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2013

# On Resumptive Pronouns in Slavic

Chidambaram, Vrinda Subhalaxmi

Princeton, NJ : Princeton University

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# ON RESUMPTIVE PRONOUNS IN SLAVIC:

## TOWARDS A GENERALIZED THEORY OF PRONOMINAL STRUCTURE AND INTERPRETATION

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SLAVIC LANGUAGES AND LITERATURES

AND THE PROGRAM IN LINGUISTICS

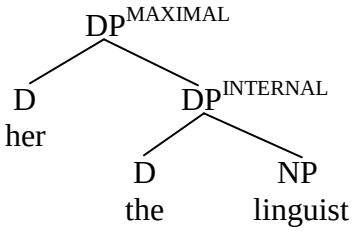
Adviser: Edwin S. Williams

June 2013

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# Abstract

"On Resumptive Pronouns in Slavic" is a first step toward a generalized theory of pronouns that accounts for the behavior of both ordinary and resumptive pronouns. I adopt the definition of resumption proposed by Boeckx (2003) who analyzes resumptive pronouns as pronouns stranded by the movement of an NP sister. In contrast to Boeckx's theory, I argue that *every* definite pronoun enters the syntax as a $D^0$ sister to its NP or DP referent.




The central argument of the dissertation rests on this proposed universal pronominal structure, called the *stacked DP*. I suggest that the single parametric difference resulting in resumptive vs. non-resumptive type languages is the ability of the internal DP to raise independently of the pronoun. In other words, any language in which the internal DP of a stacked DP is independently mobile (i.e. it can move without pied-piping the pronoun) will contain resumptive pronouns.

This analysis of the syntactic structure of pronouns extends to all instances of pronouns, including those that do not occur in a resumptive context. A natural question to follow from this is what becomes of the NP/DP sister of the pronoun in contexts not involving any resumption, as in the following sentence:

(i) I met her yesterday.

I propose that the NP/DP referent is frequently deleted by a PF operation, Pronominal Associate Deletion (PAD):

> If $D^0$ is a personal pronoun and XP is a sister to $D^0$, then XP is deleted.

If the XP referent raises during narrow syntax, the conditions for PAD will not be met at PF. As a result, both the XP and the pronoun will be pronounced.

In addition to this PF rule, I propose an LF condition to account for the interpretation of pronouns, the Pronominal Reference Condition (PRC):

> In $DP^{MAX}$ whose $D^0$ is a pronoun, interpret $D^0$ as co-referential with the NP also dominated by $DP^{MAX}$.

These two operations, in combination with the stacked DP internal structure of pronouns, provide the means to explain a wide array of phenomena relating to the occurrence of resumptive pronouns, including Macedonian clitic doubling, Hebrew interrogative *wh*-resumption, optional resumption in B/C/S and Slovak, and resumption in Slovene superlative clauses.

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LIST OF ABBREVIATIONS

| | |
|---|---|
| 1st = first person | LOC - locative case |
| 2nd = second person | MASC = masculine gender |
| 3rd = third person | NEG = negation |
| ABL = ablative case | NEUT = neuter gender |
| ACC = accusative case | NOM = nominative case |
| ADV = adverb | OP = silent *wh*-operator |
| ANIM = animate | PAST = past tense |
| AOR = aorist tense | PL = plural number |
| AUX = auxiliary verb | PRES = present tense |
| COMP = complementizer | PREP = preposition |
| compA = comparative adjective | PRON = pronominal |
| DAT = dative case | RC = relative clause |
| DEF = definite | RP = resumptive pronoun |
| DU = dual number | SG = singular number |
| FEM = feminine gender | supA = superlative adjective |
| FOC = focus | |
| FUT = future aspect/tense | |
| GEN = genitive case | |
| IMP = imperfect aspect | |
| INAN = inanimate | |
| INST = instrumental case | |

# INTRODUCTION

## *Overview*

This thesis is an investigation of resumptive pronouns. A resumptive pronoun has three fundamental properties: it is a pronoun, it appears at the origin site of a movement operation, and it takes the moved item as its antecedent. The typical environment in which a resumptive pronoun is found is the relative clause. While there has been great deal of research devoted to the syntax and semantics of relative clauses, pronouns, and those pronominal elements within relative clauses known as *resumptive pronouns*, these studies have not been exhaustive. This thesis, too, is not intended to be an exhaustive survey of all the phenomena linked to resumption, but will rather have two specific goals. The first goal is to develop an analysis for what I will call *canonical resumption*, which is, as will be established in detail in this chapter, the occurrence of a pronoun in the site of relativization of a relative clause. In the Bosnian/Croatian/Serbian (B/C/S) example below, the relative clause is bracketed and the resumptive pronoun (which occurs in a clitic pronominal form) is indicated in bold font.

Bosnian/Croatian/Serbian

(1) Čovjek [$_{RC}$ što sam **ga** vidio juče ]
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ **him$_{ACC.SG.MASC.}$** saw$_{MASC.SG.PAST.}$ yesterday

is here
je ovdje.

'The man that I saw (him) yesterday is here.'

Canonical resumption occurs in a number of unrelated languages, such as Hebrew, a Semitic Language (Borer 1984, Shlonsky 1992), Vata, a Kru language (Koopman and Sportiche 1982), and Bosnian/Croatian/Serbian, Slavic languages (Browne 1986). Cross-

linguistically, canonical resumption involves a pronominal element (either a long form pronoun or a clitic pronoun[1]) within a relative clause. Because the two salient components of canonical resumption are: 1) the pronoun and 2) the relative clause, it is necessary to conduct a thorough review of the current theories of pronouns and relative clauses before presenting an analysis of resumptive pronouns.

Having constructed an analysis of canonical resumption, I will then examine instances of non-canonical resumption that occur in the South Slavic languages. In particular I will be looking at Slovene, B/C/S, and Macedonian. These three languages all exhibit canonical resumption, but additionally, in each of them we find instances of resumptive pronouns appearing in contexts unlike those found in (1); that is, they do not fit the pattern of canonical resumption. All three languages present data that conflict with existing theories of resumption. The second goal of this thesis will be to develop an analysis of each of these non-canonical resumptive constructions that coheres with the broader theory of resumption.

*Framework*

The framework I adopt for this study is the Principles and Parameters framework. This style of analysis was initially developed by Noam Chomsky and was motivated by the notion of a universal generative grammar; that is, a non-learned grammatical computational system, part of which is innate, and which, by means of various algorithms, may generate novel utterances. Since the advent of this analytical model, it has been the generative linguist's main goal to discover the various algorithms at work and identify which of them are universal and which are language-specific.

[1] Many languages contain two types of pronominal forms: the long form, which is typically used when the pronoun is focussed, and the clitic form, which is used everywhere else.

*Syntactic Operations*

The basic machinery within the current P&P framework are the three operations: Merge, Copy, and Delete (Chomsky 2008). Merge can be characterized as having two main functions: to enter syntactic items into the derivation and to extend the derivation by re-Merging these syntactic items as higher nodes in the derivation. While I do not dispute the notion that there is only one operation at work (i.e. Merge), in the ensuing chapters I will refer to re-Merge operations as *movement* and will use the term Merge to refer only to First Merge. I do this only for the sake of simplicity.

The operation Copy occurs whenever a syntactic item is moved. The moved item leaves behind an exact copy of itself in the position which it occupied, and the highest copy (i.e. merged at the highest position within the derivation with respect to the other copies) is pronounced (Pesetksy 1998). This particular operation will be crucial in the forthcoming chapters, because it replaces the previous Government & Binding concept of traces. In much of the early literature on resumption, resumptive pronouns were considered overt traces of moved elements. Since traces have been replaced, given the Copy Theory of movement, this way of describing resumption is invalidated. The analyses which I will put forward will be consistent with the Copy theory of movement.

The function of the Delete operation is to ensure that features illegible to PF or LF do not proceed to those interfaces. This is assuming a Y-model of syntax in which the syntactic derivation proceeds (perhaps cyclically) to Spell-Out, at which the derivation diverges into two distinct paths: Logical Form (where the derivation continues to the conceptual-intensional component) and Phonological Form (where the derivation continues to the sensory-motor component).

These three basic operations are applied to satisfy syntactic requirements. For example, an item will move in order to check its features (i.e. Case or φ-features) against those of another item occurring higher in the derivation. I adopt the feature-checking theory proposed by Simpson (2000) in which a syntactic item may check it features with those of another syntactic item when the structural relationship between the two is either a Spec-Head or a Head-Complement relation.

Finally, I assume that abstract case on a DP is a feature like any other and must be checked by means of a specific configurational relationship to a case-checking Head. Case may be checked when the DP is either a Specifier or a Complement of the case checking head.

*Conditions on Syntax*

Beyond the constraints on the three syntactic operations, there are also more general requirements on the syntax; conditions that must be met in order for the derivation to converge. For example, the condition on the interpretation of anaphors requires that an anaphor have a certain structural relation to its antecedent (namely, the antecedent must c-command the anaphor within domain D (Chomsky and Lasnik 1977)) in order for it to be interpretable. In this thesis, I will adopt several conditions formulated by others (i.e. Pronounce Highest Copy (Pesetsky 1998, Franks 1998)) and will introduce these conditions as they become relevant to the analysis. In the following chapters my aim is to demonstrate how the three syntactic operations outlined here as well as specific conditions on derivations will result in the appearance of both canonical and non-canonical resumptive pronouns.

# CHAPTER 1

# ISSUES PERTAINING TO THE PHENOMENON OF RESUMPTION

## 1.1. Defining Canonical Resumption

Resumption (that is, the appearance of a pronoun in the site of a moved syntactic item) occurs in a variety of contexts (which will be addressed in later chapters), but canonical resumption is the appearance of a resumptive pronoun in a relative clause. While they are not found in English[2], resumptive pronouns are a common feature of many of the world's languages and in languages that are unrelated to one another. In every language in this diverse linguistic group; that is, in languages that exhibit any sort of resumption, the one environment in which a resumptive pronoun will certainly occur is within a relative clause. Put differently, languages that exhibit resumption will have resumption in relative clauses[3]. It is for this reason that I call such instances of resumption *canonical resumption.*

---

[2]There are infrequent occurrences even in English of pronouns that appear to be resumptive. They are primarily used as a last resort repair strategy to mend expressions that could not otherwise be parsed. The status of these pronouns has been discussed in Sells (1984), Boeckx (2003), and recently Clemens, Morgan, Polinsky, and Xiang, in their 2012 study *Listening to Resumptives: An Auditory Experiment*. All of the above have identified the pronouns occasionally produced in English islands (known as *intrusive pronouns* (Sells 1984)) as distinct from resumptive pronouns. This distinction is based on several empirical facts, notably that there is absolutely no reliably grammatical occurrence of intrusive pronouns in English. While some speakers may consider them to ameliorate some island effects at times, just as many others do not. Additionally, according to the data from the experiment conducted by Polinsky et al., most speakers find them ungrammatical across the board. That is to say, they are not, in fact, part of the English grammar.

[3]Spanish typically has no canonical resumptives pronouns, but it does display clitic-doubling. This would, at first blush, seem to be a counter-example to my claim. However, clitic doubles only occur in Spanish when they double a DP embedded in a PP. It is also the case that a resumptive pronoun will appear when the site of relativization occurs within a PP. Consider the following data:

Yo **la** ví **a** **Ana**.
$I_{NOM.SG.}$ $her_{ACC.SG.FEM.}$ $saw_{1st.SG.PAST.}$ $to_{PREP}$ Ana
'I saw Ana.'

La mujer **a** **la** que ví era Ana.
The $woman_{NOM.SG.FEM.}$ $to_{PREP}$ $her_{ACC.SG.FEM.}$ that $saw_{1st.SG.PAST.}$ was Ana
'The woman that I saw (her) was Ana.'

A proper investigation of these data would extend beyond the scope of the current topic, but they illustrate that the generalization holds for Romance languages as well. The precise mechanisms that only allow

### 1.1.1. Relative Clause Gaps

Before addressing the phenomenon of canonical resumption itself, we must first examine the environment in which it arises, meaning that we must first carefully consider the properties of relative clauses. Consider sentence (2):

(2) Sharada watched the movie [$_{RC}$ that I mentioned].

The bracketed phrase in (2) is a relative clause; it is a clausal modifier of *movie*. This $N^0$ modified by the relative clause is known as the *relative head*. And it is precisely the role of the relative head that will prove crucial, because there is no general consensus as to its precise syntactic relationship to the relative clause (e.g. while some linguists, notably Vergnaud (1974) and Kayne (1994), believe that the relative head is first merged into a position within the relative clause, others, such as Chomsky (1977), believe that it is merged outside of the relative clause. The various analyses will be discussed in detail in section 1.1.2).

If sentence (2) contained no other elements than those that appear at PF, it would constitute a serious deviation from standard generative principles. If we consider the semantic roles assigned by the predicates, the relative head, *movie*, appears at first to be assigned two thematic roles at once: both as the thing that I mentioned and as the thing that Sharada watched. Given the θ-criterion, this would present a problem. In fact, however, the θ-role assigned by *watched* is assigned to the entire DP *the movie that I mentioned*, while the θ-role assigned by *mentioned* is assigned only to N *movie*. So the semantics, in terms of theta-assignment, do not pose a problem.

---

resumption following a preposition are unclear.

However, given only the PF-legible elements, the syntax is highly problematic. The verb *mention* obligatorily takes a direct object complement (* *Jozef mentioned*.) and obligatorily assigns its complement accusative case. In sentence (2), *mentioned* does not have a direct object complement in the canonical English post-verbal position. Instead, there is a gap[4]. And in fact, such a gap exists in all English relative clauses - it can act as the subject, direct object, indirect object, or as any other grammatical function within the relative clause.

Subject Gap:

(3) Raju chased the squirrel [$_{RC}$ that _____ bit my finger].

In sentence (3), the gap occurs in the highest subject position of the relative clause. While the interpretation is unproblematic (i.e. it was the squirrel that bit my finger), the subject of *bit* is not identified in the DP-Spec-TP of the relative clause.

Indirect Object Gap:

(4) Shobha instructed the woman [$_{RC}$ that she gave the jasmine plant to _____ ] to water it daily.

The gap in (4) occurs as the indirect object within the relative clause. Again, the interpretation is uncontroversial - the N *woman* and the indirect object of the relative clause have the same denotation, but the indirect object is unpronounced.

Adjunct Gap:

(5) The couch [$_{RC}$ that Jozef fell asleep on _____ ] had a broken leg.

[4]A gap is defined as a phrase that is elided on identity with a higher phrase.

We see in (5) that the relative clause gap can also occur within an adjunct phrase. All of the argument positions required by the verbal predicates are filled, but within the relative clause, there is an adjunct prepositional phrase, headed by $P^0$ *on*, whose complement is unpronounced. And although the PP is merely an adjunct, it becomes crucial to the grammaticality of the sentence because it contains the gap.

(5) a. * The couch [ that Jozef fell asleep ] had a broken leg.

In sentence (5a), all of the argument positions are filled, and there are thus no violations of the θ-criterion nor of the case assignment criteria: The matrix predicate *have* requires two arguments, to which it assigns its two θ-roles: possessor (assigned to the subject *couch*) and theme (assigned to *broken leg*). In addition, the matrix predicate assigns accusative case to the DP *a broken leg*. The embedded predicate *fall asleep* requires only one experiencer θ-role which it assigns to its subject, *Jozef*. The subjects of both clauses are assigned structural nominative case. Thus, case and thematic criteria are not the source of the ungrammticality of (5a). The problem with (5a) is rather that the relationship between the embedded clause and the matrix clause is entirely undefined. The gap in relative clauses is crucial precisely because it determines that relationship[5].

The English relative clause is not unique in containing a gap: all PF structures in which a modifier and its modified object are non-contiguous generally contain a gap. This also applies to the syntax of predicate adjectives. Under most contemporary analyses (since Stowell 1981), the predicate adjective is first merged with the modified noun,

[5]In Turkish, which has neither relative pronouns nor complementizers, the only way to distinguish between a relative clause and a subordinate clause is that the former contains a gap. Many thanks to Leonard Babby for bringing this to my attention.

producing a small clause, as in (6). Subsequently the noun raises out of the small clause giving the order found in (7).

(6) [ is [ Sharada clever]]

(7) [ Sharada is [ clever]]

The gap in (7) is a consequence of movement[6]. Similarly, the gap found in relative clauses is also considered to be a consequence of movement. The mechanics of this movement, however, are still being debated. Various theories have been developed to describe and explain the presence of a gap in relative clauses (see Vergnaud 1974, Chomsky 1977, Kayne 1992, Sauerland 1998). In other words, there are a number of different ways to derive the structure of a relative clause, but all of them involve a movement operation. In the following section, I examine the current theories of relative clause syntax.

### 1.1.2. The Analysis of Relative Clauses

Because the derivation of canonical resumption is inalienable from the derivation of relative clauses, it is imperative that, before launching into a discussion of canonical resumption, we look carefully at the structure of relative clauses. The difficulty in examining relative clauses, however, is that there is no consensus as to their structure. In fact, there have been two competing theories since the late 1970s and neither has surfaced as the clear victor. Therefore, in this section I will examine both theories of relative clause structure.

[6]Babby (2009) points out that a similar movement operation is also responsible for the distribution of short form adjectives in Russian.

The first that I will discuss is based on an analysis initially proposed by Jean-Roger Vergnaud in his 1974 MIT dissertation, *French Relative Clauses*. Vergnaud's analysis is that the relative head originates at the site of relativization within the relative clause and subsequently raises to a higher position outside the relative clause where it is then pronounced. This theory was later adopted and elaborated upon by Richard Kayne (1994).

The second theory is based on Chomsky's (1977) analysis of relative clause structure. Chomsky's proposal was that the relative head is base-generated in a position external to the relative clause. Within the relative clause there is a silent operator (Op) which orginates at the site of relativization (i.e. the position of the gap in the relative clause) and ultimately raises to a higher position. The Op bears a relationship to the relative head, namely, the two are co-indexed and thus co-referential.

In the following section, I will look at how each of these theories handles simple relative clauses that don't involve resumption. I will look at their treatment of both relative clauses headed by an overt $C^0$ as well as *wh*-relatives. Finally, I will also consider a more recent proposal (Uli Sauerland 1998, 2003) that combines the Vergnaud-Kayne and the Chomsky models into a hybrid analysis of relative clauses.

#### 1.1.2.1. The Raising Analysis: Vergnaud 1974 and Kayne 1994[7]

The critical assumption guiding the Vergnaud-Kayne syntactic analysis of relative clauses is that the relative head initially occupies a position within the relative clause,

[7]What I describe herafter will be the Vergnaud-Kayne model. At the time Vergnaud first proposed this analysis of relative clauses, a great deal of terminology, such as CP and merge, did not yet exist. While the theory that I summarize here is certainly the one initially conceived by Vergnaud and subsequently advanced by Kayne, I will be using updated terminology, in keeping with current models of syntax. That is, I will discuss the same theory but in terms of operations such as merge, lexical categories such as C, and excluding elements such as traces.

namely the site of relativization. That is, in examples (2)-(5), repeated here, the relative head originates in the position of the gap. (**Moved items are indicated in italics**).

(2) Sharada watched the [ movie [ that I mentioned *movie* ]].

(3) Raju chased the [ squirrel [ that *squirrel* bit my finger]].

(4) Shobha instructed the [ woman [ that she gave the jasmine plant to *woman* ]] to water it daily.

(5) The [ couch [ that Jozef fell asleep on *couch*]] had a broken leg.

In these sentences, the relative head is first merged into a position within the relative CP. It subsequently raises to the Specifier of the relative CP, leaving behind a copy in its original and in each of its successive positions.

(2) Sharada watched the [$_{CP}$ movie$_i$ [$_{C'}$ that I mentioned *movie*$_i$]].[8]

In (2), there is a relative clause CP embedded within the matrix clause. In the initial stage, as syntactic items are being merged into the derivation, the NP *movie* is merged as the complement of V *mentioned*. So, *movie* is first merged within the relative clause. As the derivation proceeds, the subject of the relative clause, *I*, and the $C^0$, *that*, are merged. At that point in the derivation, the NP *movie* raises to its eventual Spell-Out position, as Spec-CP of the relative clause.

Kayne's (1994) analysis of *wh*-relatives is not drastically different from the analysis he outlines for relative clauses with overt C, insofar as both involve a movement

[8]Given Chomsky's Inclusiveness Principle, any indexation of lexical or functional items in the syntax is impossible. The use of indices here is only to mark members of a chain for the sake of clarity. They are not intended to be syntactically real or LF legible elements.

of the relative head from the site of relativization to Spec-CP. *Wh*-relatives, however, require two distinct movement operations.

(8) Sharada watched the [$_{CP}$ [$_{whichP}$ movie$_j$ [$_{which'}$ which *movie*$_j$]$_i$] [$_{C'}$ I mentioned [*which movie*]$_i$]].

The phrase *which movie* is initially merged as the direct object of V *mentioned*. The first movement operation raises the entire phrase *which movie* into Spec-CP. The second movement raises NP *movie* to a position higher than *which*; according to Kayne (1994), the Spec-*which*P. This final movement results in the desired PF word order, however it is not a clearly motivated operation. In fact, there are several problems with the derivation shown in (8) as a whole.

The two most readily apparent problems involve the role of the Determiner. Kayne (1994) identifies *which* as the head of a *which*P. This proposal undermines an important generalization: *which* is a *wh*-word that never directly precedes a determiner in English. That is, *which* occurs in complementary distribution with other determiners, a fact indicating that *which* most likely belongs to the lexical category D. Furthermore, the determiner *the* and the NP do not at any point in the derivation form a constituent; rather D obligatorily takes a CP argument. This appears to be a unique case of D merging to CP. In all other cases, this is impossible, as illustrated in examples (9) - (11) below.

(9) * [$_{DP}$ the [$_{CP}$ John left]].

(10) * [$_{DP}$ the [$_{CP}$ what did John say]] annoyed me.

