

Grammars as Parsers: Ellipsis and the Dialogue Challenge

A recent challenge from psycholinguistics (Pickering and Garrod 2004) is that formal models of language should reflect the core data of language use – conversational dialogue. One central phenomenon of dialogue is the ability to switch roles between speaking and hearing at any stage in any sentence. This ability is completely systematic and emerges at early stages of syntactic acquisition; yet, given current formalisms, it remains inexplicable. In this talk, I shall take the core concepts of Dynamic Syntax (Kempson et al 2001, Cann et al 2005), a grammar formalism which is formulated with the dynamics of a parser, and show two things. First, as linguistic evidence for the grammar, I show how it provides a unifying account of ellipsis, which is otherwise treated as a heterogeneous set of phenomena. Then I shall show how straightforward it is to define a production mechanism which in using the grammar formalism provides a very tight coordination between parsing and production; and from this we shall see that an account of dialogue emerges that reflects the patterns of dialogue very directly (Purver et al 2006). In particular the systematicity of the split utterance phenomenon is predicted, while retaining a relatively conservative stance that a natural language grammar defines a set of constraints on tree growth.

If time, I shall show how with this perspective, we can define a family of concepts of wellformedness, allowing both a concept of context-dependent wellformedness and the more traditional context-independent concept of grammaticality.