

# Well-formedness of long-distance dependencies in English wh-sentences

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## Abstract

This presentation reviews the well-formedness of long-distance dependencies in English wh-sentences within the framework of Dependency Grammar and Copy theory.

## Introduction

After the summary of the theoretical background of long-distance dependency including interrogative clauses, topicalized clauses, relative clauses and wh-complement clauses, the so-called "displaced" elements are analyzed as generated as there are, contrary to Chomskyan Copy theory.

## Keywords

Dependency Grammar, long-distance dependency, Copy theory, well-formedness

## 1 Theoretical background

It is often the case that a dependent is located in a non-canonical position in the sentence. This is called long-distance dependency. There are four clausal types that typically contain long-distance dependency: interrogative clauses, topicalized clauses, relative clauses, and wh-complement clauses. The following examples, from (1a) to (1d), demonstrate each of these clausal types.

- (1) a. What has David submitted to Sarah?
- b. This document, David has submitted to Sarah.
- c. Sarah checked the document that/which/ $\emptyset$  David had submitted to her.
- d. I wonder which document David has submitted to Sarah.

In principle, the composition process of these clauses proceeds from left to right (Phillips 2003) and there are no phrasal movements. The copy of the sentence-initial or clause-initial (in one word, displaced) element in the Chomskyan sense (1995, 2005, 2013, 2014) internally merges with its dependency head and therefore occupies the position where the displaced element should canonically occur; however, the copy is not realized phonologically.

## 2 Long-distance dependencies

In this sense, the examples above are represented as follows, in which the struck-through words are copies of the wh-elements, indicating that the copies are not realized phonetically.

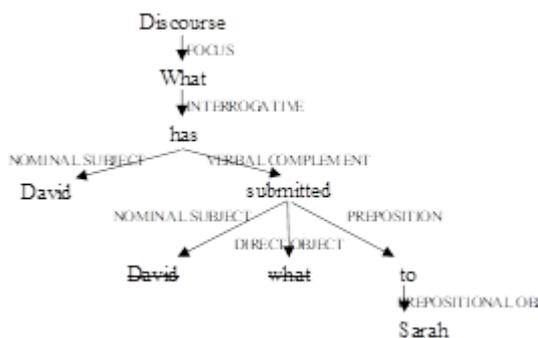
- (2) a. What has David submitted ~~what~~ to Sarah?
- b. This document, David has submitted ~~this document~~ to Sarah.

c. Sarah checked the document that/which/φ David had submitted ~~the document~~ to her.

d. I wonder which document David has submitted ~~which document~~ to Sarah.

The analysis here is different from Chomskyan Copy theory in that the relation between wh-elements and their copies is the other way round; the so-called "displaced" elements are not actually displaced from their original place; rather, they are there from the very beginning of their generation to their phonetic realization, and their copies are merged to the place where they were supposed to occur with respect to the verb on which they depend on. The typed-dependency tree for examples (2a) to (2d) will be shown in the presentation. For example, the typed-dependency tree for the example (2a) is shown below:

(3)



The displaced element "What" in (2a) depends on the discourse with the type focus, and the auxiliary "has" depends on "What" with the type interrogative. The direct object of the verb submitted is the copy of "What". The

presence of the copy "What" ensures that "What" indirectly depends on itself through the dependency path below:

(4)

What=>has=>submitted=>what

The presentation also includes a brief comment on wh-island, which is one of the constraints on long-distance dependencies, such as adjunct island, clausal subject, complex noun, the left branch, and the subject conditions.

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