It appears that D is only able to merge to a *relative* CP. But even this restriction is not narrow enough to prevent over-generation. Consider (11):

(11) * [$_{DP}$ the [$_{CP}$ what John said]] annoyed me.

The D$^{0}$ *the* is merged to a relative CP and nevertheless the resulting sentence is ungrammatical. The reason for this is that the relative clause in (11) is a free relative (i.e. a relative clause containing a *wh*-relativizer and missing an over relative head). The restriction, then, seems to be that a Determiner can only merge with a relative CP containing an overt relative head. This amended form of Kayne's proposal will generate sentences such as (12), which are in fact attested in some dialects of British English.

(12) [$_{DP}$ the [$_{CP}$ thing what John said]] annoyed me.

Nevertheless, there is no clear reason for determiners only to take relative CPs (and only headed-relative CPs at that) as complements and for any other combination of D+CP to be ungrammatical. Leaving this issue open, there is also a question regarding the relationship that obtains between the determiner and the relative head. Bianchi (2000) points out that under Kayne's analysis, the determiner and the relative head never form a constituent. This poses a problem for languages that exhibit agreement between determiners and NPs. Bianchi proposes a solution to this problem, noting the Spec-Head relationship that holds between D and *which*P at the end of the derivation; that is, the *which*P is in Spec-CP, and an agreement relationship obtains between D and Spec-CP.

Bianchi (2000) also addresses the problem of motivating the movement of NP from its initial position within the *which*P into Spec-*which*P. She proposes that the

determiner has a strong [+N] feature, which drives the movement of the relative head into the specifier position, thereby allowing D to check its [+N] feature via the Spec-Head relation. The presence of a [+N] feature on D is also indepentently motivated, given that determiners most often require an NP argument and that there are many languages whose determiners show morphological agreement with their complement NPs.

While there are many possible problems with Kayne's analysis of *wh*-relatives, the most complex issue that arises applies to both the Vergnaud-Kayne analysis of overt-C-relatives as well Kayne's analysis of *wh*-relatives. This is the issue of Case assignment. Consider the following sentences:

(13) The [$_{CP}$ song$_i$ [$_{C'}$ that my friends wrote ~~*song*$_i$~~]] was amazing.

(14) The [$_{CP}$ [$_{whichP}$ song$_j$ [$_{which'}$ which ~~*song*$_j$~~]$_i$] my friends wrote *[$_{whichP}$*~~*which song*~~*]$_i$*] was amazing.

In both (13) and (14), the phrase containing the relative head N moves from its original position as the direct object of V *wrote*, an accusative case marked position, into Spec-CP, which is not a case-marked position. It would be expected, then, that the relative head would remain marked for accusative case. This is not, however, what the data show. In languages which exhibit morphological case, the case of the relative head is determined by its grammatical function within the matrix clause and not by its relationship to the relative clause predicate[9]. Consider the following data from Czech, a West Slavic language with rich inflectional morphology for nouns.

[9]In some languages (e.g. German), there are instances of "case matching effects" in free relatives, in which the *wh*-word must satisfy the case-checking requirements of both the relative clause and the matrix clause, as in the following example from Groos and van Riemsdijk (1979):

Czech:

(15) Mé kamarádky napsali písničku.
my$_{NOM.PL.FEM.}$ friends$_{NOM.PL.FEM.}$ wrote$_{PL.PAST.}$ song$_{ACC.SG.FEM.}$

'My friends wrote a song'

In (15) we see that the verb *write* in Czech assigns accusative case to its complement. The N, which in the nominative would be *písničk**a***, becomes *písničk**u*** in the accusative; that is, it takes the feminine accusative singular -*u* ending. If, according to the Vergnaud-Kayne model, the relative head begins in an accusative case marked position and subsequently raises to Spec-CP, then we would expect that the relative head be spelled out as an accusative case marked noun. This is not, in fact, what happens, as illustrated in (16):

(16) Písnička, co napsali mé kamarádky, byla super.
song$_{NOM.SG.FEM.}$ that wrote$_{PL.PAST.}$ my friends$_{NOM.PL.FEM.}$ was$_{SG.FEM.PAST.}$ amazing

'The song that my friends wrote was amazing.'

---

Ich vertraue wem du vertraust.
I trust whom$_{DAT.SG.MASC.}$ you trust.
'I trust whomever you trust.'

Here, the same predicate (*vertrau-*) occurs in both clauses, and its dative case checking properties are satified by the *wh*-word. In the next example, however, a case conflict arises between the the matrix clause and relative clause predicates:

Ich vertraue *wem / *wen du mir empfiehlst.
I trust whom$_{DAT.SG.MASC.}$ / whom$_{ACC.SG.MASC.}$ you to-me recommend
'I trust whomever you recommend to me.'

The *wh*-word must check both dative case (with V *vertraue*) and accusative case (with the relative clause internal predicate *empfiehlst*). This results in an unresovlable case conflict for German. In an ordinary relative clause (not free relative or co-relative), the sentence would obligatorily contain two distinct case-marked elements, as shown in the following example:

Ich vertraue dem Lehrer den du mir empfiehlst.
I trust the-teacher$_{DAT.SG.MASC.}$ him$_{ACC.SG.MASC.}$ you to-me recommend.
'I trust the teacher you recommend (him) to me.'

In (16) we see that the relative head is in the nominative case, since it is the subject of the matrix clause. This means that although the relative head merges into the derivation in an accusative case-marked A-position and then raises into a caseless A'-position, the form of the relative head is not the accusative *písničku*, but rather the nominative *písnička*.

(17) Písnička, kterou napsali mé kamarádky, byla
song$_{NOM.SG.FEM.}$ which$_{ACC.SG.FEM.}$ wrote$_{PL.PAST.}$ my friends$_{NOM.PL.FEM.}$ was$_{SG.FEM.PAST.}$

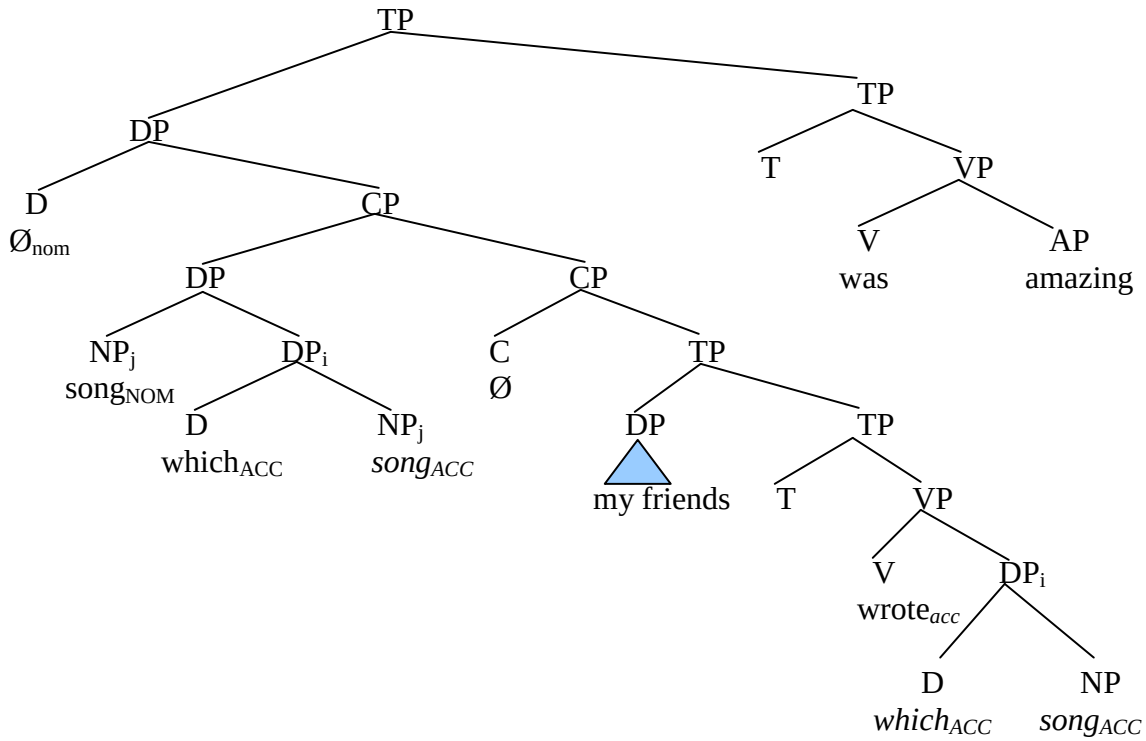
super.
amazing

'The song that my friends wrote was amazing.'

The same surprising facts hold for example (17) containing a *wh*-relative. And even more surprising, given the analysis, is that *which* and *song* do not appear in the same case: while *písnička ('song')* is nominative, *kterou ('which')* is accusative.

Valentina Bianchi (2000) offers a possible solution to this problem. First she assumes that the *which*P is, in fact, a DP and that *which* is a determiner. She then proposes that Case is a feature of $D^0$ and that an NP will simply agree with its governing $D^0$ in case.

Diagram 1



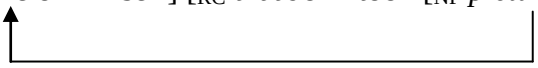

Looking at diagram (1), which is the derivation of (17)[10], we see that the DP containing the relative head is merged with the V *wrote*, which assigns accusative. The entire DP then raises to Spec-CP, and then the NP *song* raises into Specifier of DP. Given Bianchi's analysis, each NP must check its case feature with its nearest governing D. At first glance, this may seem to work: *song* checks its case with its nearest governing D, a null determiner with a nominative case feature, and the V *wrote* checks accusative case on the determiner *which*. There is, however, a serious flaw: if an NP checks its case with its nearest governing D, then the case feature of *song* should be accusative and this feature should be checked by D *which* while *song* is in its first merge position. Then, when NP *song* raises to Spec-DP, it will also check nominative case with the null determiner. This is a clear case conflict - the NP is assigned two distinct abstract cases. One way to resolve

[10]In the derivations of Czech examples, I use the translated English words instead of the original Czech words, but the structures reflect Czech.

this is to apply Pesetsky's (2007) analysis of case conflict in Russian quantified nominals. Pesetsky (2007) claims that higher affixal projections suppress case features acquired lower in the derivation, and thus the higher case is pronounced. Given his analysis, the NP in fact does receive case in both positions but the morphological case that is realized on the NP is the one that it acquires highest in the derivation, thus the nominative.

The advantage to this movement-based account is that it provides an automatic explanation for certain reconstruction effects. Consider the following sentence:

(18) The [$_{CP}$ [$_{NP}$ picture of himself] [$_{RC}$ that John took [$_{NP}$ *picture of himself* ]]] hangs on the office wall.



At PF, the anaphor *himself* appears in a position higher than its antecedent *John* - a configuration that would be ruled out under any formulation of Binding Condition A. However, given the movement operation in which the relative head *picture of himself* originates as the complement of *took*, one could formulate Condition A to take into account the original position of the anaphor with respect to its antecedent. In its original position, *himself* is c-commanded by *John* within the minimal CP, and thus there is no violation of Condition A.

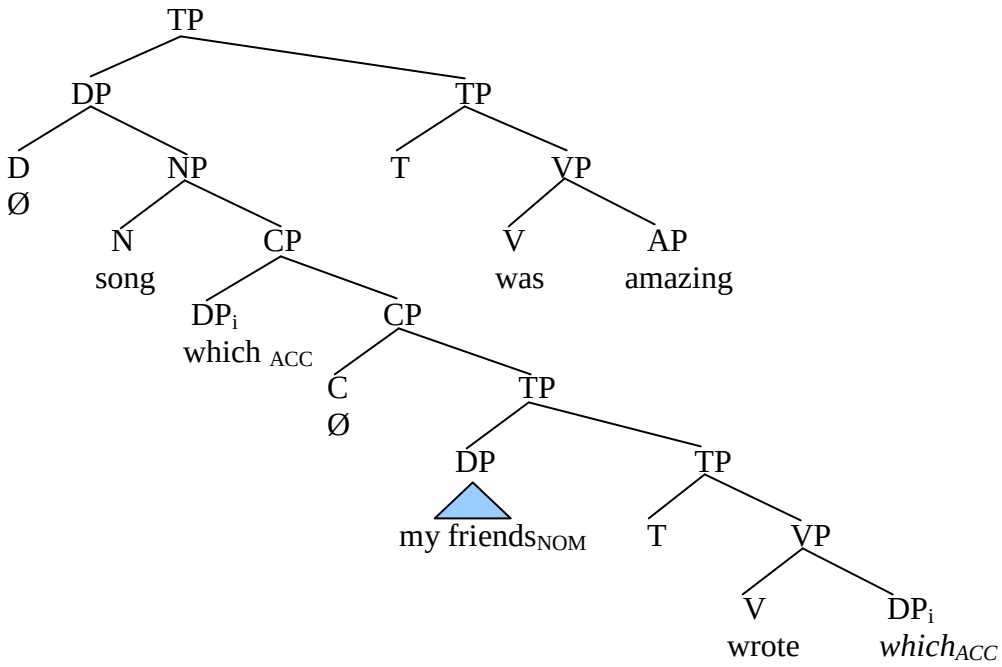
Nevertheless, in order to accept the Vergnaud-Kayne model of overt-C-relatives and Kayne's model of *wh*-relatives, one must also accept a number of other tangentially related proposals, such as Bianchi's case-assignment analysis and Pesetsky's *Pronounce Higher Case* proposal.

1.1.2.2. The Adjunction Analysis: Chomsky 1977

Chomsky's (1977)[11] account of relative clauses, like the Vergnaud-Kayne account, involves a movement operation, but the two accounts are distinguished by the nature of the moved item. Under the Vergnaud-Kayne analysis, the moved item is the relative head. Under Chomsky's analysis, it is either a *wh*-word or a silent *wh*-Operator that is moved. The *wh*-element (either having a PF legible set of features or a PF illegible operator) is first merged into the site of relativization (that is, the same position into which, according to the Vergnaud-Kayne model, the relative head would be merged) and subsequently raises to Spec-CP of the relative clause. This immediately offers a more parsimonious account of the case phenomena. Consider again the Czech example (17), derived here according to Chomsky's (1977) analysis:

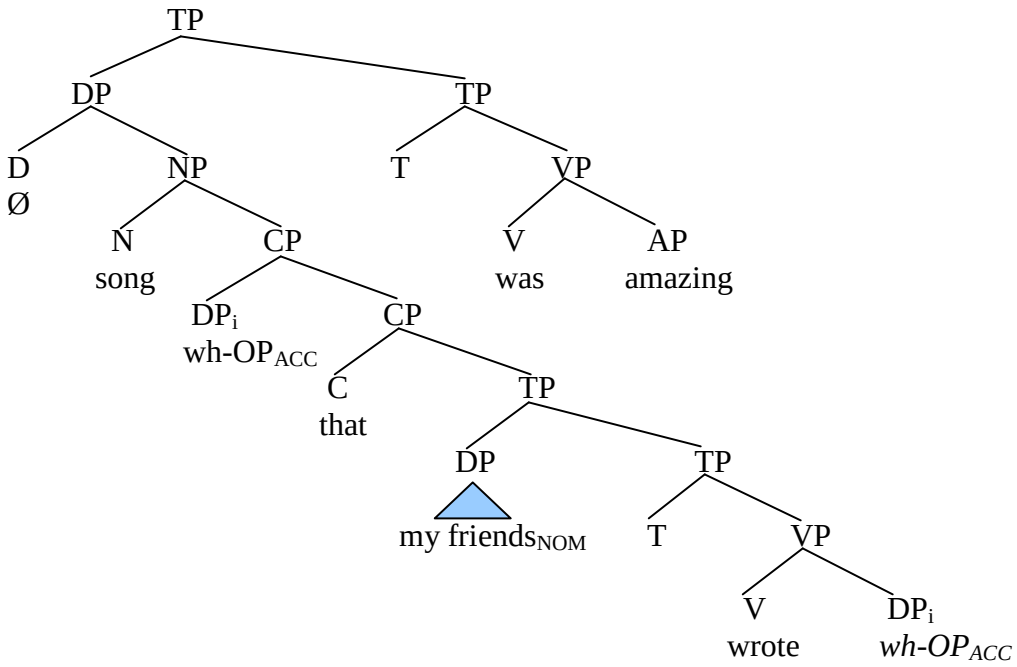
[11]In 1977, Chomsky was working under a very different set of assumptions than those held by proponents of standard generative grammar today. While the analysis he presented in 1977 is still in widespread use, the terms needed to describe the analysis have changed. Just as I did for the Vergnaud-Kayne model, I will discuss Chomsky's analysis using a modified set of assumptions (that is, the set of assumptions mentioned previously and those regularly adopted by linguists working today in a P&P framework: Copy Theory, existence of CP, existence of DP, lack of traces and indices, etc.).

Diagram 2




The relative head, *song* (*písnička*), receives its case in the same way that the nominative subject of any clause receives its case - it occurs in Spec-TP and checks its nominative case feature with a non-defective, finite T. There is no case conflict and thus no need to invoke Pesetsky's (2007) case-conflict resolution strategy. Furthermore, the process of relativization is reduced to a single movement operation for *wh*-relatives. And this operation is, in fact, identical for both *wh*-relatives and overt-C relatives. The following is the derivation of sentence (16), a Czech sentence containing overt C, according to the Chomsky model:

Diagram 3

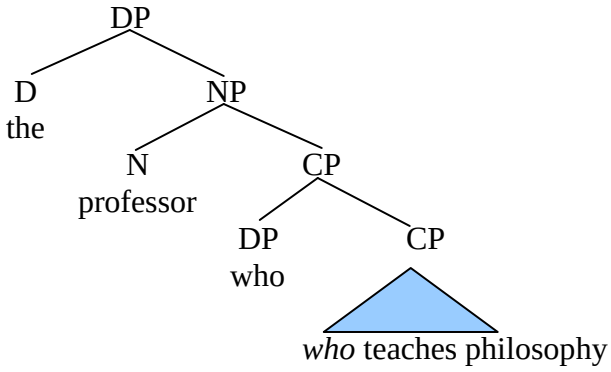



Comparing the two Chomsky-analysis-based derivations shown above, one will notice that the only two differences are these: in the second derivation 1) C contains the PF-legible item *that* and 2) the *wh*-word is PF-illegible.

The Chomsky model of relative clauses, in addition to lacking case-assignment complexities and divergent structural analyses of overt C versus *wh*-relatives, is able also to account for data that are beyond the explanatory reach of the Vergnaud-Kayne model. For example, Chomsky's analysis allows for a specific structural variance that will result in the difference between restrictive and non-restrictive relative clauses.

Diagram 4

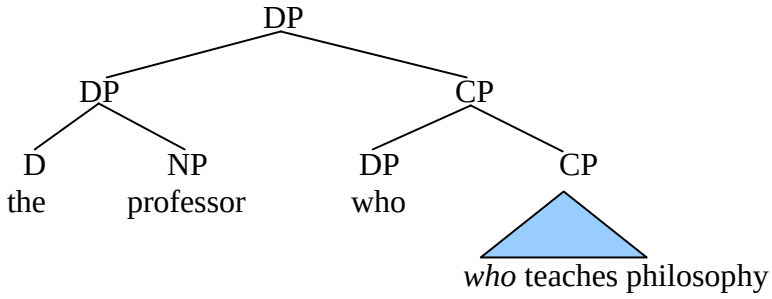
Restrictive:




In this restrictive relative clause, the relative CP is a sister to the relative head N, thus forming an NP. The determiner is a sister to NP, thus taking scope over the entire NP containing the relative clause.

Diagram 5

Non-Restrictive:




In the non-restrictive relative clause, the relative clause CP would be a sister to a DP comprised of the determiner and the NP *professor*. The determiner in Diagram 5 only has the NP *professor* within its scope and not the relative clause.

Kayne (1994) proposes that the difference between restrictive and non-restrictive relative clauses is due to a difference in their LF structures; the TP within the relative clause raises to Spec-DP at LF only in non-restrictive relatives. While this does provide some account of the semantic differences between restrictives and non-restrictives, if we take a strict view of the Y-model, Kayne's theory is problematic. There are not only semantic differences but also phonological differences between restrictive and non-restrictive relative clauses; namely, there is a prosodic break that occurs before and after the relative clause in non-restrictives that does not occur in restrictives.

While Chomsky's analysis is preferable to the Vergnaud-Kayne model for several reasons (e.g. it does not involve case conflict and it can account for the differences between restrictive and non-restrictive relatives), it too has drawbacks. One clear disadvantage of Chomsky's analysis is that it, unlike the Vergnaud-Kayne analysis, does not provide a natural account of reconstruction effects. Since the relative head is first merged outside of the relative clause, there is no obvious reason why there would not be any apparent violation of Condition A in sentences like (18), where according to Chomsky's analysis, the anaphor would be merged into a position higher than its antecedent.

In addition, the D *which* in a *wh*-relative has no nominal complement at any point in the derivation. In every other context in which we find it, D *which* is part of a D-linked *wh*-phrase (e.g. which song). Thus, having the determiner *which* appear without an NP complement only occurs in the syntactic environment of a relative clause. This leaves us with two possibilities: either this determiner *which* (i.e. the one occurring in relative clauses) must be syncretic with but lexically distinct from other instances of $D^0$ *which* or

a special rule applies to D *which* in the context of a relative clause, allowing it to appear without an NP complement.

A related but more serious problem with Chomsky's model is that the relationship between the relative clause and the relative head is not entirely clear. When Chomsky developed this model, indices were commonly used as syntactic markers of co-reference. Given the Inclusiveness Principle, indices can no longer function in that capacity. Instead, the only occasion in which we can say two items are automatically co-referential is when one is a copy of the other and thus they bear identical features. In the Vergnaud-Kayne model, the relative head moves from the site of relativization (leaving a copy of itself in that position) into the Spec-CP position where it is spelled out, thus the co-reference between the pronounced item and its lower copy is automatic. In Chomsky's model, in which the relative head is merged in a position external to the relative clause, there is a *wh*-operator that must be, by some means, referentially linked to the relative head. It is not at all clear how that referential link is manifested in the syntax.

