A Comparison of HPSG and LFG

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LFG: the "beginning"

- the formal architecture of Lexical-Functional Grammar developed in the late 1970s and was first described in detail in 1982;
- 1982 was the year of the publication of *The Mental Representation of Grammatical Relations* (Bresnan 1982), the first collection of papers on the theory of Lexical-Functional Grammar;
- the theory, which was motivated by psycholinguistic considerations, brought together several ideas that emerged from computational and linguistic investigations carried out in the early 1970s

LFG: the characteristics

- LFG is particularly distinguished by its use of formally different representations for linguistically different kinds of information: the c-structure, the f-structure, the a-structure, the σ-structure, δ-structure, and so forth (cf., Kaplan and Bresnan 1982, Kaplan and Bresnan 1995, Kaplan 1995);
- this has been one important factor that has enabled LFG to provide interesting insights into linguistic structure; these insights have in turn shaped the theory in both formal and substantive ways

LFG: the development (1)

- a large and varied work has grown up in the years since the introduction of the theory of LFG:
  - among the advances in the theory of functional structure since the publication of the 1982 volume is the ability to characterize nonlocal relations between f-structures, allowing for a formally well-defined treatment of long-distance dependencies and constraints on anaphoric binding (cf., among others, Dalrymple 1993, Dalrymple, Maxwell, and Zaenen 1995, Bredenkamp 1996);

LFG: the development (2)

- one major focus of work in LFG in recent years is the study of the relation between syntactic structure and argument structure. Beginning with Levin 1986, this research has focused on the connection between thematic argument structure and grammatical functions, and has attempted to discover the generalizations by which the two are related;
- Bresnan and Kanerva 1989 continued this work, proposing a decomposition of the grammatical functions SUBJ, OBJ, OBL, and so forth into a set of more basic features, analogous to the decomposition of phonemes into phonological features. Grammatical functions continue to be "primitives" of the theory in that they are not definable in terms of concepts from other levels of linguistic structure, such as phrase structure or thematic structure. However, grammatical functions are no longer seen as atomic entities, but instead are composed of more primitive elements which organize the grammatical functions into natural classes. On this view of mapping theory, the primitive features are associated with thematic roles, and the array of grammatical functions subcategorized by the predicate is deduced (cf., also Bresnan and Moshi 1990, which outlines a theory of linking for "applied" arguments such as benefactives and instrumentals)

LFG: the development (3)

- a major focus in LFG from the beginning has been lexical integrity and the various levels at which wordhood can be defined (cf., Matsumoto 1992, Bresnan and Mchombo 1995, Sells 1995;)
- another line of investigation in LFG has dealt with the phenomena of agreement and apparent “null pronominals” cross-linguistically. Bresnan and Mchombo 1987 showed that a clean account of pronominalization in Chichewa and other Bantu languages can be obtained by assuming that null pronominals are syntactically represented at functional structure but not in constituent structure. Related work has been conducted by Demuth and Johnson 1989, Andrews 1990, Uyechi 1991, and Nordlinger 1995;
- in recent years there has also been work exploring constituent structure and its independence from functional structure; see Kroeger 1991, King 1993, Austin and Bresnan 1995, and Bresnan 1995

LFG: the development (4)

- finally, very recent work in LFG explores semantic composition and the syntax-semantics interface. Dalrymple, Lamping, and Saraswat 1993 propose a deductive approach to assembly of meanings that relies on the projection architecture to specify the correspondence between an f-structure and its meaning. The use of linear logic as a "glue" for assembling meanings gives a clean treatment of a range of phenomena including modification, complex predicate formation (Dalrymple, Lamping, and Saraswat 1993), and quantifier scoping, bound anaphora and their interactions with intensionality (Dalrymple, Lamping, Pereira, and Saraswat 1994)

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