Labphon Parasession on Declarative Phonology

Saturday, July 1st, 1989

PROGRAMME

2.00 - 2.15 Ewan Klein: *Introduction and Overview*

2.15 - 3.00 Steven Bird & Ewan Klein: *Phonological Events*

3.00 - 3.30 Pete Whitelock: *The Syntax-Prosody Interface*

3.30 - 4.00 TEA BREAK

4.00 - 4.30 Dafydd Gibbon: *Phonological Parsing*

4.30 - 5.00 John Coleman: *Prosodic Analysis' Lessons for Declarative Phonologists*

5.00 - 5.30 Lynne Cahill: *Using Phonological Structures for Morphological Description*

ABSTRACTS

Steven Bird & Ewan Klein (EDINBURGH): *Phonological Events*

Although it is a deeply rooted part of our scientific world view to regard time as being composed of instants and collections of instants, it has nevertheless been argued by philosophers that viewing time as consisting of extended periods which admit ever-finer subdivisions is closer to our pretheoretic intuitions. The second approach has been explored in some detail over recent years by logicians working on the analysis of natural language temporal constructions, and the resulting ontology of events related by precedence, overlap and inclusion appears to provide a particularly appropriate basis for developing a logical account of autosegmental phonology. Sagey has recently suggested that it might be useful to analyse association as overlap, with the consequence that "features and x-slots have internal duration". Following this line of thought we propose that distinctive features should be characterised as properties of events, and phonological rules and representations as constraints on events. We present a collection of small linguistic examples which provide motivation for this move, followed by an exemplary analysis of Kikuyu tone shift using phonological events.

Pete Whitelock (EDINBURGH): *The Syntax-Prosody Interface*

The prosodic structures that phonologists use (e.g. Pierrehumbert and Beckman, Nespor and Vogel) differ from the ones that syntacticians will typically assign to the same utterances. The two often pick out orthogonal constituents. Furthermore, prosodic constituent types are characteristically level-ordered, while syntactic types are recursive. The classic assumption (e.g. Selkirk) is therefore that the two levels of structure are related by transformational rules which delete syntactic nodes and reorder material between the two levels.

I will argue that a monostratal approach to this problem is possible. The flexible notion of syntactic category that has been suggested within the framework of extended categorial grammar allows 'syntax' to build prosodic structures directly (as suggested by Steedman, 1989a,b), whilst the use of recursive prosodic categories (Ladd, 1986) permits a phonetic interpretation at least as simple as the Strict-Layer approach. I will illustrate my argument with data from Japanese.

John Coleman (YORK): *Prosodic Analysis' Lessons for Declarative Phonologists*

Some retrospective assessments of Prosodic Analysis focus on the way central constructs of generative phonology — features, rules, representations — were treated (or not). This talk looks at Prosodic Analysis in its own terms, and assesses the value of central notions of Prosodic Analysis — system, structure, exponency, statement, prosodic features, phonematic features, polysystemic analysis and analytical praxis — to generative theories, particularly declarative formalisms such as Unification Phonology.

I shall illustrate my presentation with examples drawn from my implementation of a Unification Grammar of English words. This implementation combines lexical structure and metrical structure in two intersecting phrase structure grammars, as well as a grammar of English syllables that has been exhaustively tested against a dictionary.

Dafydd Gibbon (BEILEFELD): *A linear feature underspecification formalism for English syllables*

Starting with the insight that the set of English syllables is not only formally restricted but indeed finite, a set of declarative generalisation conventions for feature-based finite automata is defined. These retain finite state power while expressing linguistically generalisations about natural classes, phonotactic constraints and the like. The interpreter permits robust and efficient analysis of underspecified inputs.

Lynne Cahill (SUSSEX): *Using Phonological Structures for Morphological Description*

My current work involves the application of phonological concepts, primarily the syllable, and syntactic concepts, such as unification and PATR-like feature structures, to the definition of morphological "operations". The links between morphology and phonology are well-documented (see e.g. Matthews, 1974, p.71) but computational accounts of morphology have up to now tended to ignore this fact. The approach being proposed here views morphological representations as syllable-based tree-structures. A formal language has been developed to define operations on these structures, and an interpreter for this language has been implemented. Although the "operations" performed on these structures are apparently akin to transformations, it is believed that the formalism is not as powerful as this, and a semantics for the language, based on a logic for grammar formalisms being developed by Bill Keller at Sussex, is currently being developed which views the "operations" as declarative relations between tree structures.