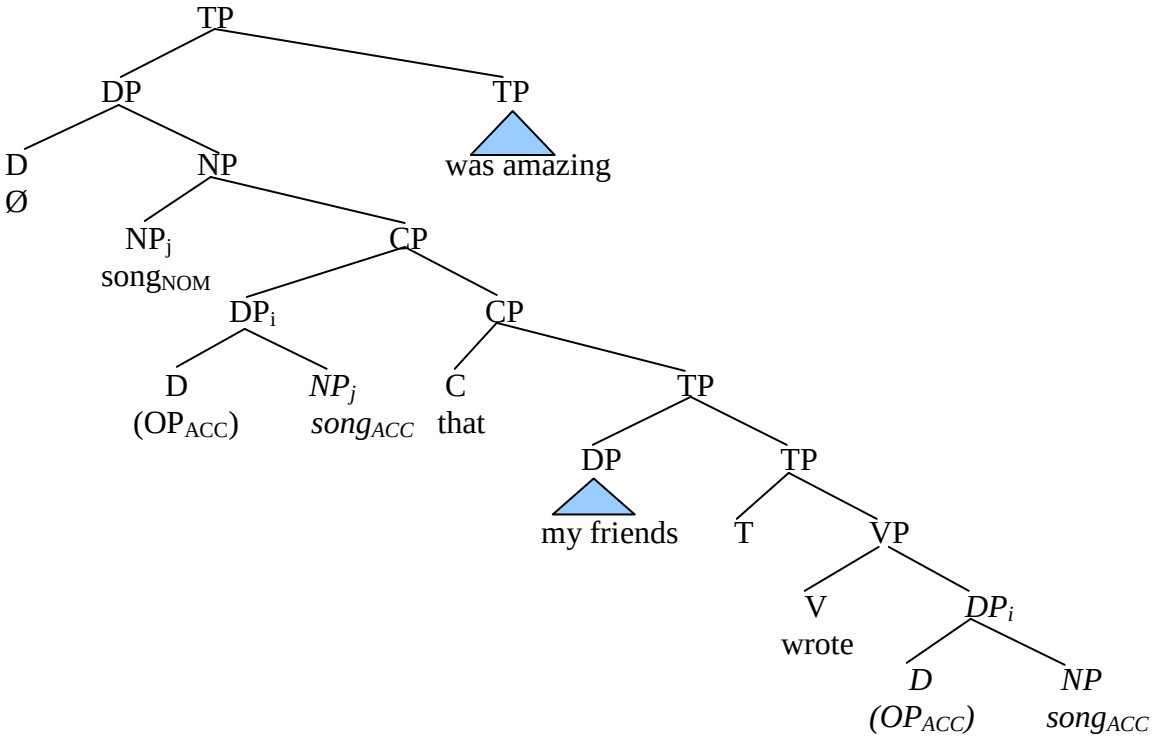
#### 1.1.2.3. A Hybrid Model - Two Structures of Relative Clauses (Sauerland 1998, Sauerland 2003)

In his 1998 MIT dissertation, Uli Sauerland proposed an analysis of relative clauses in which there is both an internal head (as in the Vergnaud-Kayne model) and external head (as in the Chomsky model). He proposes that the internal head "contains a phonlogically deleted version of the external head. Implicit in this proposal is that the external head and the internal head must match at the level of LF" (Sauerland 1998: 79).

In a later version of the proposal, Sauerland (2003) outlines two distinct models of relative clauses that he suggests co-exist; that is, both analyses are valid and both must be

available in the syntax, but they apply to different data. The first model he describes is a modified version of the Vergnaud-Kayne raising analysis. The only differences between that analysis and Sauerland's is that Sauerland proposes that 1) the NP movement of the relative head raises it to a position *external* to the relative clause and 2) there is an operator in the DP containing the relative head, even when there is an overt C. This second property of Sauerland's model is similar to what we find in Chomsky's proposal.

Diagram 6 (Raising):




This raising analysis suffers from some of the same problems as the Vergnaud-Kayne raising analysis: there is case conflict on the relative head and there is no way to distinguish restrictive from non-restrictive relatives. Sauerland argues, however, that this raising structure must be available in the syntax, because there are relative clauses in

which the head can only be interpreted internally. Sauerland applies the idiom chunk test as a diagnostic to show that reconstruction effects[12] are possible in a relative clause:

(19) The call that the referee made was disputed.

The crucial phrase here, *make a call*, is understood as an idiom, in the sense of judging a play during a sporting event, and does not take on a literal meaning, even though the idiom is non-contiguous. This provides evidence of a raising analysis that allows the relative head to reconstruct to its previous position and be interpreted internally (and only internally) to the relative clause.

Sauerland also argues, however, that the raising structure cannot be the only possible structure available for relative clauses. He offers data showing that, contrary to what we would expect if we applied the raising analysis, we do not find Condition C reconstruction effects in relative clauses.

(20) a. Which is the picture of $John_i$ that $he_i$ likes?

b. * Which picture of $John_i$ does $he_i$ like? (Sauerland 2003)

(21) a. The pictures of $Marsden_i$ which $he_i$ displays prominently are generally the attractive ones.

b. * Which pictures of $Marsden_i$ does $he_i$ display prominently? (Safir 1998)

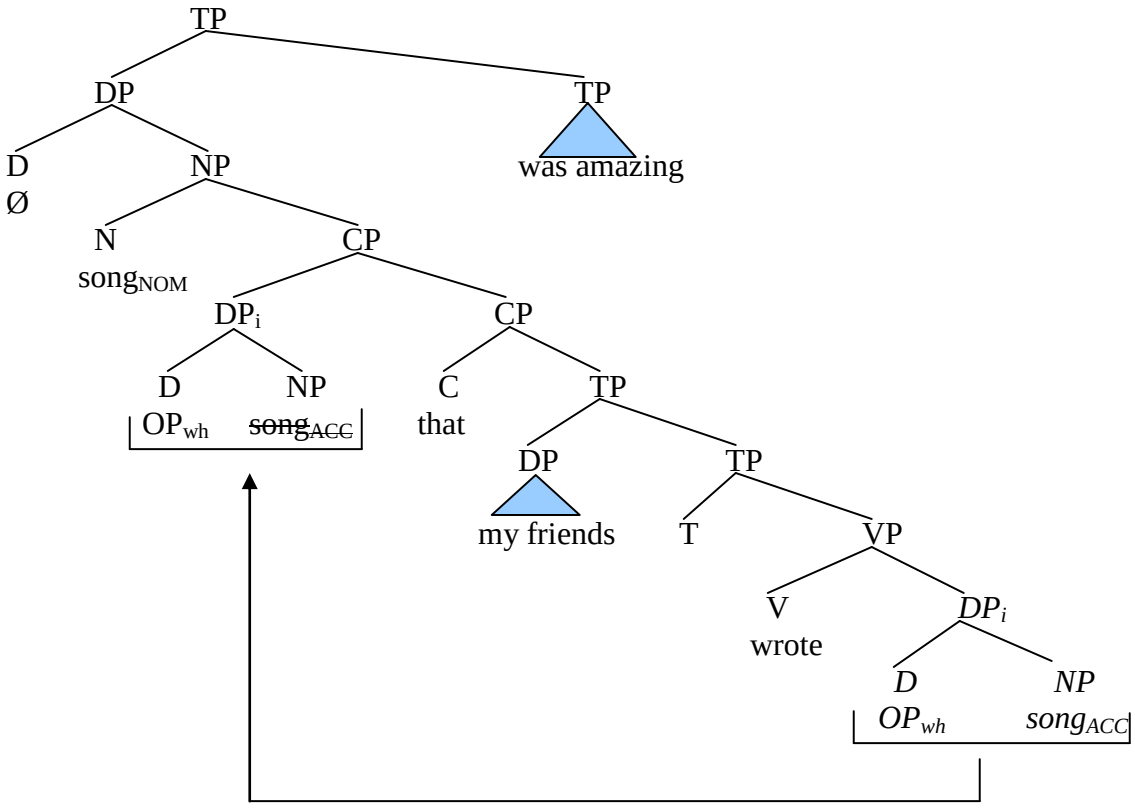
In both (20) and (21) above, the (b) examples show interrogative *wh*-movement of a phrase containing an R-expression. The resulting sentences are deviant because they

[12]Reconstruction effects are generally given as evidence that a movement operation has occurred in a sentence. If the conditions on syntax are not met at the level of PF but are satisfied at an earlier stage in the derivation and the sentence is therefore grammatical, then the conditions on syntax have been met via *reconstruction* (i.e. the conditions are satisfied by the lower copy of a syntactic item).

show Condition C reconstruction effects; that is, the chains formed by the movement of the *wh*-phrase cause a Condition C violation.

On the other hand, both of the (a) sentences are grammatical. If we note that the relative head in both sets of sentences contains an R-expression and if we assume the raising analysis, in which the relative head moves from the site of relativization into a position external to the relative clause, it is surprising that there are no Condition C reconstruction effects in either of the (a) sentences. We would expect the (a) sentences and the (b) sentences to have the same factors determining grammaticality. Since that is not the case, Sauerland proposes the matching model of relative clauses, which has the following structure for Czech sentence (16):

Diagram 7



In this derivation, the relative head, *song*, is first merged with a phonetically null *wh*-operator determiner. This DP raises into Spec-CP of the relative clause. Once there, an operation called Relative Deletion applies:

Relative Deletion (Sauerland 2003: 31)

In matching relatives the internal head must not be pronounced. Furthermore, the external head must be the antecedent of the internal head.

This operation is analogous to the operation of Comparative Deletion (Bresnan 1973, 1975), in which an item is deleted based on identity with an item higher in the derivation. Sauerland does not however spell out the details of this operation. One can surmise, however, that the internal head , once it raises to Spec-CP, is deleted when it is interpeted as co-referential with the external head; that is any element in Spec-CP that takes the external head as an antecedent is deleted. This deletion is obligatory[13].

This hybrid account, which allows for two different models of relative clauses, solves many of the problems that occur in each of the previous two analyses, taken in isolation. In the matching model, there is no case conflict and there are two distinct possible structures for restrictive and non-restrictive relatives. Furthermore in *wh*-relatives, the D *which* takes the relative head as its NP complement. The relationship between the relative clause and the relative head is clear: the pronounced relative head is the antecedent of the deleted internal head, which has moved from a position within the relative clause to Spec-CP. However, it leaves open an important question: under what

[13]Leonard Babby (p.c. 2013) mentions a stylistically marked sentence that is perhaps grammatical to some speakers:

I found a pencil, which pencil was lost by John.

In this sentence, the Relative Deletion rule does not appear to apply. While I have found no speakers who accept this sentence as grammatical, it is nevertheless possible that in some dialects, Relative Deletion is optional.

conditions does the raising structure appear and under what conditions does the matching structure appear? This question is left open for further research.

#### 1.1.2.4. Summary of Relative Clause Analyses

I have considered two competing analyses for the structure of relative clauses: the Vergnaud-Kayne analysis and the Chomsky analysis, as presented in sections 1.1.2.1 and 1.1.2.2. Each of these analyses offers some insight into the relationship between a relative clause and the matrix clause in which it appears. Both are, however, problematic for a variety of reasons: either the case phenomena are not clearly derived or the relationship of the relative head to the relative clause is not clearly represented. The third analysis presented, Sauerland's matching model, offers the possibility that there actually exist two available structures for relative clauses in the syntax. He bases this proposal upon data reflecting reconstruction effects. The two structures are both, in some respects, hybrids of the Vergnaud-Kayne and Chomsky models. While they capture many of the same structural dependencies as the previous analyses, they avoid some of the basic problems. For this reason, I will adopt Sauerland's analysis of relative clauses.

The analysis of relative clauses is critical to the study of resumptive pronouns for the following reason: based on how one derives a relative clause, one automatically arrives at some notion of where a resumptive pronoun will fit into the derivation. That is to say, the structure of a relative clause must contain a gap; we have seen that in every one of the analyses presented. But depending on the analysis, the gap could be 1) an unpronounced copy left from movement of the relative head (Vergnaud-Kayne model), 2) a silent *wh*-operator (Chomsky model), or it could be both of these together (Sauerland

model). In whichever relative clause model one adopts, the resumptive pronoun will bear a relationship to that gap.

### 1.1.3. A Pronoun and Not a Gap

In English and many other languages, the gap in a relative clause is quite plainly just that - nothing is pronounced but there is some semantic and syntactic connection between the gap in the relative clause and another term in the derivation. That is, while nothing surfaces in PF at the site of relativization, there is a syntactic and interpretive element within the relative clause that associates the relative clause with the matrix clause.

In other languages, however, there is a pronounced element occupying this position: a pronominal form. This is the canonical resumptive pronoun. Consider sentence (1), repeated below, and its English translation.

Bosnian/Croatian/Serbian

(1) Čovjek [$_{RC}$ što sam **ga** vidio juče ]
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ **him$_{ACC.SG.MASC.}$** saw$_{MASC.SG.PAST.}$ yesterday

je ovdje.
is here

'The man that I saw (him) yesterday is here.'

The translation given for sentence (1) is literal; in fact, if the pronoun in parentheses were actually pronounced, the English sentence would be ungrammatical:

(22) * That man that I saw him yesterday is here.

In English relative clauses, no PF-legible element, pronominal or otherwise, can occupy the site of relativization. On the other hand, the resumptive pronoun is obligatory in the B/C/S example. Put another way, the difference between these two languages is that B/C/S exhibits canonical resumption while English does not.

In order to form a basic, descriptive definition of canonical resumption, it is useful to look at another example and compare the two.

Bosnian/Croatian/Serbian

(23) Pričao sam sa devojkom, što si *(**joj**)
spoke$_{SG.MASC.}$ AUX$_{1st.SG.}$ with girl$_{INST.SG.FEM.}$ that AUX$_{2nd.SG.}$ **her$_{DAT.SG.FEM.}$**

pomagao juče.
helped$_{SG.MASC.}$ yesterday

'I spoke with the girl that you helped (her) yesterday.'

Comparing examples (1) and (23), one can immediately see some similarties: both are bi-clausal, containing a matrix clause as well as a relative clause. Both relative clauses begin with the word *što*, a morphologically invariable complementizer meaning *that*, and both relative clauses obligatorily include a resumptive pronoun instead of a gap. The salient difference between the two is the form of the pronoun. In (1) the pronoun is *ga*, the singular, masculine, animate accusative pronoun. In (23), the pronoun is *joj*, the singular, feminine, dative pronoun. The gender difference between the pronouns of the two relative clauses reflects the gender difference between the relative heads of the two sentences. The case difference reflects the difference between their case-checking heads.

In sentence (1), the relative head is *čovjek*, meaning *man*. The lexically inherent features, or φ-features, on this noun are valued [ +masculine, +singular, +animate]. The

case feature, a feature which is not lexically inherent but rather structurally determined, is nominative, since *čovjek* is the subject of the matrix clause. If we look at the resumptive pronoun in (1), we see that its φ-features have identical values to those of the relative head. That is, the pronoun *ga* ('*him*') is [+masculine, +singular, +animate]. Its case, however, is distinct from the case of the relative head. The pronoun, too, receives structural case but it checks accusative case with the embedded predicate *vidio* ('*saw*').

These same basic facts hold for sentence (23); only the specific values of the features are different from those found in (1). The relative head is *devojkom*, meaning *girl*. The φ-features of *devojkom* are valued as [+feminine, +singular, +animate[14]]. The case feature on *devojkom* is instrumental, checked by the preposition *sa*. The pronoun *joj* shares the same φ-feature values as the relative head, but differs from the relative head in its case feature. The case on the pronoun is dative, as it is the direct object of the lexical dative case checking predicate *pomagao*.

The pronoun in the relative clause not only matches the relative head in φ-features, but in fact, it must match the relative head in reference[15].

Bosnian/Croatian/Serbian

(24) * Čovjek$_{i}$ [$_{RC}$ što sam ga$_{j}$ vidio včera ]
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ him$_{ACC.SG.MASC.}$ saw$_{MASC.SG.PAST.}$ yesterday

je ovdje.
is here

'The man that I saw (him) yesterday is here.'

[14]Although animacy does not have any morphological consequence on either feminine or neuter nouns, I will nonetheless assume that it is part of the feature complex of every B/C/S noun.
[15]The pronoun *ga* and the N *čovjek*, as well as the entire NP *čovjek što sam ga vidio*, must have the same denotation. They cannot refer to distinct individuals.

If we take the pronoun *ga* and the relative head *čovjek*, to have disjoint reference, the resulting sentence is deviant. In order for the sentence to be grammatical, the two must bear the same reference. Given this fact (i.e. they are obligatorily co-referential), we can refer to the relative head as the *antecedent* of the resumptive pronoun.

These data reveal the fundamental syntactic function of the resumptive pronoun: it is an element that matches the features and reference of the relative head but receives its case based on its grammatical function within the relative clause.

Recall the data in (5) and (5a), repeated below:

(5) The couch [$_{RC}$ that Jozef fell asleep on _____ ] had a broken leg.

(5) a. * The couch [that Jozef fell asleep] had a broken leg.

These data illustrate that the gap in a relative clause determines the relationship between the relative clause and the higher clause in which it is embedded (as shown in section 1.1.1). Now, let us look at a translation of (5) in Slovak, a language with canonical resumption.

Slovak

(25) Pohovka, [$_{RC}$ čo na **nej** Jozef zaspal ] mala
couch$_{NOM.SG.FEM.}$ that on **it$_{LOC.SG.FEM.}$** Jozef$_{NOM.SG.MASC.}$ fell-asleep had

zlomenú nohu.
broken leg

'The couch that Jozef fell asleep on (it) had a broken leg.'

The interpretive function of the resumptive pronoun in Slovak is identical to the function of the gap in an English relative clause; it determines the relationship of the relative clause to the higher clause in which it is embedded.

Zaenen, Engdahl, and Malin (1981) show, using a coordination test, that a relative clause gap and a canonical resumptive pronoun are of the same syntactic category. They refer to an observation dating back to Ross (1967) that in coordinate structures, if an element in one conjunct has undergone a movement operation, then that same operation must have applied to the other conjuncts as well. Williams (1978) formalizes this observation into a set of conditions on *across-the-board* rule application. One of these conditions is that the moved elements in each conjunct must be of the same syntactic category. Zaenen, Engdahl, and Malin offer data from Swedish, showing extraction from conjoined relative clauses, in which one relative clause contains a gap and the other contains a resumptive pronoun:

(26) Där borta går en man$_i$ som jag ofta träfar ___$_i$ men inte minns vad
There goes a man that I often meet ___ but don't remember what

**han$_i$** heter.
**he** is-called

'There goes a man that I often meet but don't remember what he is called.'
(Zaenen, Engdahl, and Malin (1981))

Thus, the syntactic category of the gap and the resumptive pronoun (as well as their interpretation) must be identical. The resumptive pronoun must therefore be part of either an NP or a DP constituent.

### 1.1.4. The Definition of a Canonical Resumptive Pronoun[16]

A Canonical Resumptive Pronoun is a pronoun:

1. that occurs inside a relative clause headed by an indeclinable $C^0$,
2. whose antecedent is the relative head,
3. whose case is determined by its grammatical function within the relative clause,
4. whose function is to determine the relationship between the relative clause and the higher clause,
5. whose syntactic category is either N or D[17].

## 1.2. The Properties of Pronouns

An important generalization about resumption is that, in all languages exhibiting resumption, the resumptive element takes the form of a pronoun. Thus, the following is universal:

If: 1) z is an R-expression with a fully valued set of φ features,

2) x is a lexical pronoun whose φ-features are valued identically to those of z, and

3) y is a pronounced lexical term in the structure $[z[_{RC}...y...]]$ in which z is the antecedent of y,

Then: x and y are syncretic.

---

[16]Note that English intrusive pronouns (mentioned in footnote 2) are not considered resumptive pronouns, since they do not occur regularly, they are never considered grammatical, and they do not exhibit many of the defining properties of resumptive pronouns (e.g. they do occur in highest subject position).

[17]The question of whether the resumptive pronoun is an $N^0$ or a $D^0$ will be discussed in section 1.4. There do not appear to be any non-pronominal elements that regularly appear as resumptive pronouns. Consider the following example from Slovak, a language that does contain canonical resumptive pronouns:

Obdobie čo Ivan strávil *vtedy na Slovensku
The-time that Ivan spent then in Slovakia
'the time that Ivan spent in Slovakia'

The sentence is made ungrammatical by the presence of *vtedy*, which is meant to refer to *obdobje*. An adverb cannot be used in a resumptive function.

In other words, resumptive pronouns are universally syncretic with ordinary pronouns. Because this is a true linguistic universal, it cannot legitimately be dismissed as mere coincidence. The fact that resumptive pronouns and ordinary pronouns invariably have the same phonetic forms is not fortuitous. This notion is elegantly formulated by McCloskey:

> A fundamental question, which has not often been explicitly addressed, but which lies behind much of the discussion is why resumptive elements have the form that they do. That is, resumptive pronouns simply *are* (formally) pronouns. I know of no report of a language that uses a morphologically or lexically distinct series of pronouns in the resumptive function. If we take this observation to be revealing, there can be no syntactic feature which distinguishes resumptive pronouns from ordinary pronouns, and any appeal to such a feature must be construed as, at best an indication of the limits of understanding. (McCloskey 2006: 97)[18]

Unless there emerges concrete evidence indicating otherwise, we must assume that resumptive pronouns are not lexically or syntactically different from ordinary pronouns. We therefore cannot distinguish them based upon *what they are* but rather *where they appear*. That is, the term *resumptive* refers not to a type of pronoun but rather to a context in which a pronoun may occur. Therefore, if a theory of ordinary pronouns is unable to account also for resumptive pronouns, then that theory is not powerful enough. Furthermore, any assertion that the ordinary pronoun and the resumptive pronoun are lexically or syntactically distinct motivated solely by a commitment to maintain theory-internal consistency, while "at best an indication of the limits of understanding" (McCloskey 2006), is at worst a case of data tampering to suit an existing theory[19].

