

# PRONOUNS AND THE LEFT PERIPHERIES

## DISSERTATION PROPOSAL

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### 1 INTRODUCTION

The behavior of anaphoric pronouns is richer than usually understood in current generative grammar. Consider the following classical configurations: *backward anaphora* (BA) (1), *weak crossover* (WCO) (2), and *overt pronoun constraint* (OPC) (3).

- (1) If a DP is a possible antecedent for an embedded pronoun to its left, the DP must be definite (or generic)
  - a. The portrait of his<sub>i/j</sub> mother always depressed John<sub>i</sub>.
  - b. The portrait of his<sub>?\*i/j</sub> mother always depressed someone<sub>i</sub>. (cf. Postal 1970 a.o.)
- (2) If an  $\bar{A}$ -moved DP crosses over an embedded pronoun, the DP cannot bind the pronoun
  - a. Who<sub>i</sub> does his<sub>?\*i/j</sub> mother admire t<sub>i</sub>?
  - b. Who<sub>i</sub> t<sub>i</sub> likes his<sub>i/j</sub> mother? (cf. Wasow 1972)
- (3) If an overt/null pronominal alternation is possible, an overt pronominal must not have a quantified antecedent
  - a. Nadie<sub>i</sub> cree que [él<sub>\*i/j</sub> es feliz]
  - b. Nadie<sub>i</sub> cree que [pro<sub>i/j</sub> es feliz]  
'Nobody believes that he<sub>\*i/j</sub>/pro<sub>i/j</sub> is happy' (cf. Montalbetti 1984)

These configurations display a common property: the specificity of the antecedent plays a crucial role in allowing wider BA possibilities (4) and in alleviating WCO (5) and OPC (6) effects.

- (4) The portrait of his<sub>i/j</sub> mother always depressed [a man that I know]<sub>i</sub>. cf. Wasow 1972
- (5) [Which famous professor]<sub>i</sub> do his<sub>?i/j</sub> students admire t<sub>i</sub>? (*weaker crossover* cf. Falco 2007)
- (6) [Quale brillante studente]<sub>i</sub> t<sub>i</sub> dice che (nemmeno) lui<sub>i/j</sub> supererà la selezione?  
[which brilliant student]<sub>i</sub> t<sub>i</sub> says that (not even) he<sub>i/j</sub> will pass the selection

In fact, Wasow (1972), in his seminal investigation, proposed a reduction of the WCO effect to the BA paradigm, precisely because both phenomena are absent when the antecedent is *determinate* (cf. (4)-(5)). However, this notion remained at an intuitive level. With the introduction of Logical Form (LF), beginning with Chomsky (1976), these empirical obser-

vations were shelved. The sharp distinction between binding and coreference (Reinhart 1983) expunged BA from the domain of binding theory and core syntax in general, and obscured the relevance of the subtler differences in the WCO and the OPC paradigms.

Lasnik & Stowell (1991) pointed out that the quantificational nature of the antecedent determines the emergence of WCO effects, and speculate that the distinction between true quantifiers and non-quantificational  $\bar{A}$ -binders may be relevant for the OPC configurations as well. Crucially, non-quantificational binders do not give rise to WCO and OPC effects as illustrated by the parasitic gap configurations in (7) and (8).

- (7) Who did you gossip about  $t_i$  [despite his<sub>*i*</sub> teachers having vouched for  $t_i$ ].  
(Lasnik & Stowell 1991: ex.23-a)
- (8) A quiénes contrató  $t_i$  el director [sin persuadir de que ellos<sub>*i*</sub> viajen a Lima]?  
'Who did the director hire without persuading that they should travel to Lima'  
(Montalbetti 1984: ex.36, ch.4)

Building on their insight, I will investigate the role of specificity in binding configurations involving quantificational antecedents.

