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What is coordination?☆

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Abstract

We argue that there are no devices in the grammar specific to coordination. The grammar is only capable of providing asymmetric structures, through particular lexical entries relating to semantic conjunction. Such entries produce adjunction structures, rather than head-complement structures. The interpretation of conjunction structures is a joint function of such lexical entries, processing properties, and pragmatics. Coordination phenomena are the result of an unresolved ambivalence between a 'head initial' and a 'head final' asymmetric conjunction structure, with the effect that there are parallel representations.

Keywords: Coordination; Conjunction; Adjunction; Syntax; Semantics; Lexicon; Minimalism; CCG

1. Introduction

Our purpose in this paper is to argue for the position that there are no devices in the grammar specific to coordination. Coordination appears to be symmetric, but the grammar is only capable of providing asymmetric structures. In a standard Principles and Parameters version of projection, two phrasal categories can be related in either of two ways. They may be linked (asymmetrically) to a particular head as specifier or complement of that head, or they may be linked (again asymmetrically) as adjunct and host. We see the adjunct–host relation, like the complement–specifier relation, as also essentially head-mediated and, in the case of conjunction, we argue that the particular lexical entries encoding semantic conjunction relate the two conjuncts as adjunct and

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host, rather than as specifier and complement.[1] The interpretation of conjunction structures is then a joint function of such lexical entries, processing considerations, and pragmatics. We argue that the grammar exploits both asymmetric (subordinating) and symmetric (coordinating) conjunction structures, but that coordination requires no further elaboration of the grammar: coordination phenomena result from the occurrence of parallel 'head initial' and 'head final' asymmetric conjunction structures.

We first clarify the terminology and notation we use. **Conjunction** '$\wedge$', **disjunction** '$\vee$', and **implication** '$\supset$' are **logical operators**—specifically, **two-place** operators. Negation is a **one-place** logical operator. Lexical items (connectives) like ***and***, ***but***, and ***because***, ***or***, and ***if***, are either **Natural Language two-place operators** corresponding to traditional truth-functional operators for the non-pragmatic part of their meaning, or they are **markers**, much like agreement markers, which are associated with such a NL operator (which may itself be phonologically null).

Coordination is a particular syntactic manifestation of conjunction (or disjunction), which is **symmetric** with respect to the conjuncts/disjuncts (i.e. the conjuncts/disjuncts have the same syntactic status). Without theoretical commitment, we may use **&**, instead of $\wedge$, to indicate that conjuncts are coordinated, and refer to this as **coordinating conjunction**. **Subordination**, e.g. as induced by implication (*if*), is **asymmetric**: there is an **adjunct** and a **host**. We may use **$** to indicate **asymmetric conjunction**, instead of $\wedge$ (see Smith, 1999). We mostly use a 'bare' category notation, where V, for instance, stands for some projection of a verb. For the operators, we use the full categorial notation, which includes the selection categories.

Our analysis of coordination exploits a simplified version of Minimalism, with the addition of Combinators from Combinatorial Categorial Grammar (CCG). In such a theory, most of the work of the grammar is done by the lexicon. We assume that the combinators are included in the lexicon: they have syntax, semantics, and (null) phonology.

In contradistinction to standard CCG, but consistent with Minimalism, we assume that Merge produces an LF representation within NL syntax, with LF being the representation presented to the Conceptual-Intentional Interface for non-linguistic inferential processing. All merge is driven by selection.[2] We assume that the LF representation, like the PF representation, is ordered: the unmarked option is that selector precedes selected.[3] PF ordering is derivative, and obtained by displacement. In particular, the PF-part of a head or phrase may be displaced to some other position because of the morphological selection properties of the head at that position. This process, which we refer to as PF-attraction, or simply attraction, has no effect on LF ordering. For expository convenience, we talk of 'movement', though we have argued elsewhere (Cormack and Smith, 2001a) that there is no real movement in the grammar of NL.

[1] See Cinque (1994, 1999) for adjectival and adverbial phrases as Specifiers. Sportiche (1994) suggests for adjuncts only a Spec-Complement relation. See also discussion in Cormack (1999).

[2] Cormack and Smith (1994); this assumption is fundamental in Categorial Grammar. Chomsky (2000: 133–134) endorses this principle for ordinary heads, but excludes adjuncts.

[3] Of course, we do not know how a tree structure, or a tree with a precedence relation defined over it, is represented in the mind/brain. However, given items of fixed arity, 'functor first' allows a linear bracket-free representation of a tree with a suitable precedence relation (see Partee et al., 1990: 439; for Polish notation, see McCawley, 1981).