[18]This quotation came to my attention by its appearance in Asudeh (2011), who also mentions a similar passage in McCloskey 2002: 192.

[19]It is important to note that PF is certainly not always indicative of syntactic structure; that is, there are many operators and processes in the syntax that are not observable at PF. But any assertion that the

The conditions on binding are of particular interest when one assumes an identity relation between resumptive and ordinary pronouns. All pronouns are dependent semantic variables whose reference is determined by another nominal element (or elements, in the case of split antecedents) either within the sentence or elsewhere in the discourse or whose reference is determined by means of deixis. As stated by Panagiotidis (2002) "it seems to be an absolute universal that *pronouns refer but do not denote*." However, beyond this fundamental fact, pronouns vary across languages in terms of the contexts in which they appear (e.g. in pro-drop languages, pronouns in subject position can be elided at PF) and how their interpretations are constrained (i.e. their binding conditions). The particular binding constraint relevant to the topic of resumptive pronouns is Condition B[20]. The reason that this is particluarly relevant is that no existing formulation of Condition B can account for the interpretation or binding properties of resumptive pronouns. Concretely, pronouns in a resumptive function are obligatorily coreferential with a proximate antecedent, whereas pronouns in other functions are not.

### 1.2.1. Binding Theory and Resumption

The deepest concern for anyone working on anaphora within the current Principles and Parameters framework is that we no longer have indices at our diposal, which were previously the pillar of defining conditions on binding. Given fairly recent postulates concerning conditions on representations and derivations, the original Government and Binding solutions to problems of anaphoric reference (that is, binding),

---

syntactic structure differs from the PF must be motivated by evidence beyond theory-internal requirements. If we claim that theory-internal arguments are in and of themselves sufficient for supporting claims about syntax, then nothing prevents us from proposing that all PF is accidental, thereby rendering all data irrelevant. In essence, while it is certainly acceptable to posit things that are not observable, the moment we begin to ignore the things that are observable, we can no longer call what we are doing *science*.

[20]Condition B: A pronoun must not be bound within its binding domain.

become impossible - the theoretical mechanisms previously used to solve those puzzles have become obsolete; the Inclusiveness Condition (Chomsky 1995:228), as will be discussed in greater detail below, rules those mechanisms out. And although G&B binding theory was not able to account for the full array of anaphoric data[21], Conditions A, B, and C (a basic definition of these under G&B can be found in footnote 21), covered a great deal of empirical ground. The task, then, has been to construct a set of conditions that is equally powerful as the one formulated under G&B but whose formal mechanics comply with the Inclusiveness Condition.

1.2.1.1. Binding Condition B as a Constraint on Interpretation
(Chomsky and Lasnik 1993, Chomsky 1993)

In 1993 Noam Chomsky and Howard Lasnik produced a re-analysis of the Binding Theory. One of the results of the paper was that they developed a version of Binding Theory that was compliant with a condition later introduced by Chomsky (1995),

[21]There is attested data from languages that are, in a sense, "immune" to binding condition violations, as formulated in G&B; that is :

A. an anaphor must be bound in domain D
B. a pronoun must not be bound in domain D
C. an R-expression must not be bound

The following are examples taken from Siewerska (2004) of violations of these conditions:
Condition A violation, long-distance binding of an anaphor in Gujarati (Mistry 2000: 353):

Raaj$_i$ Kišor$_j$ kamiTimaa pot-anne$_{i/j}$ nimše em lakhe che
Raj Kishor committee self-ACC will-appoint thus write AUX
'Raj writes that Kishor will appoint himself (either Raj or Kishor) to the committee'

This Gujarati sentence is ambiguous, because the anaphor may refer to either *Raj* or *Kishor*.

Condition B violation, binding of anaphor and pronoun in the same domain in Hausa (Newman 2000:524):

Tàlá tā gan tà / ga kântà à madûbîn
Tala past:3SGF see her / see herself in mirror
'Tala saw herself in the mirror.'

Although the verb takes different forms depending on whether the pronoun or the anaphor is used, there is no reason why the pronoun should be considered to be in a different domain from the anaphor.

Condition C violation, long-distance binding of an R-expression in Malayalam (Jayaseelam 2000:162)

Raaman paRañña Siita Raaman-e sneehikkunnu ennə
Raaman said Sita Raaman-ACC loves that
'Raaman said that Sita loves him$_{Raaman}$.'

While there have been various theories (e.g. Fiengo and May's (1994) proposal of Vehicle Change to rescue condition C violations) that help to account for some of the data observed, they are not comprehensive theories (i.e. they cannot account for the full array of data).

namely, the Inclusiveness Condition (where N is the numeration, and π and λ are the phonetic and logical levels of computation, respectively):

> Any structure formed by the computation (in particular π and λ) is constituted of elements already present in the lexical items already selected for N; no new objects are added in the course of the computation apart from rearrangements of lexical properties. (Chomsky 1995:228)

One inevitable result of this condition is that indices, which were once a crucial element in the definition of binding, are barred. The analysis of binding proposed by Chomsky and Lasnik (1993) does not include indices, and as pointed out by Freidin (1997), is "derivational in nature". It offers an alternative to conditions on binding and instead propose a series of interpretive procedures. These procedures are re-iterated and supported by Freidin (1997):

(a) If α is an anaphor, interpret it as coreferential with a c-commanding phrase in D.
(b) If α is a pronoun, interpret it as disjoint from every c-commanding phrase in D.
(c) If α is an r-expression, interpret it as disjoint from every c-commanding phrase.

As Freidin notes, these procedures alone are insufficient, as they will not account for the ungrammaticality of (27):

(27) * Mary expects John to like herself. (Freidin 1997)

Given only the interpretive procedures outlined above, there is no reason that *herself* and *John* should not corefer. Freidin, therefore, proposes an addendum to the procedures, namely that the anaphor must be interpreted with a c-commanding *antecedent* within domain D. Because the φ-features of *herself* and *John* do not match, specifically the

gender feature, there is no possible antecedent for *herself*. Therefore, the interpretive procedure cannot be completed, and the sentence is rendered uninterpretable.

Furthermore, Freidin observes that while the interpretive procedure (b) will account for one interpretation of sentence (28), given a CP domain, it does not offer any explanation as to the source of the interpretation in which *Mary* and *she* are coreferential.

(28) Mary thinks that she is clever. (Freidin 1997)

One possibility is to provide an addendum to the interpretive procedure, much like the one stated for (a). That is, one could revise the rule as:

(b) If α is a pronoun, interpret it as disjoint from every c-commanding phrase in D. If there is a non-c-commanding NP or a c-commanding NP outside of D, the pronoun may be interpreted as co-referential with that NP only if the NP is an eligible antecedent.

While this rule accounts for possible coreference of a pronoun and another NP within the sentence, it still does not account for the obligatory reference of resumptive pronouns. That is, there is no account of why resumptive pronouns *must* be interpreted as co-referential with the relative head.

1.2.1.2. The Internal Structure of Pronouns

Freidin and Vergnaud (2001) propose that the underlying representation of every definite pronoun is a definite description which includes both the gender, number, and person features (φ-features) of the NP to which the pronoun refers as well as an unpronounced NP element to which the pronoun refers. The general schema of the underlying representation of a pronoun is as follows:

i. [$_{DP}$ [+def] φ NP] (Freidin and ~~V~~ergnaud 2001: 653)

Both the φ-features and the silent NP of any given pronoun will be identified in the underlying representation, but while the NP does not proceed beyond Spell-Out to PF (but only towards LF), the φ-features are pronounced. Freidin and Vergnaud offer the following example of how their proposal functions (Freidin and Vergnaud 2001: 654):

ii. Mary thinks [$_{DP}$ [+def [3rd pers., sg., fem.] Mary]] ~~solv~~ed the problem.

iii. Mary thinks [$_{DP}$ [+def [3rd pers., sg., fem.] Clea]] ~~solv~~ed the problem.

In example (ii), the pronoun is interpreted as co-referential with the subject of the matrix clause, while in the other, the pronoun is interpreted as co-referential with some other NP external to the matrix clause. Thus, these two sentences, identical at PF, are distinct prior to Spell Out - one contains the NP *Mary* and the other contains the NP *Clea*. And only when the deleted NP is identical to the higher NP in *all* features (including phonetic features), can they share an interpretation. In fact, "there is an unstated assumption that Mary and ~~Mary~~ have the same interpretation" (Freidin, p.c. 2012). That is to say, in (ii), there is, in fact, a forced interpretation of the DP internal pronoun relating it to the matrix subject.[22]

[22]Although Freidin and Vergnaud do not explicitly state whether this model will also account for pronouns with split antecedents, there is no reason why it cannot be extended to include those pronouns.

Mary thought that Clea would build them a new dining table.

Mary thought that Clea would build [$_{DP}$ +def [3rd pers., pl.] ~~Mary~~, ~~Clea~~] a new dining table.

The only difference between this example and the previous ones is that the pronominal DP contains a set of referents, namely {Mary, Clea}.

In 2003, Cedric Boeckx advanced a theory of resumptive pronouns called the Big-DP analysis, which closely resembles this proposal made by Freidin and Vergnaud (2001) and which will be discussed in the following section.

## 1.3. Previous Analyses of Resumptive Pronouns

### 1.3.1. Some Early Analyses

Since the early 1980s, linguists have been trying to provide an analysis of the phenomenon of resumptive pronouns (Doron 1982, Sells 1984, Browne 1986, Erteschik-Shir 1992, and Shlonsky 1992 among others). Although their analyses were extremely useful in terms of defining the nature of the relationship between a resumptive pronoun and the relative heads (e.g. they are interpreted as the one and same), the mechanics of their derivations suffered from the same problems as early analyses of binding: they introduce new elements into the syntax as part of the computation.

Doron (1982) initially characterized resumptive pronouns as "overt traces". That is, they are traces that are substituted with pronouns by means of some syntactic rule. Some took the view that this substitution occurs as a last resort strategy to prevent the derivation from crashing (Shlonsky 1992). In these proposals, either the trace was left by an overt NP, namely the relative head (Doron), which raises out of its A-position, or it was left by a silent operator, following the Chomsky (1977) model of relative clauses.

The problem with these early analyses is that they relied on formal mechanisms, i.e. substitution of a trace by a pronoun, that are no longer viable. Assuming the Inclusiveness Condition, the existence of traces is impossible, as they are elements with specific syntacic properties that are generated during the course of the derivation.

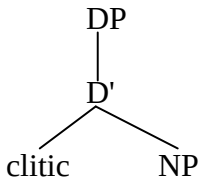
Furthermore, these early analyses used indices to stipulate co-reference between terms, and this was the unique mechanism whereby a resumptive pronoun would be interpreted as co-referential with the relative head. The use of indices is also problematic given our assumptions, as shown in section 1.2. The early analyses, while providing valuable insight into the nature of resumptive pronouns (e.g. their obligatorily coreference with the relative head), must be re-formulated in a way that conforms to current theoretical assumptions.

### 1.3.2. Boeckx (2003) and the Stranding Analysis

The analysis of resumptive pronouns that Boeckx (2003) presents is inspired by Sportiche's (1988) analysis of Quantifier Float, according to which a quantifier can surface at various levels in the derivation and in various positions with regard to the quantified N (e.g. *All the students left* versus *The students all left*). Sportiche's theory of how quantifier float arises is that the quantifier enters the derivation as a Q sister of the NP it quantifies; that is, *all the students* would be inserted into the syntax as a single constituent QP. The entire QP may then raise to higher phrasal positions to satisfy EPP requirements. Alternatively, the NP may raise out of the QP, thereby stranding the quantifier either in its original position or in any of the intermediate positions which it occupies. Boeckx suggests that resumption is derivationally analogous to Quantifier Float; the resumptive pronoun and the NP to which it refers are first merged to form a constituent. The antecedent NP then raises first to Spec-DP and subsequently to Spec of the relative CP, leaving the resumptive pronoun behind.

This proposal is similar to many earlier proposals, notably the analysis of clitic-doubling[23] first introduced by Kayne (1972) and subsequently adopted and reanalyzed by many scholars according to changing models of syntax (Torrego 1986, Uriagereka 1988, Cecchetto 2000, among others). The basic concept, however, remained the same: the clitic and the NP it refers to are initially in a sisterhood relationship in the derivation. Boeckx maintains Cechetto's (2000) analysis of the derivation of clitic doubling and extends it to handle resumption as well. In Cechetto's structural analysis, repeated below, the clitic and its sister NP are co-referential:

Diagram 8




This is identical to the structure proposed by Boeckx, except that instead of a clitic double, the resumptive pronoun is the determiner head. Then, in a process analogous to Sportiche's quantifier float, the NP is extracted from the DP whose head, the resumptive pronoun, is stranded. Thus the DP structure containing the resumptive pronoun ends up

[23] Clitic doubling occurs in many languages (e.g. Spanish, Macedonian, Albanian) in which a R-expression is "doubled" by a clitic pronominal form, as in the Macedonian example below:

Macedonian

| | | | | |
|---|---|---|---|---|
| **Ja** | pročitav | **kniga-ta** | za | volšebnik-ot. |
| **her**$_{\textbf{FEM.SG.ACC}}$ | I-read$_{\text{1ST.SG.AOR}}$ | **book**$_{\textbf{FEM.SG.}}$**-the**$_{\textbf{DEF.}}$ | about | wizard-the |

'I read (it) the book about the wizard.'

The direct object of V *pročitav*, meaning read, is *knigata*, meaning *the book*. In Macedonian, a definite direct or indirect object NP must additionally accompanied in the syntax by a clitic pronoun that matches it in all syntactic features. Thus, the clitic pronoun *ja* appears.

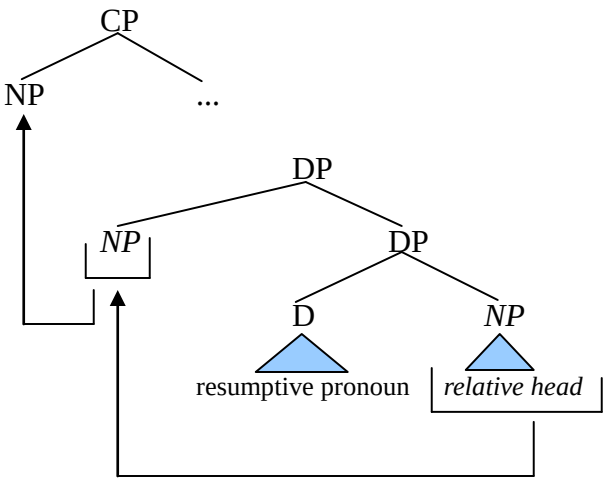
Steven Franks and Catherine Rudin (2005) offer an account for this phenomenon in Bulgarian. They propose that the DP is nested within another phrasal shell, namely a K(ase)P. The clitic pronoun is the head of KP and takes DP as its complement. The DP embedded within the KP is the associate of the clitic pronoun. While I restrict myself to a brief descriptive footnote here, I will return to the topic of clitic doubling in chapter 3.

looking very much like the DP structure of all definite pronouns proposed by Freidin and Vergnaud (2001):

(29) $[_{DP}$ [[resumptive pronoun] φ NP]]

Unlike the Freidin and Vergnaud proposal, however, the NP is not elided, but rather is raised out of the DP into another position higher in the clause. Boeckx's analysis of resumptives is tied to the Vergnaud-Kayne model of relative clauses; after the relative head NP has merged with the resumptive pronoun D, the resulting DP is merged into an A-position within the relative clause. The relative head NP is then extracted from the DP and raises first to Spec-DP and subsequently to Spec-CP of the relative clause.

Diagram 9[24]




Boeckx's proposal was highly influential, and since its publication, there has been wide acceptance that the resumptive pronoun is part of a larger phrase in which it is first merged with its co-referential NP. In nearly every subsequent generative analysis of resumptive pronouns, it has been assumed that they are initially merged with their

[24]Note, that the structure shown here is highly simplified. All of the intermediate nodes between the matrix relative clause CP and the DP containing the resumptive pronoun are omitted.

antecedents to form a structure that is then merged into the relative clause. Nevertheless, Boeckx's analysis does present some problems: 1) It does not offer a unified account of pronouns with resumptive pronouns; he treats resumptive pronouns as lexically distinct from ordinary pronouns. 2) Because it relies on the Vergnaud-Kayne analysis of relative clauses, it results in a case conflict for the relative head. 3) His analysis fails to provide an account of the optionality of resumptive pronouns[25].

While I adopt many elements of Boeckx's analysis (most significantly, his analysis of resumption as the stranding of a pronoun by its complement), I present an alternative to the structure that he proposes. The new analysis which I develop in the next chapter is rooted in three sources: 1) Boeckx's *resumption as stranding* theory, 2) the Sauerland matching model of relative clauses. 3) the pronominal structure proposed by Franks and Rudin (2005) in which the pronoun takes a DP complement headed by a definite determiner (see footnote 23).

[25]In some languages (e.g., Hebrew, B/C/S) resumptive pronouns are optional (i.e. they may or may not be pronounced) under certain conditions. This will be discussed further in Chapters 3 and 5.

# CHAPTER 2

# A NEW ANALYSIS OF CANONICAL RESUMPTIVE PRONOUNS

In this chapter I offer a new analysis of canonical resumptive pronouns, which incorporates many of the elements of previous analyses, namely a version of Sauerland's (2003) matching model of relative clauses, a modification of Boeckx's (2003) stranding analysis of resumptive pronouns, and the Franks and Rudin (2005) analysis of clitic doubling. However, my general approach differs from previous approaches in two crucial ways: First, I treat resumptive pronouns as no different from ordinary pronouns. The consequence of this assumption is twofold: I must develop a uniform structural analysis of pronouns as well as a unified theory of pronominal interpretation, both of which must extend to all instances of pronouns[26]. Second, I develop an analysis that not only formally describes the conditions under which resumptive pronouns may occur, but one that can predict their occurrence. In the following chapter my goal is to identify the source of resumption as well as some of the universal and parametric constraints on it.

## 2.1. Requirements on the Derivation

The syntactic analysis of canonical resumption presented in this chapter is structured to satisfy four specific derivational requirements. The first of these has to do with the status of clitic pronouns with respect to long-form pronouns. I argue that the two pronominal forms are, in fact, not distinct in their interpretation but only in terms of a feature that does not allow clitics to occur under phonological stress. Thus, the first requirement is that clitic pronouns must not occur in focus positions.

[26]This includes all three varieties of pronouns (clitic, deficient, and strong) identified in Cardinaletti and Starke (1999).

Furthermore, because I assume that resumptive pronouns and ordinary pronouns are simply different instantions of the same lexical item, they enter the derivation with the same set of syntacic features to check. One of these features is definiteness[27]. The second structural requirement, which will be discussed in 2.1.2, is that pronouns must check their [def] feature with another syntactic item (a definite N, a definite NP, or a definite DP). This means that definiteness is not a lexical primitive of pronouns, but like their φ-features, it is something obligatorily derived through checking relationships with other syntactic elements.

In section 2.1.2.1, I apply a diagnostic from Macedonian to show that the moved relative head within a relative clause is invariably definite. Although the relative head at PF may be indefinite, the moved phrase of the relative clause is always interpreted as definite. This leads to the conclusion that there are two distinct heads (as proposed by Sauerland 1998, 2003). The third structural requirement, then, is that there must be two distinct heads and that the internal head must be definite.

Finally, the fourth requirement, which will be discussed in Section 2.1.3, is that all personal pronouns, including those that are resumptive (i.e. stranded by movement), must be subject to the same lexical and interpretive rules. That is to say, while we distinguish resumptive pronouns from ordinary pronouns based on the syntactic configurations in which they appear, they are actually instances of the same lexical item, and thus the same binding criteria apply to them.

[27]I am intentionally leaving out the "generic" pronoun that can occasionally be found in English proverbs:

Let **him** who is without sin cast the first stone. (John 8:7)

This pronoun is actually different from both resumptive and ordinary personal pronouns. It essentially has the same meaning as *anyone*; it has no specific referent.

2.1.1. The Status of Clitic Pronouns

One robust generalization we find is that, in languages that have clitic pronominal forms, those are the forms that occur as resumptives[28]. While I do not make a distinction between resumptive pronouns and ordinary pronouns, clitic pronouns do differ from long-form pronouns in their syntactic features. Clitics have two features that set them apart from long-form pronouns: First, they cannot ocur under stress, and therefore they can never move into any focus position. Second, they have certain prosodic features that require them to be pronounced in a specific position in the linear sequence of the sentence. In Slavic, this is often the second position (also known as the Wackernagel position)[29]. I will assume that the clitic position is determined by a PF linearization rule (as in Richards 2002, Franks 2008).

Nevertheless, the interpretation of clitic pronouns is not distinctive, i.e. there is no evidence supporting any LF-legible feature besides focus that distinguishes clitic pronouns from their long-form counterparts. In most cases, they are interchangable[30]:

[28]It is not, however, the case that resumptive pronouns uniquely surface as clitics. In Hebrew, which has only one set of pronouns (that is, it does not have a distinct set of clitic pronominal forms), the ordinary form of the pronoun occurs:

Hebrew
Ha-ʔiš še- raʔiti ʔoto.
the-man that I-saw him
'the man that I saw (him)' (Shlonsky 1992)
I will address this data in section 2.2.

[29]What qualifies as second position in the linear sequence and the operation by which a clitic moves into that position are much debated topics among Slavists. As it is both a controversial question and one that is not immediately germane to my analysis, the details of clitic movement will not be included as part of this thesis.

[30]One general difference between clitic pronouns and long-form pronouns is that clitic pronouns must be bound; they can never occupy positions where a null pronoun could potentially occur. Long-form pronouns, on the other hand, are not necessarily bound. Montalbetti (1984) gives evidence that an overt pronoun cannot be bound if it occurs in a position that could be occupied by a null pronoun.