## 2 THE EMPIRICAL CONTRIBUTION

More recent research on the syntax and semantics of specificity allows us to develop Wasow's (1972) original observation more precisely. On the semantic side, various explicit definitions of the notion of specificity have been explored; on the syntactic side, various operational tests have been identified which are sensitive to (diagnose) the specificity of a noun phrase. So far these two threads of research have been carried out independently, without any significant interaction with each other. Since the late 1980s syntacticians have recognized the crucial role of specificity in many syntactic phenomena (Heycock 1995; Rizzi 2001; Obenauer 1994; Dobrovie-Sorin 1994; Heim 1987; Longobardi 1986 a.o.) and have often aimed to integrate this in their theory. Nevertheless these efforts commonly relied on the intuitive notion of D-linking proposed by Pesetsky (1987), without a critical assessment of alternative semantic views of specificity that have been developed in the meantime. Similarly, proposals in the semantic literature (Fodor & Sag 1982; Reinhart 1997; Enç 1991; Schwarzschild 2002 a.o.) have been more concerned with the notional side of the issue and have not considered all the operational tests that have been advanced in the syntactic literature. One of the goals of this dissertation is to bridge this gap.

In order to do so, I will review the different notions of specificity and test them against the operational tests that have been developed, so that each perspective can shed light on the other, eventually arriving at a new systematization of the domain. The analyses of specific indefinites and specific *wh*-phrases advanced in the literature will be reviewed and classified in two main families: epistemic specificity vs. partitivity. In order to determine which notion is relevant for anaphora, I will use the Russian indefinite (Kagan 2006) as an operational test in backward anaphora configurations, and I will show that the relevant notion is partitivity.

Then, drawing on the literature, I will describe a number of syntactic contexts whose grammaticality is sensitive to the specificity of the extracted DP. With this systematization of the notional and operational definitions of specificity, I will test the empirical observa-

tion that WCO is sensitive to the specificity of the extracted antecedent. The data shows that a partitive *wh*-operator can bind a leftward pronoun without a WCO effect, whereas a non-specific *wh*-operator cannot. Furthermore, I will propose to extend this generalization to OPC configurations as well. Here a partitive quantifier can bind an overt pronoun alternating with a null one, whereas a non-specific quantifier cannot. Establishing these generalizations systematically would be the major empirical contribution of my work.

### 3 THE THEORETICAL PROPOSAL

The empirical results described in the previous section will be the starting point of the theoretical proposal to be developed. As I mentioned at the outset, these phenomena have been neglected in the literature on binding and thus have been left unaccounted for.

I will propose a “syntacticization” of the notion of specificity. Building on Lasnik’s (1991) insight, I would suggest that the binding relation should be characterized in terms of the “relative referentiality” of the binder and the bindee, and that Lasnik’s (1991) prohibition against binding of a more referential expression by a less referential one is the underlying factor in blocking a binding relation in WCO and OPC configurations. This predicts that in any sentence in which the bindee is more referential than the binder, binding should fail to result. In the spirit of Lee (2001), I would like to reinterpret this insight in terms of the sets of features carried by the elements that enter the binding relation: in other words, the amount of features possessed by two nominal expressions determines their “relative referentiality” for the purposes of binding. Recast in these terms, Lasnik’s (1991) argument is implemented by imposing a feature subset relation between binder and bindee. This hypothesis predicts that there is a trade-off between the featural make-up of the binder and that of the bindee: richer antecedents are able to bind richer pronouns.

Such an analysis in terms of features draws on to two recent research threads that are opening a new perspective on the behavior of pronouns and anaphoric relations. On the one hand, Kratzer (2009) proposes that a pronoun’s behavior can be derived from the meaning of its features in interaction with general principles for structure building and morpho-phonological spell-out. In particular, she proposes that while referential pronouns are born with their features already in place, bound pronouns are born underspecified and inherit their features from binding functional heads via unification (Adger & Ramchand 2005) in the morpho-phonological component. On the other hand, some scholars working in the so called “cartographic” approach have recently advanced the hypothesis that referential pronouns are always syntactically connected to possibly silent Topics in the left periphery of the clause (Belletti 2008; Fascarelli 2007 a.o.), the interface between grammar and context. Although these two hypotheses are formulated from slightly different perspectives, they share the crucial assumption that pronouns are licensed by functional heads, thus pointing to a new general view of pronouns and anaphora which I will endeavour to develop systematically.

Focusing on the data at issue here, my basic argument would be that antecedents richer in featural make-up target a special position in the left periphery of the clause and thus activate a functional head that initiates the feature transmission in the morpho-phonological component. In this system a bound reading of a pronoun with more features than its antecedent is impossible to derive because the functional head activated by the antecedent will not be endowed with enough features to transmit: thus, the features on

the pronoun must be intrinsic rather than inherited, which corresponds to a referential reading.

