

Marc Steedman

The Computational Problem of Interface Acquisition

CCG is a theory of grammar in which all language-specific grammatical information about the sound-meaning interface resides in the lexicon. A small universal set of strictly type-driven, non-structure dependent, syntactic rules (based on Curry's combinators \mathbf{B} , \mathbf{S} , and \mathbf{T}) then completes the interface by "projecting" lexical items into sentence-meaning pairs. The task that faces the child in the earliest stages of language acquisition can therefore be seen as learning a lexicon on the basis of exposure to (probably contextually ambiguous, possibly somewhat noisy) sentence-meaning pairs, given this universal combinatory "projection principle", and a mapping from semantic types to the set of all universally available lexical syntactic types.

The paper argues that a very simple statistical model allows children to arrive at a solution to the so-called "logical" problem of language acquisition without navigation of any "subset principle", or attention to any attendant notion of "trigger" other than the notion "reasonably short sentence in a not too confusing situation drawn from a reasonably representative sample". The model explains the general pattern of errors that are found in elicitation experiments. The linguistic notion of "parameter" appears to be redundant to this process.