Slovene

(30) Ana pozna njega.
Ana$_{NOM.SG.FEM.}$ know$_{3rd.SG.PRES.}$ him$_{ACC.SG.MASC.}$

'Ana knows him.'

(31) Ana ga pozna.
Ana$_{NOM.SG.FEM.}$ him$_{ACC.SG.MASC.}$ know$_{3rd.SG.PRES.}$

'Ana knows him.'

Because clitic pronouns have a PF-feature that prohibits them from being stressed, they cannot occur in focus positions. On the other hand, long-form pronouns are used exclusively in focus positions[31]. That is, (30) and (31) differ from one another because the use of the long-form pronoun in (30) implies contrastive stress; Ana knows *him* and not someone else. Such contrastive focus is ruled out in (31).

One can then posit that the *only* feature setting clitics apart from long-form pronouns is that the latter have a [+foc] feature that causes them to move into focus positions. Clitic pronominal forms, on the other hand, have a [-foc] feature that prevents them from moving into focus positions. The second structural requirement amounts to a restriction on clitic pronouns prohibiting them from moving into focus positions.

[31]Prepositions also tend to take only the long-form of a pronoun as an object. The reason for this is that prepositions, like clitic pronominals, frequently do not bear stress. They form a single accentual unit with their object which is why the object must be an element that can bear stress. While a clitic pronominal cannot bear stress, a long-form pronominal can. That said, there are instances of the preposition bearing stress and forming an accentual unit with a clitic object pronoun, as in Slovene (data taken from a Slovene online magazine, www.zurnal24.si):

Mussomeli poziva Američane, naj glasujejo **za-nj**.
Mussomeli$_{NOM.SG.MASC.}$ calls Americans$_{ACC.PL.}$ in-order-that they-vote$_{3rd.PL.PRES.}$ for-him$_{ACC.SG.MASC.}$
'Mussomeli calls upon Americans to vote for him.'

The term *zanj* is the combination of the preposition *za*, meaning *for*, with a clitic form (*-nj*) of the pronoun *njega*, meaning *him*. Here, the stress is on the preposition, so it is able to host a clitic pronoun.

2.1.2. Checking Definiteness on the Pronoun

Freidin and Vergnaud (2001) postulate a [+def] feature which, when combined with a complete set of φ-features, spells out as a pronoun. Extending their proposal into a syntactic operation, I suggest that a pronoun must check its definiteness feature with another syntactic item. The second requirement on the structure is that personal pronouns (both clitic and long-form) must check their definiteness feature during the course of the derivation. They can either check this feature either with a definite NP (i.e. a proper name or a geographical name) or with definite Determiner (a definite article or a D-linked *wh*-word).

Diagram (10) illustrates a pronoun whose definiteness feature can be checked with a definite NP:

Diagram 10[32]

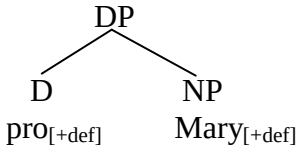
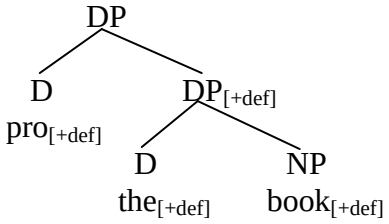



Diagram (11) shows the pronoun can check its definiteness feature against a definite DP:

Diagram 11




[32]One can argue that proper nouns are also DPs in which the head N moves into D, as claimed by Longobardi (1994), but this claim does not present any critical consequences on the theory proposed here.

Thus, the pronoun checks its definiteness through a sisterhood relationship with either NP or DP. Similary, it checks its φ-features with those of either its NP sister or the NP immediately dominated by its DP sister.

Under most conditions, the NP or DP sister of the pronoun is deleted. While this process, namely the deletion of the NP, is assumed to occur in Freidin and Vergnaud's proposal, the formal mechanics of the operation are not specified; rather they simply refer to the NP as a "silent NP component" (Freidin and Vergnaud 2001: 653) of the pronoun. I propose the following PF condition:

(32) Pronominal Associate Deletion: if $D^0$ is a personal pronoun and XP is a sister to $D^0$, then XP must be deleted.

Because this deletion is a PF operation, the NP/DP must still be a sister to the pronoun at PF. That is, if the associate raises to a position higher than the pronoun prior to Spell-Out, thereby stranding the pronoun (as per Boeckx 2003), this deletion operation cannot occur, and thus both the pronoun and the NP/DP with which it was first merged will be pronounced.

This is, in essence, the source of resumptive pronouns - they are simply ordinary pronouns whose internal NPs/DPs have raised into a higher projection.

2.1.2.1. The Definiteness of Relative Clause internal DPs: Evidence from Macedonian Clitic Doubling[33]

In the Vergnaud-Kayne analysis of relative clauses, the relative head first merges into the derivation as a bare NP without any determiner. The determiner that is eventually linearly adjacent to the relative head is actually a $D^0$ sister to the entire relative clause CP. This analysis of the syntax does not accurately reflect the fact that the gap within a relative clause is uniformly interpreted as definite.

The invariant definiteness of the relative clause gap can be shown by applying a diagnostic using data from Macedonian, which exhibits clitic doubling only for definite objects.

Macedonian

(33) Pročitav edna kniga od Petre Andreevski včera.
I-read$_{1st.SG.AOR.}$ a$_{ACC.SG.FEM.}$ book$_{ACC.SG.FEM.}$ by Petre Andreevski yesterday.
'I read a book by Petre Andreevski yesterday.'

*Edna* in (33) is an indefinite adjective[34], which takes scope over *kniga*. The NP *edna kniga* is the direct object of V *pročitav*.

Unlike most other Slavic languages (but much like English), Macedonian R-expressions do not inflect for case, but they are marked for definiteness by an enclitic article. When the direct object is definite, the sentence must include an additional clitic pronominal element - a clitic double of the direct object.

[33]In this section I do not provide an analysis of clitic doubling, only a description of the phenomenon. In the next chapter, I will address clitic doubling in detail, as it, too, is a case of resumption.
[34]NPs are automatically interpreted as indefinite in Macedonian, unless an NP is embedded in a DP headed by a definite $D^0$. I am assuming that *edna* is not a determiner but rather an indefinite adjective (see Dimitrova-Vulchanova and Giusti 1998: 357).

(34) *(Ja) pročitav kniga-ta od Petre Andreevski včera.
it$_{ACC.SG.FEM.}$ I-read$_{1st.SG.AOR.}$ book-the by Petre Andreevski yesterday.

'I read (it) the book by Petre Andreevski yesterday.'

The clitic *ja* matches the direct object *knigata* in φ-features but additionally exhibits case morphology; Macedonian, like English, shows morphological case only on pronouns. The clitic pronoun in (34) is obligatory, whereas in (33), a clitic double would be ungrammatical. The crucial difference is that in (33), the direct object is indefinite while in (34) it is definite. Clitic doubling only occurs in Macedonian when the object is definite. Therefore, we can use Macedonian as a test for the definiteness of an object by determining whether or not a clitic double is required[35].

(35) Na policata beše edna kniga, [$_{RC}$ što *(ja) napiša
on the-shelf was a$_{SG.FEM.}$ book$_{SG.FEM.}$ that it$_{ACC.SG.FEM.}$ wrote$_{3rd.SG.AOR.}$

Petre Andreeveski].
Petre Andreevski

'On the shelf there was a book that Petre Andreevski wrote (it).'

Sentence (35) contains a relative clause, whose relative head, *edna kniga*, is indefinite. However, there is an obligatory clitic within the relative clause that matches the relative head in φ-features, just as the clitic double in (34) matches the definite direct object in φ-features. Unlike in (34), however, the clitic differs from its overt antecedent, *kniga*, in its case. While *kniga* is nominative, the pronoun *ja* is accusative. Moreover, *kniga* is indefinite, and in Macedonian, indefinite objects cannot have clitic doubles. Thus, the pronoun *ja* must be the clitic double of the unpronounced direct object of *napiša*. If this unpronounced object were simply a copy of *edna kniga*, it would be indefinite, in which

[35]Many thanks to Steven Franks, who suggested this test for definiteness.

case, the unpronounced object of the V *napiša* could not have a clitic double. Because the clitic double is present in the relative clause, we can gather that its "associate" (Franks and Rudin 2005) must be definite. Therefore the object of the relative clause internal predicate must be distinct from the pronounced relative head, indicating that the Sauerland model of relative clauses is likely the correct one.

Heim (1987) provides independent evidence that the pronoun in (35) is definite. She shows that overt bound variable pronouns are always definite by running Milsark's (1977) Definiteness Restriction diagnostic[36]. She presents the following data as evidence:

(36) * Few people admitted that there had been them at the party.

(37) * No perfect relationship is such that there is it.

(Heim 1987)

Although their antecedents (i.e. *few people* and *no perfect relationship*) are indefinite, the overt bound variable pronouns are prohibited from following *there-be*. Similarly, in (35), while the apparent antecedent of *ja* is the indefinite NP *edna kniga*, the pronoun itself must be definite.

These data not only suggest that Sauerland's model in which there are two relative heads (one internal and one external) is correct, but furthermore, they reveal that the internal relative head must be definite regardless of the definiteness of the external head.

[36]The Definiteness Restriction prohibits definite NPs from occurring as the logical subject of existential sentences:

* There is the horse in the barn.

Definites will only work in these sentences when they are part of a pair-list series:

There is the horse in the barn and the chickens in the coop and the dogs in the yard.

### 2.1.3. The Interpretation of Resumptive Pronouns

The interpretive procedure for pronouns in Section 1.2.1.1 and restated below is a slightly revised version of the rule initially proposed by Chomsky and Lasnik (1993) and subsequently elaborated by Freidin (1997):

(b) If α is a pronoun, interpret it as disjoint from every c-commanding phrase in D. If there is a non-c-commanding NP or a c-commanding NP outside of D, the pronoun may be interpreted as co-referential with that NP only if the NP matches the pronoun in φ-features.

This rule (which is a re-formulation of Condition B), given a domain of CP, explains the interpretive relationships of pronouns in non-resumptive positions but falls short of explaining the obligatory interpretation of canonical resumptive pronouns as coreferential with the relative head; the interpretive rule (b) allows any pronoun to have arbitrary reference at the sentential level.

(38) $\text{Harry}_i$ thought $\text{Snape}_j$ saw $\text{him}_{i//*j/k}$ in the corridor.

In (38), the pronoun *him* may refer to *Harry*, but crucially cannot refer to *Snape*: *Snape* is within the CP domain of the pronoun and c-commands it, thus their co-reference would constitute a violation of the interpretive procedure (b). But the interpretation of the pronoun is nonetheless ambiguous; *him* could refer either to *Harry* or to some other individual not mentioned in the matrix clause (e.g. *Ron*), deriving its interpretation through discourse. A simple proof of this lies in the grammaticality of sentence (39).

(39) Harry$_{i}$ thought Snape$_{j}$ saw her$_{*i/*j/k}$ in the corridor.

Because there is a gender feature mismatch between the pronoun and its only available antecedent (i.e. *Harry*), the reference of the pronoun cannot be determined in the sentence but rather must depend on some element outside the matrix clause (i.e. in the discourse). Although the pronoun's reference cannot be determined sentence internally, (39) is nevertheless grammatical. This is precisely what we expect, given interpretive rule (b).

In sharp contrast to the free interpretation of ordinary pronouns, canonical resumptive pronouns are *obligatorily bound by the relative head* and thus cannot refer to any other potential antecedent.

Slovene

(40) Študent$_{\mathbf{i}}$ je videl profesorja$_{\mathbf{j}}$, ki so
student$_{NOM.SG.MASC.}$ AUX$_{3rd.SG.}$ saw$_{PAST.SG.MASC..}$ professor$_{ACC.SG.MASC.}$ that AUX$_{3rd.PL}$

**mu**$_{\mathbf{*i/j/*k}}$ dali nagrado.
him$_{DAT.SG.MASC.}$ gave$_{PAST.PL.}$ award$_{ACC.SG.FEM.}$

'The student saw the professor that they gave the award to (him).'

It is impossible for the dative pronoun *mu* in the relative clause in (40) to refer to any individual other than the *professor*. The pronoun cannot refer to the student, even though they share the same φ-features and therefore could potentially be co-referential under other circumstances.[37] The pronoun is also unable to refer to some other individual

[37] Študent$_{\mathbf{i}}$ je videl profesorja$_{\mathbf{j}}$, ki **mu**$_{\mathbf{i/j/k}}$ je
student$_{NOM.SG.MASC.}$ AUX$_{3rd.SG.}$ saw$_{PAST.SG.MASC.}$ professor$_{ACC.SG.MASC.}$ that him$_{DAT.SG.MASC.}$ AUX$_{3rd.SG}$.
dal nagrado.
gave$_{PAST.SG.MASC.}$ award$_{ACC.SG.FEM.}$
'The student saw the professor that he$_{(student)}$ gave the award to.'
'The student saw the professor that he$_{(discourse)}$ gave the award to.'
'The student saw the professor who gave him$_{(student)}$ the award.'
'The student saw the professor who gave him$_{(discourse)}$ the award.'

mentioned in the discourse, as illustrated by the absence of any interpretation of the pronoun in (41).

(41) * Študent$_{\mathbf{i}}$ je videl profesorja$_{\mathbf{j}}$, ki so
student$_{\text{NOM.SG.MASC.}}$ AUX$_{\text{3rd.SG.}}$ saw$_{\text{PAST.SG.MASC.}}$ professor$_{\text{ACC.SG.MASC.}}$ that AUX$_{\text{3rd.PL.}}$

ji$_{\mathbf{*i/*j/*k}}$ dali nagrado.
her$_{\text{DAT.SG.FEM}}$ gave$_{\text{PAST.PL.}}$ award$_{\text{ACC.SG.FEM.}}$

'The student$_{\text{(male)}}$ saw the professor$_{\text{(male)}}$ that they gave the award to (her).'

Sentence (41) stands in stark contrast to (39), in which none of the NPs within the matrix clause is an eligible antecedent of the pronoun but which is nevertheless grammatical because the pronoun can refer to some individual mentioned previously in the discourse. There is no possible interpretation of (41): the absence of a potential antecedent in the clause renders the sentence ungrammatical. However, even the presence of another potential antecedent NP (i.e., possessing matching φ-features) in the clause will not repair the sentence, if that potential antecedent is not in the position of the relative head.

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In the example above, it is possible for the dative pronoun, *mu*, to take *študent* as its antecedent. In fact, this sentence is ambiguous between four potential readings; one in which the student gave the professor a reward, one in which some other person X (presumably identified in the discourse) have the professor the award, one in which the student is the recipent of the award given by the professor, the other in which some other person X (presumably identified in the disccourse) is the recipient of the award given by the professor.

The source of this ambiguity is that the dative pronoun *mu* could either be a resumptive pronoun (that is, a pronoun that has been stranded) or an ordinary pronoun. Slovene is a subject pro-drop language and resumptive pronouns never surface in subject position. Thus, it is unclear whether it is the dative object being relativized and the subject is simply null due to the subject-pro drop nature of Slovene or whether it is the subject that is being relativized and the dative object is simly an ordinary (i.e. non-resumptive) pronoun.

(42) * Študentka$_{\mathbf{i}}$ je videla profesorja$_{\mathbf{j}}$, ki so
student$_{\text{NOM.SG.FEM.}}$ AUX$_{\text{3rd.SG.}}$ saw$_{\text{PAST.SG.FEM.}}$ professor$_{\text{ACC.SG.MASC.}}$ that AUX$_{\text{3rd.PL.}}$

her$_{\text{DAT.SG.FEM.}}$ gave$_{\text{PAST.PL.}}$ award$_{\text{ACC.SG.FEM.}}$
ji$_{\mathbf{*i/*j/*k}}$ dali nagrado.

'The student$_{\text{(female)}}$ saw the professor$_{\text{(male)}}$ that they gave the award to (her).'

If a feature mismatch prevents co-reference between the resumptive pronoun and the relative head, the resulting sentence is ungrammatical because a canonical resumptive pronoun invariably refers to the relative head.

Furthermore, a resumptive pronoun cannot be bound by a split antecedent, even if the relative head is part of that antecedent. Consider the contrast between (43) and (44) below.

Slovene

(43) Irina$_{\text{i}}$ je povedala Jožetu$_{\text{j}}$, da njeni$_{\text{i}}$ starši
Irina$_{\text{NOM.SG.FEM.}}$ AUX$_{\text{3rd.SG.}}$ told$_{\text{SG.FEM.PAST.}}$ Jože$_{\text{DAT.SG.MASC.}}$ that her parents$_{\text{NOM.PL.}}$

so jima$_{\text{i+j}}$ prepovedali živeti skupaj.
AUX$_{\text{3rd.PL.}}$ them$_{\text{3rd.DAT.DU.}}$ forbid$_{\text{PL.PAST.}}$ to-live together

'Irina$_{\text{i}}$ told Jože$_{\text{j}}$ that her$_{\text{i}}$ parents forbid them$_{\text{i+j}}$ to live together.'

The pronoun in the subordinate clause in (43), *jima*, can take both the subject and the dative object of the matrix clause together as its antecedent: the antecedent of the *jima* is the non-contiguous pair {Irina, Jože}. This is evident from the form of the pronoun, which indicates a Dual number.

(44) * Irina$_i$ ima-rada človeka$_j$, ki so jima$_{i+j}$ njeni$_i$
Irina$_{NOM.SG.FEM.}$ loves man$_{ACC.SG.MASC.}$ that AUX$_{3rd.PL.}$ them$_{3rd.DAT.DU.}$ her

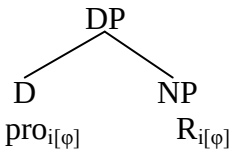
starši prepovedali živeti skupaj.
parents$_{NOM.PL.}$ forbid$_{PL.PAST.}$ to-live together

'Irina$_i$ loves the man$_j$ that her$_i$ parents forbid them$_{i+j}$ to live together.'

In (44) the relative clause internal canonical resumptive pronoun cannot be anaphoric on a non-contiguous antecedent; it can take only the relative head as its antecedent. A natural question to ask given these data is how it will possible to account for the restriction prohibiting split antecedents of resumptive pronouns while allowing split antecedents generally. This question will be addressed in Section 2.2.4. But we must first address a related question, namely, how to account for the obligatory reference between the resumptive pronoun and the relative head.

If we adopt Boeckx's (2003) proposal that a pronoun's referent is an NP internal to the DP headed by the pronoun, we can propose that a pronoun must be interpreted as co-referential with the
NP internal to the DP headed by the pronoun.

Diagram 12




In this structure, *pro* represents any personal pronoun and *R* is an R-expression. Whereas Boeckx posits this structure exclusively for resumptive clitic pronouns, I follow the idea proposed by Freidin and Vergnaud (2001) that the referent NP is part of the underlying

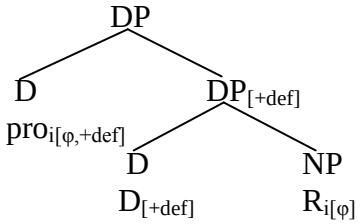
structure of every definite pronoun. Freidin and Vergnaud (2001:654) furthermore propose that "the unpronounced NP component of the pronoun determines its interpretation". Because I have extended their proposal into a syntactic procedure, I must provide a formal condition accounting for the interpretation of the pronoun.

I propose the following LF condition:

(45) Pronominal Reference Condition: In $DP^{MAX}$ whose $D^0$ is a pronoun, interpret $D^0$ as co-referential with the NP also dominated by $DP^{MAX}$.

This will also account for the interpretation of pronouns that have a DP sister[38], as in diagram (11) in section 2.1.2, repeated below:

Diagram 11




As the derivation proceeds, there may be another element merged into the derivation possessing the same interpretation as the pronoun and its coreferential NP, thus giving the coreferential interpretation of sentence (28), repeated here:

(28) $Mary_i$ thinks that $she_{(Mary)i}$ is clever.

[38]Because the Pronominal Reference Condition applies at LF, if the internal DP of the structure shown here raises to a higher position prior to Spell-Out, it is the copy of NP that gives the pronoun its reference.

Alternatively, there may be no other element in the derivation possessing the same interpretation as the pronoun, as in example (39). So long as any phrase that *does* share the same interpretation as the pronoun does not c-command the pronoun within the CP domain, no aspect of the interpretive rule (b) is violated.

Thus one of the constraints on the derivation in which canonical resumption occurs is that the relative head, with which the resumptive pronoun is interpreted as coreferential, must be in a position where it either does not c-command the pronoun or where it is outside of the relative CP. This falls out naturally from Sauerland's matching model of relative clauses; the external head is merged outside of the relative CP, allowing it to be interpreted as co-referential with the relative-CP-internal pronoun. What forces this coreference, however, is the following general condition on relative clauses: the external head must be the antecedent of the internal head (Sauerland 2003).

## 2.2. A New Analysis

### 2.2.1 The Structure of the Relative Clause and the Structure of the Pronoun

#### 2.2.1.1. The Matching Model

As shown in chapter 1, the matching model of relative clauses proposed by Sauerland (1998, 2003) is essentially a hybrid of the two earlier models (the Vergnaud-Kayne raising analysis and the Chomsky adjunction analysis). But since it employs facets of both, it has many advantages over each of those individual analyses. It was also shown above that an analysis in which there are two heads, one external and one internal to the relative clause, accounts for a larger set of data.

By employing Sauerland's matching model, we need not stipulate ancillary interpretive rules applying uniquely to resumptive pronouns. They can be interpreted

according to condition (b) just as an ordinary pronoun, as will be shown in section 2.2.2. In addition, Sauerland's model provides a means to account for a possible difference in definiteness between the internal relative head and the external relative head.

Therefore, for the new analysis proposed here, I will adopt Sauerland's matching model, in which there are two heads. I make only one adjustment to his theory: whereas Sauerland (2003) simply states that the external relative head must be the antecedent of the internal relative head and that the internal relative head must be deleted, I provide a more specific rule by which this deletion applies.