Crucially, the solution will make use of the rich CP field, where the context is plugged in grammar, and restrict the binding ability to an head activated by (implicit or explicit) restrictions (cf. Stanley 2000). This approach leads to the observation that specific *wh*-elements somehow have access to a special binding mechanism (Rizzi 2001). The fact that quantifiers, moved in covert syntax, give rise to WCO independently of their specificity, would be dealt with by a scope analysis (Ruys 2000): they target a position unable to initiate the “feature transmission”. At this stage, the details of the implementation are still to be worked out. But clearly such an account, crucially based on unification, would rise important questions on cyclic spell-out and the theory of phases (Chomsky 2001), bearing on the architecture of the language faculty in general. Arriving at such an analysis and answering these questions is the main goal of this dissertation.

Finally, I would like to compare my proposal with other possible approaches to pronouns to understand whether and how they differ. A syntactic alternative to the analysis of specificity effects in WCO involves an intermediate A-movement step, in the movement chain of specific operators (Mahajan 1991; Ishii 2006). I plan to review these scrambling analysis and compare them to my proposal. I aim to argue that scrambling can be recast from a “cartographic” perspective, once the informational variables involved are considered. Furthermore, Elbourne (2005) argues that third person pronouns are always concealed definite descriptions and not real pronouns; my proposal will take into account this perspective. Essentially, I will try to reinterpret this perspective in terms of an (implicit or explicit) restriction present in the CP field. This proposal would be rephrased in the system presented here assuming that the implicit content of the pronoun must be licensed by a head at the interface with the context, that is in the left periphery. Finally, I will consider two alternative semantic approaches to the specificity effect, one based on quantifier restrictions (von Stechow 1994), another on the semantic type of the variable bound by a specific operator; in particular Heim (1987), who proposes that there is a violation of the definiteness restriction whenever there is an individual variable, of type *e*.

Summarizing, the goal of this dissertation is to argue that specificity plays a crucial role in binding configurations and to develop an analysis based on recent proposals on the syntax and semantics of pronominal features and the cartographic approach to the left peripheries.

#### 4 OUTLINE OF THE CHAPTERS

A from the introduction and conclusion, I plan to structure the work around four chapters devoted respectively to the notion of specificity, the role of specificity in WCO and in OPC, the theoretical proposal, and the comparison with possible alternatives.

THE FIRST CHAPTER will be devoted to the state of the art on the notion of specificity in generative syntax and semantics with reference to both indefinites and interrogative phrases.

I will start by introducing the difference between referential and quantificational elements and the classic analysis of indefinites by Heim (1982). I will review the scopal behavior of indefinites that has played a crucial role in the development of more recent

approaches. Fodor & Sag (1982) observed the absence of “intermediate scope” readings for indefinites, and proposed that indefinites are lexically ambiguous between referential elements (of type *e*) and existential quantifiers: crucially only the latter are submitted to the usual scope restrictions. Reinhart (1997) argues instead that “intermediate scope” is actually available: this observation leads her to claim that an indefinite may introduce a variable on choice functions that is bound by an existential closure at arbitrary distance, thus obtaining the intermediate scope readings. The common characteristic shared by these analyses is the treatment of indefinites as a “special” category, distinct from ordinary generalized quantifiers, and the interpretation of the ambiguity between specific and non-specific indefinites as an ambiguity of semantic type.

A different perspective on indefinites, which I would call “epistemic specificity”, is linked to the informative state of the speaker. This view is explicitly advanced by Schwarzschild (2002). According to this scholar, specific indefinites are not special, but are simply “singleton” existential quantifiers, whose restriction contains just one element. This makes them scopally inert. Singleton indefiniteness is obtained by (usually implicit) restriction of the domain of the existential quantifier, based on information which is asymmetrically available to the speaker, but not to the hearer.

In his classic proposal, Pesetsky (1987) analyzes the discourse properties of interrogative elements and distinguishes them on the basis of these. When a *wh*-question asks for answers in which the entities that replace the *wh*-phrase are drawn from a set that is salient for both the speaker and the hearer, the *wh*-phrase is D-linked. Finally, Enç (1991) provides a formalization of D-linking (cf. Enç 1991: note 8), proposing that indefinites are covert partitives to be characterized by two indexes.

