation of semantic representations against intensional model structures (Truth) and of conceptual structures against contexts (Acceptability).
Phase 3: Background

- Phase 2: Focus on "Semantic Representations"
- Phase 3: Focus on "Conceptual Structures'"
Phase 3: The need for conceptual structures

One issue has become more and more pressing in Phase 2:

We need a systematic theory of the conceptual structures and primes involved in DM/DRT representations of our talk about space, time and other conceptual domains.

In Phase 3, we propose to start from the linguistic justification of conceptual domains (vs. the traditional metaphysical justification). For example, we want to design an appropriate theory of the structure and relation of linguistic primes such as paths, regions, directions, paths, grounds, locations,... based on linguistic evidence.
Phase 3: Main Goals

- Continuing interface investigations, e.g.
  - Compositional analysis of the Perfect in German and English, Aktionsart Calculus, Aspect in Slavonic languages
  - Syntactic parallels between PPs and VPs
- Supply the existent DM/DRT fragment with a systematic foundation in conceptual structures
- Transfer the notion of context change potential to the (sub-)lexical level (incremental specification of meaning)
- Take into account shifts between conceptual domains (e.g. space to time)
Phase 3: Cooperation (indispensable for B4)

- Theoretical syntax group (B1)/(B6): DM/DRT-architecture; minimalist syntax, case theory, argument structure, ...
- Schulte im Walde group
  - Distributive semantics of P(repositional) expressions; indicative features for modelling natural semantic classes
  - Interpretation principles for domain shifts and meaning transfer in particle verbs
- (Dependency) parsing group: data-intensive and quantitative evaluation of theoretical hypotheses
- Database and infrastructure group (B3 follow up): quantitative investigation of categorial shifts of roots in context


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