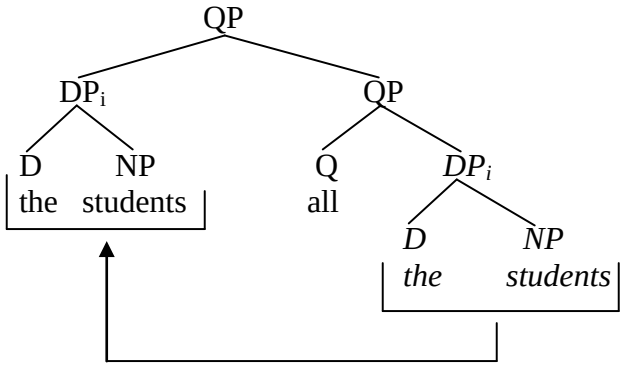
(46) Relative Deletion (slightly altered): In relative clauses, the internal head must take the external head as its antecedent. Any lexical item in Spec-CP of the relative clause that takes the external head as an antecedent must be deleted.

2.2.1.2. The Stacked-DP Pronoun Structure

In section 2.1.2, I presented two configurations in which a pronoun may occur: in one, there is a D pronoun whose sister is an NP and in the other the D pronoun is the head of one DP which immediately dominates another definite DP. It is only the second of these configurations, which I call a *stacked-DP*, that can give rise to resumptive pronouns[39]. Resumption, which is simply another way of saying *the stranding of a pronoun by its internal DP*, can only occur in this (i.e. stacked-DP) configuration, because an NP cannot raise out of the minimal DP in which it is embedded. That is, an NP cannot strand its determiner. Consider again the derivation of Quantifier Float.

[39]This analysis of the resumptive pronoun is similar to the KP analysis of Macedonian clitic doubling proposed in Franks and Rudin (2005). The primary difference is that in my analysis, there is no head K(ase) designated specifically for clitic pronouns; all pronouns are D and clitics are unexceptional.

Diagram 12




The DP *the students* moves into the Spec-QP, giving the surface word order *the students all*. It is impossible, however, for the NP to move into the Spec-QP stranding the determiner, which would give **students all the*. The NP must pied-pipe the determiner with it into the higher phrase. It is, however, possible to extract a DP from within another DP, in much the same way as the DP is extracted from QP in Quantifier Float.

In both ancient and modern Greek there are instances of DP-stacking[40]. The following is a famous example from ancient Greek, in which the $N^0$ occurs between a definite article and a demonstrative, both of which agree with the $N^0$ in accusative case.

Ancient Greek[41]

(47) ouk oida ton anthrōpon touton
not I-know $the_{ACC.SG.MASC.}$ $man_{ACC.SG.MASC.}$ $this_{ACC.SG.MASC.}$

'I do not know this man. '

(Apostle Peter's denial of Christ, Ioannes Damscenus, fragmenta e cod. Vat. gr. 1236)

[40]This is following Panagiotidis (2000), who proposes that demonstratives are, in fact, $D^0$ heads and that they may have some further internal structure (i.e. they may constitute a simplex DP), arguing against earlier theories (e.g. Stavrou and Horrocks (1989), among others) that the demonstrative occupies Spec-DP. But while Panagiotidis allows for the possibility that the demonstrative could be a full phrase, I propose that it is a head.

[41]Many thanks to Jozef Müller for the ancient Greek data.

Below are examples of DP-stacking in Modern Greek.

Modern Greek[42]

(48) to vivlio
the book

'the book'

(49) auto to vivlio
this the book

'this book'

(50) *auto vivlio
this book

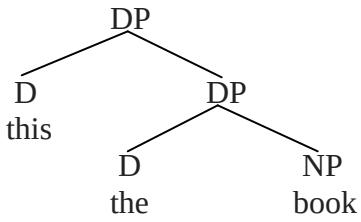
‘this book’

(51) *vivlio auto
book this

‘this book’

(48) shows that not all Greek DPs are stacked DPs. However, as illustrated by ungrammaticality of (50) and (51), Greek demonstrative determiners obligatorily cooccur with a definite determiner. Thus, Greek requires that determiner D heads be merged with another D. This occurs for the same reason that a pronoun D must be merged with another D: to check a feature. While Panagiotidis (2000) suggests this feature is [ref], I suggest that it is the definiteness feature, [def], that must be checked. Diagram (13) shows the structure of sentence (49):

Diagram 13

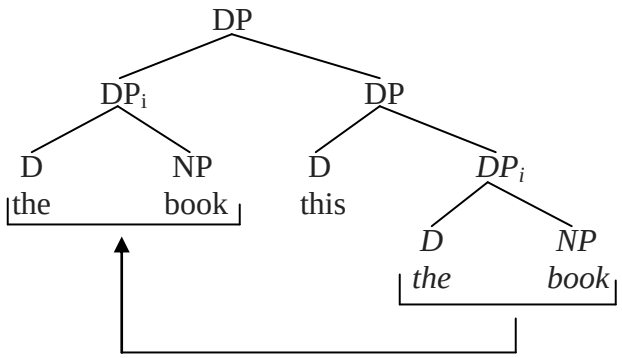



Once the demonstrative checks its features with the internal D head, the entire internal DP can then raise into the Spec position of the higher DP headed by D *this*. This

[42]Many thanks to Phoevos Panagiotidis and Pavlos Avlamis for the modern Greek data and judgements.

movement operation is analogous to what we find in Quantifier Float and results in the structure in diagram (14).

Diagram 14




The definite article followed by the NP followed by the demonstrative is an attested sequence in modern Greek (see (52)) as well as ancient Greek (see (47)).

(52) to vivlio auto
the book this

'this book'

Thus, the structure I suggest for pronouns is not unique; DP-stacking occurs in several languages (e.g. Greek, Macedonian, Hungarian) under other conditions as well.

The movement of the embedded DP is crucial in the analysis of resumptive pronouns, because it strands the pronoun, thereby forcing both the pronoun as well as the moved DP to be pronounced (i.e., eliminating the conditions under which Pronominal Associate Deletion may apply).

2.2.1.3. Languages with and without Canonical Resumption

The analysis of resumptive pronouns I have outlined above reduces the differences between languages with and without resumption to a single parametric difference: if the internal DP of a stacked-DP can move independently, the language will have resumptive pronouns. If the internal DP must pied-pipe the pronoun, the language will not have resumptive pronouns. Given this generalization, there is no reason to posit additional differences between relative clauses in languages with and without resumptive pronouns. I suggest that cross-linguistically the relativized object is a pronoun whose sister contains the internal head of the relative clause. Thus, some languages will exhibit canonical resumption and others will not, depending only upon the parametric difference of internal-DP movement versus pied-piping[43].

2.2.1.4. Island Effects

This movement analysis of resumptive pronouns inevitably raises questions pertaining to the consequences of this movement from within an island. One would predict that the presence of a resumptive pronoun at the origin site of a movement operation would have no effect on any island violation resulting from that movement. In other words, if a movement operation constitutes an island violation (thereby producing an ungrammatical sentence), then the presence of a resumptive pronoun stranded by that movement should not ameliorate those island effects.

[43]It is not necessarily the case that all languages whose internal DP is independently mobile (i.e. languages in which resumption is possible) will show the same overt stacking of determiners that occurs in Greek. In many languages, the combination of a demonstrative and an article is ruled out for reasons independent of structural constraints (e.g. rules relating to parsimony: the demonstrative automatically conveys definiteness, so an additional definite determiner is redundant).

Likewise, a language that has overt stacked-DPs will not necessarily have resumptive pronouns, if the internal DP in that language is not independently mobile (this will be shown explicitly in section 2.3.1.1.)

In some languages, such as B/C/S, this prediction proves correct: an island violation (weak or strong) cannot be remedied by the presence of a resumptive pronoun.

(53) * Čovek, koga se sećam gde
man$_{NOM.SG.MASC.}$ whom$_{ACC.SG.MASC.}$ REFL remember$_{1st.SG.PRES.}$ where

sam upoznala.
AUX$_{1st.SG.PRES.}$ met$_{SG.PAST.FEM.}$

'the man whom I remember where I met him'

(54) * Čovek što se sećam gde sam
man$_{NOM.SG.MASC.}$ that REFL remember$_{1st.SG.PRES.}$ where AUX$_{1st.SG.PRES.}$

ga upoznala.
him$_{ACC.SG.MASC.}$ met$_{SG.PAST.FEM.}$

'the man that I remember where I met him' (Boeckx 2003)

Both of these sentences contain a *wh*-island from which, according to the analysis I have presented, the internal relative head must raise. In sentence (53), the DP containing the $D^0$ *koga* and the internal relative head raises past the *wh*-phrase *gde* to Spec-CP of the relative clause. This movement constitutes a *wh*-island violation, and the sentence is thus ungrammatical. An identical movement operation occurs in sentence (54), only the moved elements differ: the DP containing a null $D^0$ operator and the internal relative head raises to Spec-CP. As predicted, this movement, too, constitutes a *wh*-island violation.

In many other languages, however, the prediction does not hold. While movement out of an island by a DP headed by an overt $D^0$ results in an island violation, the same movement made by a DP headed by a PF-null $D^0$ (and the subsequent stranding of a resumptive pronoun) will be grammatical. Consider the following Slovak data:

(55) * Človek, ktorého si spomínam kde
man$_{NOM.SG.MASC.}$ whom$_{ACC.SG.MASC.}$ REFL remember$_{1st.SG.PRES.}$ where

som stretol.
AUX$_{1ST.SG.PRES.}$ met$_{SG.PAST.MASC.}$

'the man which I now remember where I met'

(56) Človek, čo si spomínam kde som
man$_{NOM.SG.MASC.}$ that REFL remember$_{1st.SG.PRES.}$ where AUX$_{1ST.SG.PRES.}$

ho stretol
him$_{ACC.SG.MASC.}$ met$_{SG.PAST.MASC.}$

'the man that I remember where I met him'

Boeckx (2003) examines this question in great detail and presents a varied array of relevant empirical data. While in some languages, all movement out of islands results in ungrammatical sentences, in others island violations appear to be ameliorated by the presence of a resumptive pronoun. Furthermore, Boeckx shows that some languages can rescue certain island violations (weak islands) by the introduction of a resumptive pronoun while strong island violations will result in an ungrammatical sentence regardless of the presence of a resumptive pronoun.

Boeckx's solution to this complex problem is to tease apart two syntactic operations, namely Match and Agree. His proposal, put very simply, is that resumptive chains are the result of a Match operation, and chains created by means of Match are impervious to island conditions. Chains built on the Agree operation, on the other hand, are island-sensitive. Boeckx is quick to point out that in some languages (e.g. B/C/S), resumptive chains involve Agree, and therefore those chains will be island-sensitive. In many ways, his proposal is unsatisfactory, since the distinction he draws between

resumptive and non-resumptive chains is, at its core, simply a descriptive device; there is nothing beyond the data he is attempting to explain to support the existence of such a distinction.

The empirical data are varied with respect to resumption in islands. Languages do not behave uniformly. While Boeckx's proposal may not be correct, he does illustrate that "a pluralistic approach" (Boeckx 2003) is required and that any analysis of resumption will have to contend with the broad variations in the data related to islands (i.e. a non-movement approach to resumption would have to provide some explanation for the island-effects in B/C/S resumptive relatives). Thus, while there is still no clear account of how islands may be affected by the presence of a resumptive pronoun, it is evident that a movement analysis of resumption is no weaker than a non-movement analysis based on the island-effects alone.

### 2.2.2. Derivations of Canonical Resumption

In this section I present derivations based on the new analysis of resumptive pronouns outlined above and following Sauerland's matching model of relative clauses. I present these derivations to demonstrate how they comply with the structural requirements noted in section 2.1 and how they account for the data.

#### 2.2.2.1. Bosnian/Croatian/Serbian: Feature-checking and Licensing Co-reference

Diagram (15) reflects the Spell-Out syntax of sentence (1), repeated below.

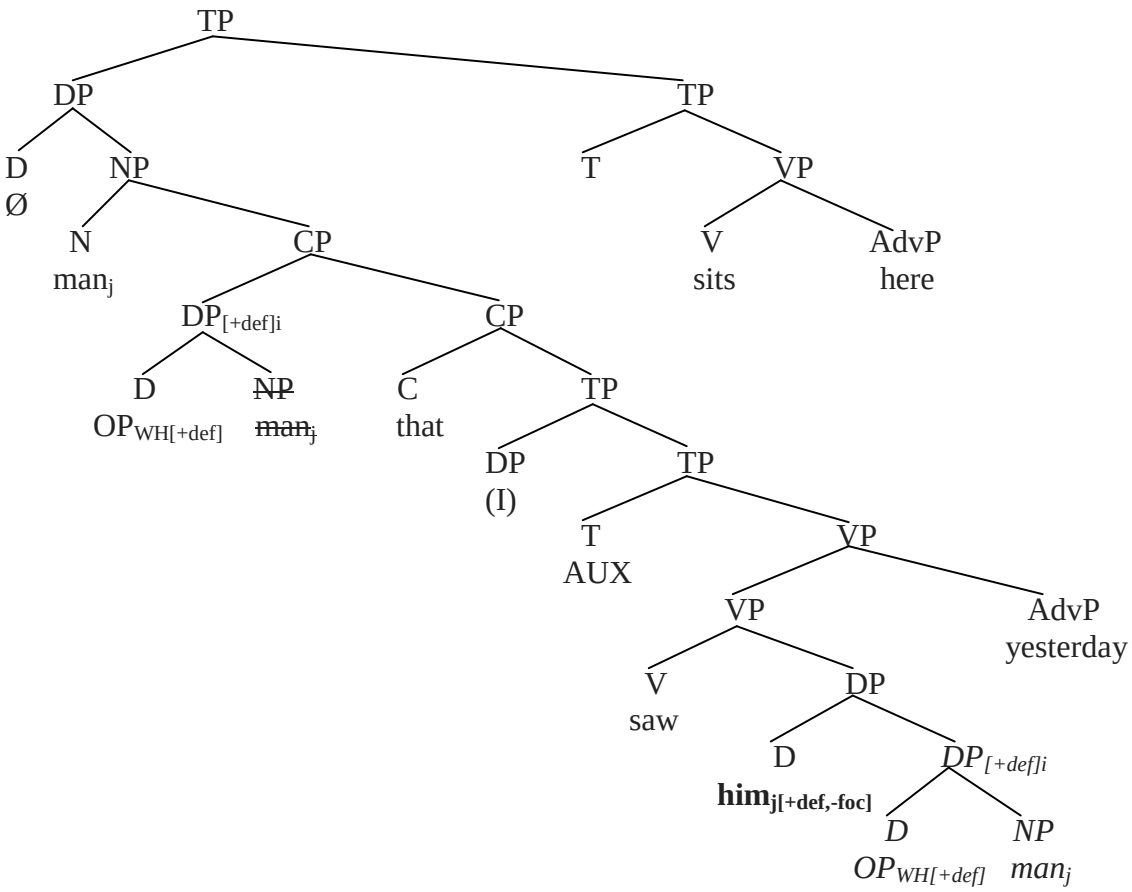
Bosnian/Croatian/Serbian

(1) Čovjek [$_{RC}$ što sam ga vidio juče ]
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ him$_{ACC.SG.MASC.}$ saw$_{MASC.SG.PAST.}$ yesterday

sjedi ovdje.
sits here

'The man that I saw (him) yesterday is sitting here.'

Diagram 15




The NP *man* first merges with a silent *wh*-operator definite determiner. The resulting [+def] DP is then merged with the pronoun D *him*, thereby creating a stacked DP. The pronominal D$^0$ then checks its definiteness feature with its sister DP. The stacked

DP then merges with V *saw*, which checks accusative case on its DP object. The VP then merges with an adjunct AdvP, creating the maximal VP, which then merges with the auxiliary. Subsequently the DP subject merges and then the complementizer, *that*, merges.

Once $C^0$ *that* merges, a feature on C, presumably a [wh] or [foc] feature that needs to be checked, causes the DP sister of the pronoun (i.e. the internal DP of the stacked DP) to raise into Spec-CP. The stacked DP itself cannot move to Spec-CP because it is headed by a [-foc] clitic pronoun. The [-foc] feature of the head is inherited by the phrase (via feature spreading / percolation (see Babby 1986, Franks 1995)), thus the DP headed by the clitic is also [-foc]. The stacked DP, being marked [-foc], cannot move into focus positions. Because Spec-CP is a focus position, the [-foc] DP headed by the clitic pronoun is not eligible to move into it. It is only the internal DP headed by a *wh*-operator that can raise into Spec-CP.

Once the DP containing the *wh*-operator and the internal head raise and merge into Spec-CP, the external head $N^0$ is merged with the relative clause CP. It is at this point that Relative Deletion (as in Sauerland 2003) applies, i.e., the internal head, being an item in Spec-CP (thus visible to the higher phase) that takes the external head as an antecedent, is obligatorily deleted. This gives us the Spell-Out syntax shown in the derivation above. At PF, the clitic moves into its dedicated position (the second, or Wackernagel, position in many languages). This results in the correct PF word order, with the pronominal clitic immediately following the verbal auxiliary clitic.

All the binding criteria are also satisfied. The external head N *man* is merged in a position outside of the relative clause CP containing the pronoun *him*. Thus, the

interpretation of the pronoun *him* as co-referential with *man* does not violate interpretive rule (b), which states that a pronoun may not be interpreted as co-referential with a c-commanding phrase within D. And, following Sauerland (2003), the co-reference between the internal head and the external head is obligatory as a condition on relative clauses.

Finally, looking at the movement operation, one may expect to find Strong Crossover effects, given that the a co-referential NP raises from a position lower in the derivation to a position higher in the derivation, with respect to the pronoun. The movement described here, however, is not movement *past* the position of pronoun, but rather extraction from the pronominal DP, and therefore it does not precipitate a crossover effect.

2.2.2.2. Hebrew: A Case of Optional Resumption

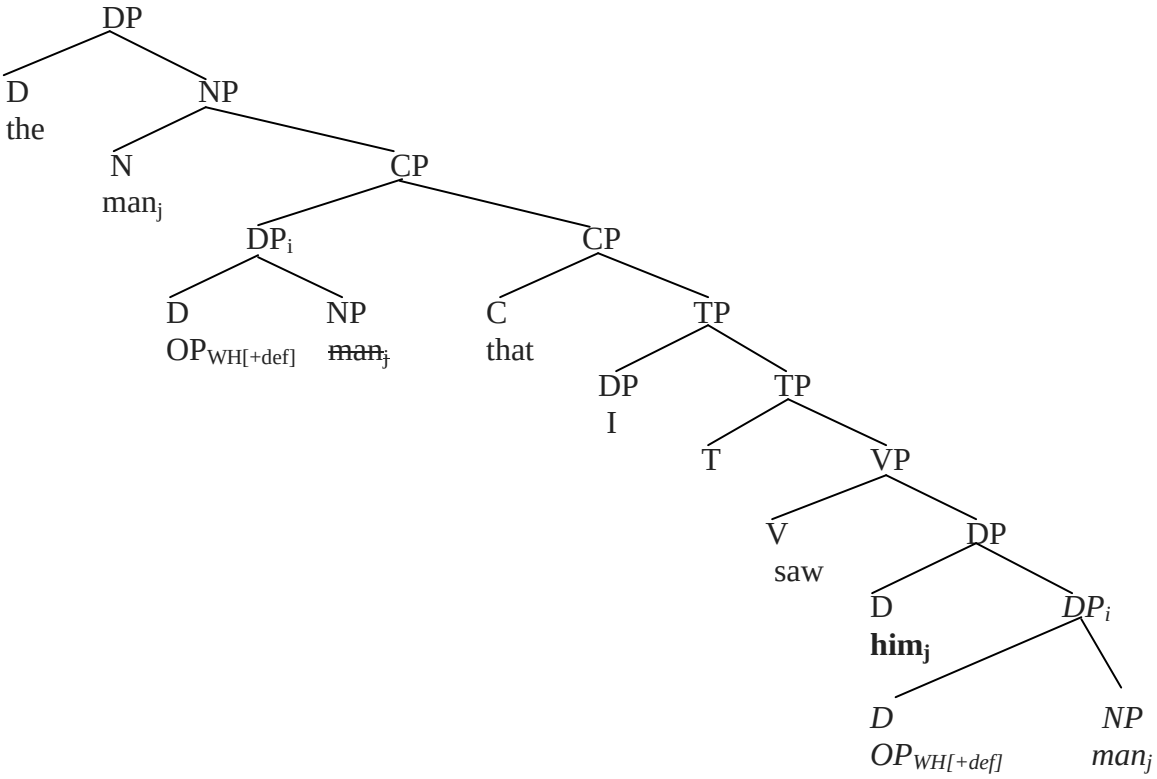
Diagram (16) represents the structure of the relative clause DP in example (57) at Spell-Out.