Although these proposals share an epistemic nature, the notion of partitivity makes different a prediction than the singleton indefinite: while the partitive analysis imposes a subset requirement (namely, the partitive indefinite denotes some subset of the restriction), the singleton analysis requires that the indefinite denote one and only one of the possible subsets of the restriction. This difference is illustrated by Gutiérrez-Rexach (1999) with data on clitic doubling in Spanish, which allow a singleton interpretation only: the speaker that uses (9) desires a particular subset of books, not any subset of books, so the indefinite is a “singleton” with respect to a plurality.

- (9) Quiero que me los traigas varios de los libros  
I would like that you me they-*clitic* bring various of the books

(Gutiérrez-Rexach 1999: ex.56)

In the final part of the chapter I will describe a morpheme in Russian that overtly marks non-speaker identifiability (Kagan 2006). This will provide a test to assess the role of partitivity vs. speaker identifiability in BA configurations. The final result of the test is that partitivity is the relevant notion which affects anaphoric possibilities.

IN THE SECOND CHAPTER I plan to present a number of operational tests for specificity (from now on, to be conceived of as partitivity) advanced in the literature and use these to test its role in WCO configurations. I will then extend the generalization to OPC cases.

I will begin introducing some syntactic contexts where it has been argued that the specificity of the extracted DP plays a crucial role in determining grammaticality. In particular, I will consider antireconstruction (Heycock 1995), extraction from weak islands

(Cinque 1990), participial agreement in French (Obenauer 1994), clitic doubling in Romanian (Dobrovie-Sorin 1994), extraction from existential *there* constructions (Heim 1987), and scope reconstruction (Cinque 1990).

I will make some important methodological remarks on the use of such contexts as tests for the hypothesis. Bearing these in mind, I will systematically combine these tests for specificity with the WCO configuration and show that the resulting evidence confirms the hypothesis: specificity (partitivity) of the *wh*-binder alleviates the WCO effect.

Finally, using carefully selected examples from Italian, I extend the generalization to OPC configurations.

THE THIRD CHAPTER will be devoted to the theoretical proposal. I will start by proposing an interpretation in terms of feature sets of the contrast involving specificity discussed in the previous chapter, based on the idea that binding requires a feature subset relation between binder and bindee (Lasnik 1991; Lee 2001).

The proposals by Kratzer (2009) and those in the cartographic stream will be reviewed to arrive at a general theory of pronouns based on peripheral functional positions.

I will show how the system can derive the anaphoric behaviors in the configurations at issue by using a specialized head in the CP system, targeted by *wh*-elements with an (implicit or explicit) restriction. I will then illustrate that the system can derive the observation that specific *wh*-elements have access to a special binding mechanism (Rizzi 2001).

In the final part of the chapter, I will analyze some potential counterexamples to the generalization, mainly the fact that quantifiers in WCO configurations, independently of how specific they are, are unable to license a leftward bound pronoun (at LF). The solution I will propose to deal with such cases will specify that quantifiers moved in covert syntax target functional positions from where binding cannot obtain. This will allow cases traditionally covered by the *Leftness Condition* (Chomsky 1976) to be integrated into the sketched theory.

IN THE FINAL CHAPTER, I will compare the analysis described to the alternatives trying to show that they can be rephrased in terms of my proposals.

I start considering the syntactic alternatives based on an intermediate A-movement step advanced by Mahajan (1991) and more recently by Ishii (2006). Essentially, I will show that scrambling is sensitive to informational variables and can thus be naturally recast in a cartographic framework using peripheral positions. The binding facts will then follow from the fact that only some context related heads are capable of initiating features transmission, while others cannot.

Concerning Elbourne's (2005) claim that pronouns are always concealed definite descriptions, I would like to reinterpret this in terms of an (implicit or explicit) restriction present in the CP field. The translation of his proposal into my system would be based on the assumption that the implicit content of the pronoun must be licensed by heads at the interface with context, that is in the left periphery.

Finally, I will conclude the chapter by comparing my proposal to the semantic accounts of the restriction of operators (von Stechow 1994) and to the analyses based on the semantic type of the gap left by specific vs. non-specific operators (Heim 1987 a.o.).

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