

## CONTROL AND *WH*-INFINITIVALS<sup>†</sup>

### 1. INTRODUCTION

This paper discusses control into *wh*-infininitivals as illustrated in the following examples.

- (1) a. John knows when to wash the dishes.
- b. Mary learned how to fly a 747.
- c. Alexis told Janice where to meet before the play.
- d. Alex told Jack where to get good cheese.

I show that there are two types of control into *wh*-infininitivals, specifically obligatory control (OC) (represented by (1a) and (1c)) and non-obligatory control (NOC) (represented by (1b) and (1d)). I further argue that NOC into *wh*-infininitivals is instantiated as generic control. I present data from multiple sluicing and extraction across weak islands that distinguish these two types of control. Further, the data will be shown to support an analysis in which OC into *wh*-infininitivals arises by movement of the controller from the embedded clause into the matrix clause (in the sense of Hornstein 1999, 2001), while NOC entails no such movement. I argue that the embedded subject is represented by *pro*, which is clause-bound by a generic operator. In short, I argue for the following representations for (1a) and (1b), respectively.

- (2) a. John<sub>*i*</sub> knows [when *t<sub>i</sub>* to wash the dishes]
- b. Mary learned [how *pro* to fly a 747]

The analysis proceeds as follows. The multiple sluicing data crucially rely on Fox and Pesetsky's (2005) proposal that linearization proceeds on a phase-by-phase basis. In multiple sluicing environments, the two surviving elements must be able to be linearized. This is only possible if the two elements were originally merged in the same phase (for reasons to be made clear below). If one of the two sluiced elements is in a higher clause in the surface structure, and multiple sluicing produces a grammatical result, then the higher element must have originated in the same phase as the other sluiced element. In the case of control constructions, the evidence from multiple sluicing suggests that the controller originates in the embedded clause.

The section on extraction from *wh*-infinitival clauses revisits some of the original data presented in Huang 1982 and discussed in Manzini 1992. I present evidence that the data has been mischaracterized as involving an argument/adjunct asymmetry. Instead, I show that extraction across *wh*-infinitivals is sensitive to the distinction between OC and NOC. In particular, OC environments do not allow extraction out of a *wh*-infinitival, whereas NOC environments do allow extraction. I will argue that in OC the controller raises from the embedded clause to the matrix clause, thus using up the single escape hatch in the CP domain and preventing the *wh*-phrase from extracting out. In NOC, there is no controller that raises from the embedded to the matrix clause. Thus, the *wh*-phrase is free to extract to the matrix clause.

This paper is organized as follows. Section 2 presents the patterns of control into *wh*-infinitivals, establishes a contrast between OC and NOC, and presents the data on multiple sluicing and extraction from weak islands. Section 3 develops an analysis of this type of control. First we establish the structure of the left periphery of *wh*-infinitivals and then present an analysis in which the controller raises from the embedded clause to the matrix clause in OC, but not in NOC. Section 4 presents a brief conclusion.

## 2. PATTERNS OF CONTROL INTO *WH*-INFINITIVALS

This section introduces the basic empirical facts on control into *wh*-infinitivals in English. We begin by discussing the types of predicates in which *wh*-infinitivals are found and the types of *wh*-phrases that are found in these constructions. Next, a distinction is made between OC and generic control, and it is shown that control into *wh*-infinitivals can be of both types. The last two subsections present two asymmetries (extraction across weak islands and multiple sluicing) that highlight the difference between these two types of controls.

### 2.1 *Predicate types*

Landau (1999) presents a typology of control predicates consisting of implicatives, aspectuals, factives, propositionals, desideratives, and interrogatives. The data below show that *wh*-infinitives appear only with desiderative and interrogative predicates. Note that I define interrogative predicates as those that obligatorily appear with a *wh*-phrase in the left edge of the complement.

#### (3) *Typology of control predicates*

##### a. implicative

- i. John managed to eat a coconut.
- ii. \* John managed how to eat a coconut.