Hebrew

(57) Ha-ʔiš še- raʔiti ʔoto.
the-man that I-saw him

'the man that I saw (him)' (Shlonsky 1992)

Diagram 16

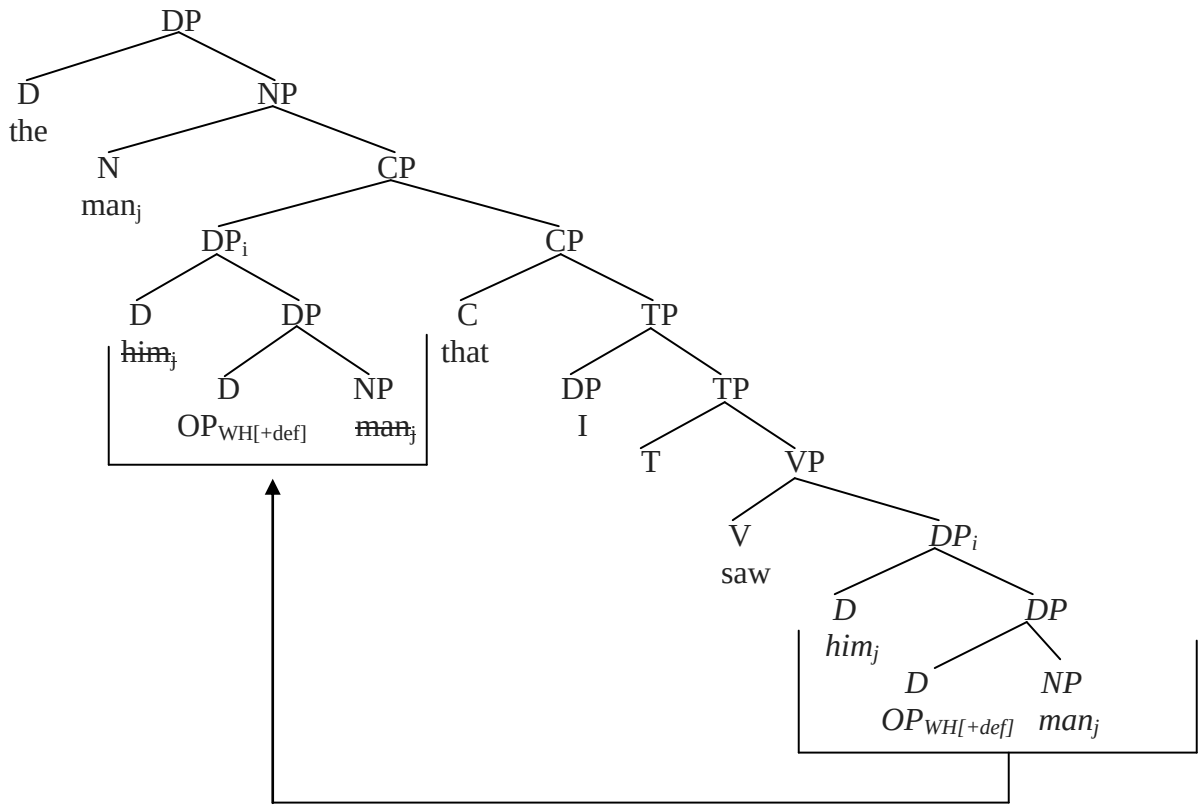



With the exception of the AdvP (which is present in (1) and absent in (57)[44]), the structure of the relative clause in (57) is identical to that of the relative clause in (1). The only significant difference between them is that the Hebrew pronoun is not a clitic form. Unlike B/C/S, Hebrew does not have distinct [+foc] and [-foc] pronominal forms; it has no pronominal clitics and its pronouns are unspecified for focus. This means that there is no special feature on the pronoun prohibiting it from moving into Spec-CP. The question this inevitably raises is: why, in Hebrew, does the movement of the internal DP (motivated by the [+wh] feature on the operator) not also pied-pipe the pronoun into Spec-CP? The answer is that it can. That is, in Hebrew, either the internal DP can move

[44]The presence or absence of the AdvP is inconsequential to the structure of the relative clause.

into Spec-CP or the entire stacked DP can move into Spec-CP. Consider the following derivation:

Diagram 17




If the entire stacked DP moves into the Spec-CP, we would expect, given the revised definition of Relative Deletion (as stated in (46)), that both the pronoun *him* as well as the NP *man* will be deleted. The pronoun is bound by the external relative head; the two are interpreted as co-referential. The operation of Relative Deletion specifies that any element in Spec-CP (and therefore visible to the higher phase) that takes the external relative head as an antecedent is obligatorily deleted. In this derivation, this operation will force the deletion not only of the internal relative head but also of the pronoun *him*. This yields the surface word order:

(57a) Ha-ʔiš še- raʔiti
the-man that I-saw

'the man that I saw' (Shlonsky 1992)

(57a) is, in fact, entirely grammatical: the resumptive pronoun is optional in Hebrew. Given my analysis, this optionality is predictable. If the internal DP moves, there is a stranded (resumptive) pronoun that is pronounced. If the stacked-DP moves, the pronoun is obligatorily deleted, so there is no resumptive pronoun.

This is the fundamental parametric difference between languages that contain resumptive pronouns and those that do not. If the internal DP can move independently of the stacked DP to a higher projection, then it strands the pronoun, making it a *resumptive* pronoun. If, on the other hand, the internal DP must pied-pipe the pronoun to the higher projection, then the pronoun is ultimately deleted under Relative Deletion.

2.2.2.3. Slovene: A Case of "Clitics Only" Resumption

In this section, we explore an issue that arises in all languages that have specialized clitic forms of pronouns. The data show that long form pronouns in languages that also have clitic forms are never canonical resumptive pronouns. Thus, in Slovene, (unlike Hebrew, which does not have distinct clitic forms), canonical resumptive pronouns are always clitics. The question, then, is *why* the long form pronoun cannot occur as a canonical resumptive, i.e., why is (58) grammatical while (59) is ungrammatical?

(58) Človek, ki sem ga videla prihaja.
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ him$_{ACC.SG.MASC}$ saw$_{SG.FEM.PAST}$ is-coming$_{3rd.SG.PRES.}$

'The man that I saw is coming.'

(59) *Človek, ki sem njega videla prihaja.
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ him$_{ACC.SG.MASC}$ saw$_{SG.FEM.PAST}$ is-coming$_{3rd.SG.PRES.}$

'The man that I saw is coming.'

Given the DP-stacking analysis of pronouns, there is no obvious reason why the long-form pronoun cannot be stranded. If we assume that there is only one feature distinguishing the clitic from the long-form pronoun, namely the focus feature, then that feature must be responsible for the difference in grammaticality between (58) and (59). In other words, the reason that only clitic pronouns can be stranded must relate to the [-foc] feature that is inherent in clitics.

Consider the Slovene data (30) and (31) from section 2.1.1, repeated here as (60) and (61):

Slovene

(60) Ana pozna njega.
Ana$_{NOM.SG.FEM.}$ know$_{3rd.SG.PRES.}$ him$_{ACC.SG.MASC.}$

'Ana knows him.'

(61) Ana ga pozna
Ana$_{NOM.SG.FEM.}$ him$_{ACC.SG.MASC.}$ know$_{3rd.SG.PRES.}$

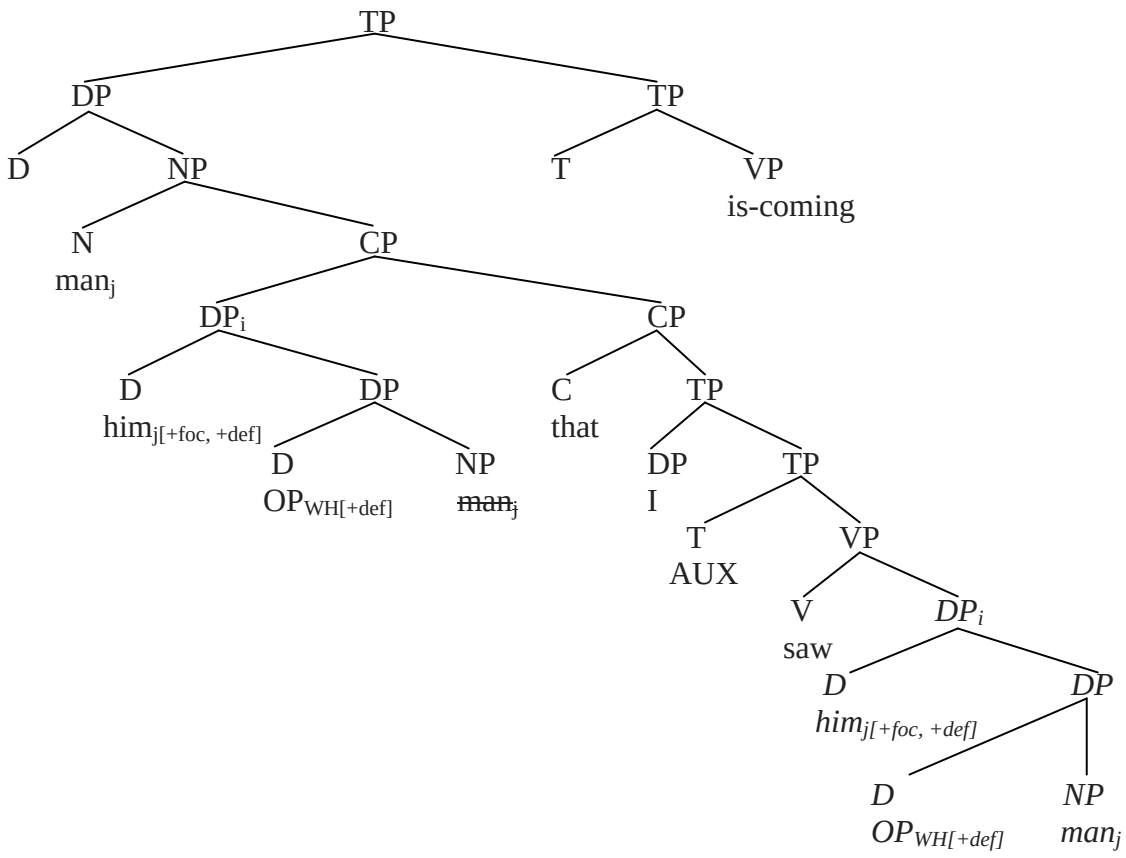
'Ana knows him.'

In (60), the long form pronoun *njega* is the direct object of the V *pozna*. In (61), the clitic pronoun *ga* takes the place of the long form pronoun as the direct object. The crucial

difference between the  two sentences has to do with focus. Sentence (60) cannot be uttered under neutral intonation; *njega* is automatically prnounced under contrastive stress. In (61) the pronoun *ga*, being a clitic, can never take contrastive or any other kind of stress. The valuation of the focus feature across pronouns is then clear: while clitic pronouns are inherently [-foc], long form pronouns are inherently [+foc].

Just as a DP headed by a [-foc] clitic pronoun is unable to raise into a focus position, a [+foc] long form pronoun would obligatorily move into the closest available focus position. Therefore, while the stacked DP can optionally raise into Spec of the relative CP in Hebrew (whose pronouns are unspecified for focus), the stacked DP in Slovene *must* raise into Spec-CP when the pronoun is specified [+foc]. Thus, if a clitic pronoun is merged into Spec-CP, it will obligatorily remain in its first merge position until Spell-Out while the internal DP raises into Spec-CP. If a long form pronoun merges, its [+foc] feature will force it to move into Spec-CP. This gives the following structure:

Diagram 18




There is one critical problem with this derivation, namely, Relative Deletion, which should apply to both the pronoun and to the internal head, cannot apply to the pronoun. Elements under focus cannot be deleted, because focus cannot be recovered (Takahashi and Fox 2005:230). Because there are two competing rules (namely Relative Deletion versus No Deletion of Focussed Material), the derivation is deviant[45]. As expected, the sentence is ungrammatical in Slovene regardless of whether Relative Deletion applies to the pronoun:

[45]As pointed out by Leonard Babby (p.c. 2013), competing rules do not always result in ungrammatical sentences, as there are resolution strategies that can be applied in some cases. In the case of these two competeing rules (i.e. Relative Deletion versus No Deletion of Focussed Material), however, it seems no resolution strategy is available.

(62) *Človek, ki sem (njega) videla prihaja.
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ him$_{ACC.SG.MASC.}$ saw$_{SG.FEM.PAST}$ is-coming$_{3rd.SG.PRES.}$

'The man that I saw (him$_{LONG-FORM}$) is coming.'

This accounts both for the obligatory presence of a resumptive pronoun and for its obligatory clitic morphology in Slovene. This also provides one possible account for the obligatory absence of any resumptive pronoun in the highest subject position in Slovene relative clauses. Since Slovene is a subject-pro-drop language, overt subject pronouns are always [+foc]; there simply are no clitic forms that correspond to a nominative case pronoun. This means that any overt subject pronoun would be [+foc], and would therfore automatically raise to the Spec-CP focus positon and thus be deleted under Relative Deletion.

The absence of a resumptive pronoun in highest subject position at Spell-Out is, however, a widely-observed phenomenon cross-linguistically. It occurs in all languages exhibiting resumption, including those whose pronouns are unspecified for focus (e.g. Hebrew). Therefore, a broader account must be provided.

2.2.2.4. A Universal Condition on Resumptive Pronouns

Among all languages exhibiting canonical resumptive pronouns in relative clauses, there is a universal restriction prohibiting a resumptive pronoun from occurring in the highest subject position. This has been explained as relating to the null-subject / pro-drop parameter, or in more recent terms the Avoid Pronoun Principle, which states that a pronominal subject can be elided if it is recoverable (see McCloskey 1991, Boeckx 2003). In the case of the highest subject of a relative clause, the pronoun is certainly

recoverable, since it must be interpreted as co-referential with the external relative head. This explanation, however, is not entirely satisfactory, particularly since there are cases in which resumption is optional (see section 2.2.2.2. for optional resumption in Hebrew and Chapter 4 for optional resumption in B/C/S and Slovak). If the Avoid Pronoun Principle were at work, we would not expect to find optional resumptive pronouns at all – they would either be obligatory or prohibited in any given position.

A possible alternative hypothesis is that all languages function like Slovene, in that all nominative case pronouns are inherently [+foc], thus forcing them to raise into Spec-CP and be deleted under Relative Deletion. This would not only prevent resumption in the highest subject of a relative clause but in any position where the pronoun would check its nominative case[46]. The problem with this analysis, however, is that many languages do exhibit nominative case [-foc] pronominal subjects, namely expletive subjects.

The restriction on nominative case resumptive pronouns remains an open question and a topic for further inquiry.

### 2.2.3. Overt $C^0$ Relatives versus *Wh*-Relatives in Slavic

All the examples cited thus far have involved an overt complementizer. In Slavic languages, the presence of overt C is a necessary condition on the occurrence of a canonical resumptive pronoun. In this section I will examine the differences between *wh*-

[46] Mitrović (2011) offers the following evidence from B/C/S of a general restriction barring nominative case resumptive pronouns, even when they do not occupy subject position.

Knjiga, što se (*ona) patljku čita je na stolu.
book$_{NOM.SG.FEM.}$ that REFL it$_{NOM.SG.FEM.}$ dwarf$_{DAT.SG.MASC.}$ reads is on table.
'The book that the dwarf feels like reading (*it) is on the table.'

relatives and overt-C relatives in Slavic and offer an explanation as to why resumptive pronouns occur only in the latter. In order to do this, we must take note of three empirical facts:

i. Resumptive pronouns must co-occur with overt C in a relative CP.

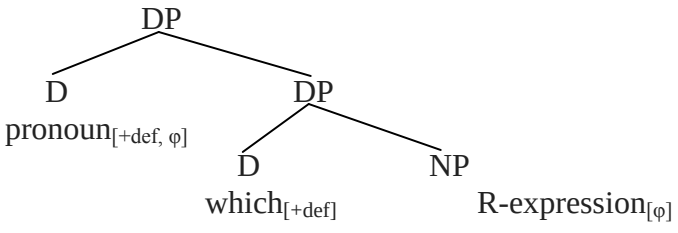
ii. Overt *wh*-words cannot occur in the Spec of a CP headed by overt C.

iii. Overt *wh*-words cannot occur in the Spec of a relative CP containing a resumptive pronoun.

2.2.3.1. What happens when an overt *wh*-word merges?

The stacked-DP structure I have proposed contains two distinct D positions; one is occupied by the pronoun while the other contains a definite determiner. Because there are two distinct positions, there is the possibility that both the *wh*-operator and the pronoun could be pronounced (this is the case in Macedonian, Greek, and Hebrew). In many languages (e.g. B/C/S, Slovene, Slovak), however, this is prohibited[47]. The stacked DP shown below is, therefore, a violation of some syntactic rule in those languages.

Diagram 19 (NB: I do not place an asterisk by this structure because it is not universally prohibited. See footnote 47.)




[47]This restriction is not universal: Greek, for example, allows two case marked $D^0$s to occur within a single DP, and as this analysis predicts, it also allows *wh*-relative clauses to contain resumptive pronouns. This will be addressed in section 2.3.1.2.

I propose that this structure is deviant in languages that prohibit case, when assigned to a DP, from being phonetically realized on more than one $D^0$ in that phrase[48], i.e., case cannot be realized on both the pronoun and the overt *wh*-word. But because these languages require every occurrence of an overt pronoun or of an overt *wh*-word to be morphologically marked for case, a stacked-DP containing both is impossible. Thus, as soon as an overt *wh*-word is merged into D, a pronoun cannot be merged. Conversely, when a PF-null *wh*-operator is merged as the head of DP, a pronoun must then be merged to that DP (failure to merge the pronoun results in a structure where the case assigned to DP does not get assigned to any element with PF-legible features, which is automatically ungrammatical).

[48] The notion that the same morphological case cannot be occur on two adjacent D heads is supported by other independent data from Slovene (data from Marušič and Žaucer 2006):

[$_{DP}$ ta [$_{DP}$ ta zelen svinčnik]]
the$_{NOM.SG.MASC.}$ the$_{NOM.SG.MASC.}$ green$_{NOM.SG.MASC.}$ pencil$_{NOM.SG.MASC.}$
'this green pencil'

* [$_{DP}$ tega [$_{DP}$ tega zelenega svinčnika]]
the$_{GEN.SG.MASC.}$ the$_{GEN.SG.MASC.}$ green$_{GEN.SG.MASC.}$ pencil$_{GEN.SG.MASC.}$
'of this green pencil'

[$_{DP}$ tega [$_{DP}$ ta zelenega svinčnika]]
the$_{GEN.SG.MASC.}$ the$_{CASE?.SG.MASC.}$ green$_{GEN.SG.MASC.}$ pencil$_{GEN.SG.MASC.}$
'of this green pencil'

While these are the data from Marušič and Žaucer 2006, this is not their analysis. They claim that the second occurrence of *ta* is not a determiner but rather some other type of head. Given the data that they present, this *ta* is at least a defective $D^0$, because it does not inflect for case, number, or gender, and it can never be stressed.

2.2.3.2. What happens when an overt *wh*-word raises?

There is a strong cross-linguistic generalization that an overt complementizer cannot cooccur with an overt *wh*-word in its Spec position[49]. This is true not only for relative clauses (as shown in (64)) but is also for embedded questions, as in (65).

(64) * The book which that I read yesterday was fascinating.

(65) * I wonder which girl that Amy likes.

It has been suggested, following the basic idea of Chomsky and Lasnik's Doubly Filled COMP Filter (1977), that a deletion rule applies; when an overt *wh*-word is in Spec-CP, then an overt C will be deleted. It is unclear precisely when (at what level in the derivation) and how (by what mechanism) this deletion applies. I suggest that overt C is PF-deleted according to a condition that prohibits C from being pronounced if an overt *wh*-word occupies Spec-CP[50].

2.2.3.3. Getting the Facts

Given the PF-deletion rule in 2.2.3.2 along with the case realization rule in 2.2.3.1, the empirical facts noted in 2.2.3 fall out naturally. Fact (iii) is explained by a condition on case, namely, the case assigned to DP cannot be phonetically realized on more that one $D^0$ head in that DP, thus a pronoun $D^0$ cannot be merged to a DP headed by an overt *wh*-word. Fact (ii) is explained by a general restriction on PF: an overt C cannot be pronounced (i.e. must be deleted at PF) if Spec-CP contains an overt *wh*-word. Fact (i)

[49]It is possible that the Macedonian *kojšto* (which is a combination of *koj* '*which*' and *što* '*that*') is a counterexample to this generalization.

[50]The precise operation by which the C *that* gets deleted is immaterial to the current topic, so I will suffice simply to say that it does delete.

is a natural consequence of these two rules taken together: the pronoun can only be merged into the derivation if there is a PF-null *wh*-operator. The DP containing the null *wh*-operator raises to Spec-CP, thereby stranding the pronoun, but at PF there is no overt *wh*-word in Spec-CP and therefore no cause for the deletion of $C^0$. This derives the consistent co-occurrence of the resumptive pronoun and overt C.

2.2.3.4. The Structure of *wh*-relatives versus overt C relatives

In many of the Slavic languages that exhibit canonical resumption, the overt-C and resumptive pronoun strategy is the most common way to form a relative clause when the site of relativization is the subject[51], direct object or indirect object within the relative clause. That is, the resumptive pronoun is typically the direct or indirect object of the relative clause V. Under other conditions, for example (55), when the internal relative head is the object of a preposition, a *wh*-relative is typically used.

Slovene

(66) punca, s katero sem plesal
girl$_{NOM.SG.FEM.}$ with which$_{INST.SG.FEM.}$ AUX$_{1st.SG.}$ danced$_{SG.MASC.PAST.}$

'the girl with whom I danced'[52]

In Slovene, the preposition '*with*' takes an instrumental case object. It is this object that is being relativized in (66). While speakers most often employ the *wh*-relativization strategy

[51]When the site of relativization is the subject of the relative clause, the presence of a resumptive pronoun in that position is universally prohibited, as mentioned in sections 2.2.2.3 and 2.2.2.4. This could be a result of the Avoid Pronoun Principle, or alternatively, as I suggest, it could be due to the absence of a [-foc] nominative case pronoun.

[52]English *wh*-words are sensitive to animacy. '*Who*' is used instead of '*which'* when referring to an animate object. Slavic languages do not have a separate *wh*-word that applies only to animates. So, although I translate the PP as '*with whom'*, it is actually literally translated (and glossed) as '*with which'*.

in such situations, they occasionally use a different relativization strategy, as shown in (67).

(67)[53] punca, ki sem z njo plesal
girl$_{NOM.SG.FEM.}$ that AUX$_{1st.SG.}$ with her$_{INST.SG.FEM.}$ danced$_{SG.MASC.PAST.}$

'the girl that I danced with (her).'

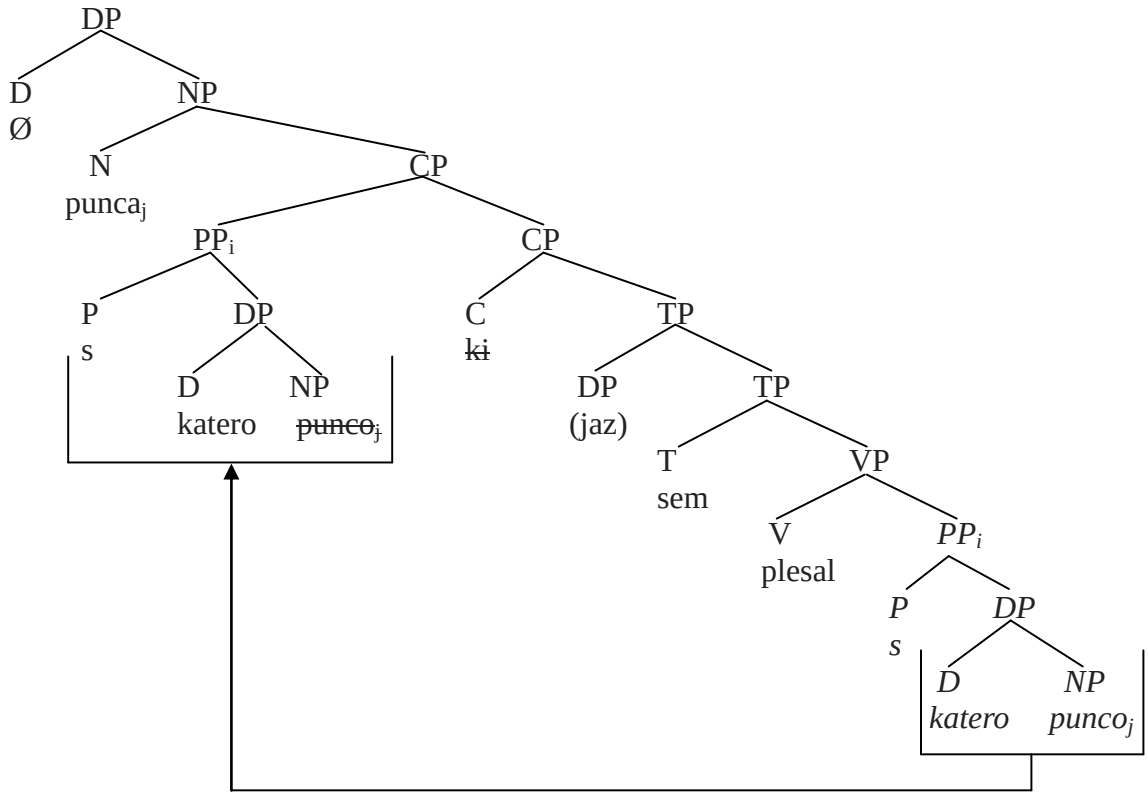
In this section, we will compare the derivations of (66) and (67), represented in diagrams (20) and (21), respectively.

[53]Note that the form of the preposition is variable and dependent on PF voicing assimilation. In (66), the preposition *with* is *s*, while in (67) it is *z*. The preposition is in fact the same; the variation only arises as a result of regressive voicing assimilation.

2.2.3.4.1. The Girl with Whom I Danced (Punca, s katero sem plesal)

(NB: *Jaz* is the nominative first person singular pronoun and is the elided (pro-dropped) subject of the relative clause.)

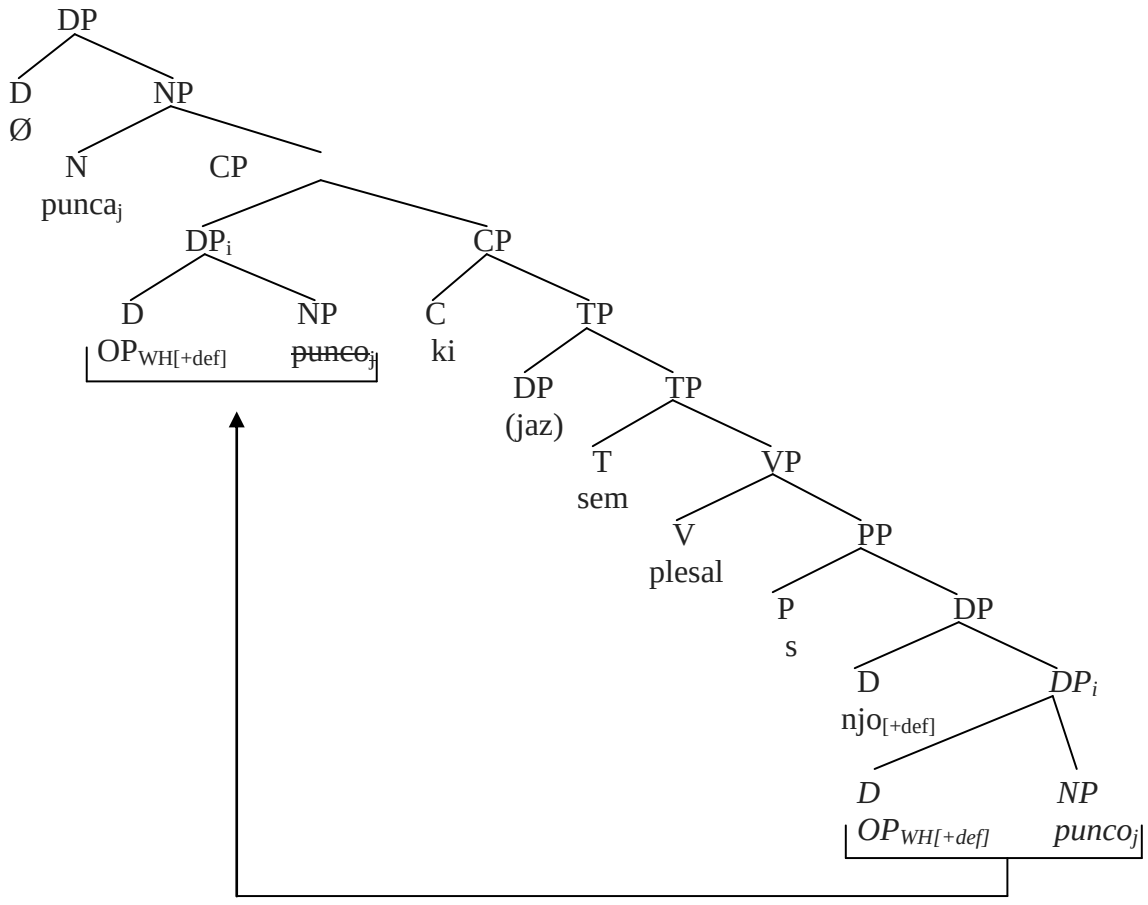
Diagram 20




Since prepositions in Slovene cannot be stranded, the DP *katero punco* '*which girl*', when it raises into Spec-CP, pied-pipes the preposition *s* '*with*' along with it. The overt complementizer as well as the internal head are deleted, deriving the PF word order *punca s katero (jaz) sem plesal* '*girl with which I danced*'.

2.2.3.4.2. The Girl that I Danced With Her (Punca, ki sem z njo plesal)[54]

Diagram 21




In this derivation, the pronoun *njo* '*her*' is merged to a DP headed by a null *wh*-operator, where it checks its instrumental case feature with P *s* '*with*' and checks its definiteness feature with the internal DP. Once the rest of the items in the relative clause have merged, the internal DP raises into Spec-CP, leaving behind both the preposition and its clitic pronominal object.

[54]Typically, this structure would be deviant, because prepositions generally take long form pronouns as their objects. But the term *njo*, an instrumental case feminine pronoun, is ambiguous between clitic and long form, so speakers find it possible to use it in a resumptive function.

2.2.4. Split Antecedents and Canonical Resumption

As mentioned in section 2.1.3, canonical resumptive pronouns differ from ordinary pronouns in that they cannot take non-contiguous NPs as their antecedents (i.e. split antecedents). Recall the difference in grammaticality between the Slovene examples (43) and (44), repeated here as (68) and (69):

(68) Irina$_i$ je povedala Jožetu$_j$, da njeni$_i$ starši
Irina$_{NOM.SG.FEM.}$ AUX$_{3rd.SG.}$ told$_{SG.FEM.PAST.}$ Jože$_{DAT.SG.MASC.}$ that her parents$_{NOM.PL.}$

so jima$_{i+j}$ prepovedali živeti skupaj.
AUX$_{3rd.PL.}$ them$_{3rd.DAT.DU.}$ forbid$_{PL.PAST.}$ to-live together

'Irina$_i$ told Jože$_j$ that her$_i$ parents forbid them$_{i+j}$ to live together.'

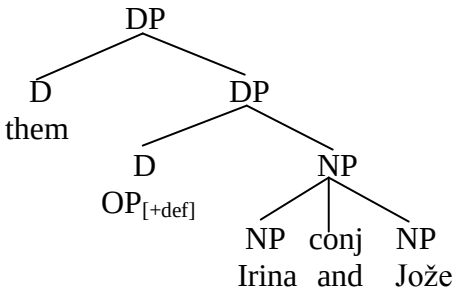
(69) *Irina$_i$ ima-rada človeka$_j$, ki so jima$_{i+j}$ njeni$_i$
Irina$_{NOM.SG.FEM.}$ loves man$_{ACC.SG.MASC.}$ that AUX$_{3rd.PL.}$ them$_{3rd.DAT.DU.}$ her

starši prepovedali živeti skupaj.
parents$_{NOM.PL.}$ forbid$_{PL.PAST.}$ to-live together

'Irina$_i$ loves the man$_j$ that her$_i$ parents forbid them$_{i+j}$ to live together.'

Given the analysis I propose, it is certainly possible for the following structure to exist:

Diagram (22)




Here the NP containing both of the antecedents of the pronoun occurs within the maximal DP headed by the pronoun, which given the Pronominal Reference Condition,

forces *them* to be interpreted as co-referential with *Irina and Jože*. If the DP *Irina and Jože* remains in its first merge position, it will be deleted under Pronominal Associate Deletion. But if the internal DP is headed by a [+wh] $D^0$, as it would if it were an internal relative head, then it will raise into Spec-CP.

When the internal DP raises, it must raise as unit, and as a unit, it will have to match the external relative head. This would result in a sentence such as the following[55]:

(70) Jaz sem videla [ Irino in Jožeta ], ki sem **ju**
I $AUX_{1ST.SG.}$ saw Irina and Jože that $AUX_{1ST.SG.}$ **them$_{3rd.ACC.DU.}$**

spoznala na tečaju slovenščine.
met at class $Slovene_{GEN.SG.FEM.}$

'I saw Irina and Jože, whom I met in Slovene class.'

Thus, while split antecedents are generally permitted (and can be accounted for under my analysis), they cannot possibly act as antecedents of canonical resumptive pronouns.

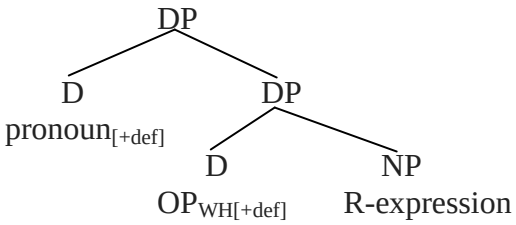
## 2.3. Summary

In this chapter, I have presented a new analysis of relative clauses and a new account of the phenomenon of canonical resumptive pronouns. I adopt Sauerland's (1998, 2003) model of relative clauses in which there are two heads: one internal to the relative clause CP and one external. The internal relative head, which takes the external head as an antecedent, deletes via the operation of Relative Deletion. Building on Sauerland's model, I propose that cross-linguistically all relative clauses headed by an overt head $C^0$ contain a pronoun in the site of relativization. The pronoun has what I have called a

[55]Note that this is a non-restrictive relative clause only because the relative head is composed of proper names.

stacked-DP structure, repeated in Diagram 23. In relative clauses, the internal D must be an unpronounced *wh*-operator, thus forcing it to raise to Spec-CP to check an uninterpretable [wh] feature on C.

Diagram 23




I have also suggested two linguistic parameters. The first parameter is that in some languages, the internal DP cannot move independently: it obligatorily pied-pipes the pronoun. In other languages, the pronoun can be stranded, thus yielding a resumptive pronoun. In languages that have clitic pronouns, the resumptive pronoun is invariably the clitic form. In languages that do not have two sets of pronouns, we find optional resumption.

I then examine the difference between overt-C relatives and *wh*-relatives. I suggest a second parametric difference, namely, that in some languages in which R-expressions and articles inflect for case, no more than one $D^0$ can have phonetically realized case within a single case-marked DP. In such languages, a pronoun cannot be merged to head a stacked-DP in which the internal $D^0$ is an overt *wh*-word; when an overt *wh*-word is merged, the pronoun cannot then merge without causing a case assignment violation. Thus, case inflected *wh*-words and canonical resumptive pronouns occur in complementary distribution in these languages.

2.3.1. Two Predictions

The first prediction that this analysis of canonical resumptive pronouns makes is that all languages that have clitic pronominal forms (that contrast with long forms[56]) also have canonical resumptive pronouns. In other words, if a language has both long form pronouns as well as clitic pronouns, the clitic pronouns will occur as canonical resumptive pronouns in relative clauses. I have looked at many languages with clitic pronouns, and although I cannot claim that my study has been exhaustive, it has included all of the Slavic languages, and I have yet to find a counter-example[57].

The second prediction has to do with the two parameters I describe in this chapter. The stacked-DP analysis presented here includes two fundamental linguistic parameters: 1) some languages allow the internal DP to move independently of the pronoun and 2) some languages that show morphological case on $D^0$ heads will restrict phonetically realized case to a single $D^0$. Given any two parameters, we expect four resulting language types. That is, each cell of the matrix in Diagram 24 should contain at least one element.

Diagram 24

| | Internal DP: mobile | Internal DP: immobile |
|---|---|---|
| No case-marking on >1 $D^0$ | Slovene, B/C/S | |
| No rule about case-marking $D^0$s | | English |

[56]While Romance languages do have clitic pronouns for objects, those pronouns do not contrast with specific long forms. Slovene, for example, has *ga* and *njega*, which are both [ACC.SG.MASC.] pronouns that differ only in the value of their focus feature. Romance languages do not have these contrasting pairs. In Spanish, the [ACC.SG.MASC.] pronoun is *lo*; there is no alternate [+foc] form.
[57]Cedric Boeckx (p.c. 2012) also knows of no counter-example to this claim.

In the following sections, I will show that the two empty cells of this matrix are filled by Hungarian and Greek.

2.3.1.1. Hungarian[58]

Hungarian, like Greek, has stacked-DPs that do not involve pronouns; they have demonstrative pronouns followed by the definite article.

(71) a jó diák
the good student

'the good student'

(72) ez a jó diák
this the good student

'this good student'

(73) *ez jó diák
this good student

'this good student'

Unlike in Greek, however, the internal DP is immobile, i.e., it cannot move independently of the stacked-DP:

(74) * a jó diák ez
the good student this

'this good student'

[58]Many thanks to E. Wayles Browne and Márton Dornbach for the Hungarian data and grammaticality judgements.

My analysis predicts that Hungarian should not have resumptive pronouns, and indeed, this is the case. It does, however, have case inflection on determiners. Thus, Hungarian only has one strategy for forming relative clauses, namely the inflected *wh*-relativizer.

(75) a lány, akinek elkuldtem a levelet
the girl to-whom I-sent the letter

'the girl to whom I sent the letter'

The table now has three of the four predicted language types.

Diagram 25

| | Internal DP: mobile | Internal DP: immobile |
|---|---|---|
| No case-marking on >1 $D^0$ | Slovene, B/C/S | Hungarian |
| No rule about case-marking $D^0$s | | English |

In the next section, I show that the final cell contains Greek.

2.3.1.2. Greek

As shown in section 2.2.1.2, morphological case in Greek can occur on more than determiner in a DP and the internal DP is able to move independently of the stacked-DP. Thus we would predict that *wh*-phrases can co-occur with resumptive pronouns, and indeed this is what we find: (Data from Kotzoglou and Varlakosta 2005)

(76) o kokalis proselave ton proponiti ton **opio** poli tha **ton** ithelan
the Kokalis hired the coach the **whom** many would **him** want

stin omadha tus.
at-the team their.

'Kokalis hired the coach whom many would want (him) on their team.'

Diagram 26

| | Internal DP: mobile | Internal DP: immobile |
|---|---|---|
| No case-marking on >1 $D^0$ | Slovene, B/C/S | Hungarian |
| No rule about case-marking $D^0$s | Greek | English |

In the next chapter, I will show that Hebrew and Macedonian are in some ways like Greek, in that multiple $D^0$s from a stacked DP may be pronounced. However they differ from Greek in that neither of them has overt case marking on articles or R-expression. In chapter 3, I will examine two non-canonical resumptive pronominal structures: one that occurs in Hebrew, namely resumptive pronouns left by interrogative *wh*-movement and another that occurs in Macedonian, namely object clitic doubling.

# CHAPTER 3

# A BRIEF EXAMINATION OF TWO INSTANCES OF NON-CANONICAL RESUMPTION

In this chapter we will look at two varieties of *non-canonical resumption*, which is defined as the presence of resumptive pronouns (i.e. pronouns that are stranded by the movement of the internal DP) that are not stranded as a result of *wh*-operator movement to Spec-CP of a relative clause. Non-canonical resumptive pronouns are either stranded by a non-*wh* movement operation or by *wh*-movement in some context other than a relative clause. I will show how the stacked-DP analysis accounts for instances of non-canonical resumption in Hebrew and Macedonian, and I will expand on the crucial relationship between personal pronouns and definiteness.

## 3.1. Hebrew Interrogatives

Resumptive pronouns in Hebrew can occur as a result of interrogative *wh*-movement, which is similar to the movement found in relative clauses: both are instances of movement of a [+wh] element into Spec-CP . While many languages exhibit canonical resumption, only a few of them also exhibit resumption in interrogatives. The reason for this is that many languages do not allow the co-ocurrence of an overt *wh*-element and a resumptive pronoun (see chapter 2). I claim in chapter 2 that this has to do with a parametric restriction on case, i.e., case cannot be pronounced on more than one $D^0$ within the DP to which case is assigned. In languages that do not typically show case on non-pronominal determiners, we would not expect this restriction to apply. In Hebrew, a

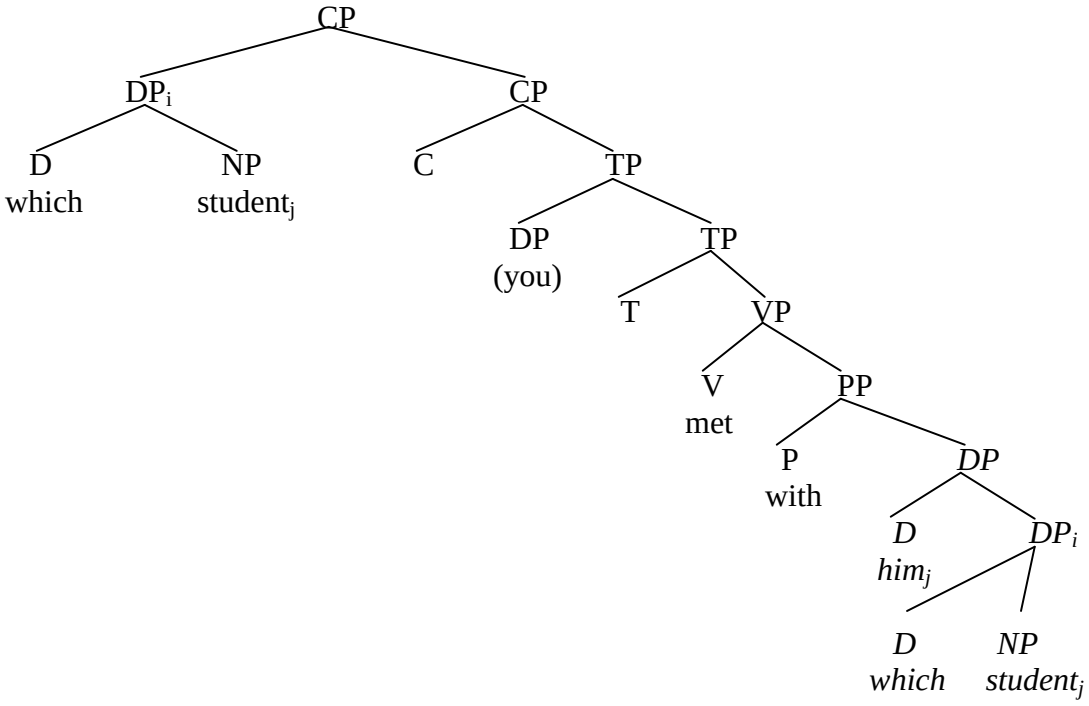
language that does not mark case on demonstratives, articles, or R-expressions, we indeed find that, like in Greek, a *wh*-word may co-occur with a resumptive pronoun.

(77) **eyze** student nifgaSta **i-to**?
which student you-met with-him

'Which student did you meet with?'

The structure of (77) is shown in diagram (27):

Diagram 27




Because Hebrew has no overt cases and thus does not have the case restriction found in Slovene and other languages, a DP headed by an overt *wh*-word can merge with a pronominal $D^0$, thereby creating a stacked-DP. When a $C^0$ with a [*wh*] feature that needs to be checked is merged, one of two things can happen. Either the entire stacked DP raises into Spec-CP, or only the internal DP *which student* raises, stranding the pronoun.

The binding criteria are also met: the pronoun is interpreted as co-referential with the NP *student*, which does not c-command the pronoun.

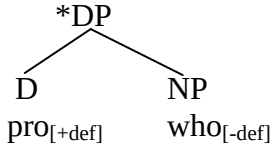
This type of structure is not unique to Hebrew. Boeckx (2003), whose analysis is similar to the one presented here, points out that pronoun stranding due to interrogative *wh*-movement occurs in a wide range of languages (e.g. Irish, Albanian, Romanian, and Archaic Dutch, among many others). Moreover, for all of the languages in which a resumptive pronoun is stranded by a *wh*-phrase, one very strong generalization can be made: only a D-linked *wh*-phrase can strand a pronoun. (The data shown for Hebrew (Sharvit 1999) are also representative of the data observed in these other languages that strand pronouns due to interrogative *wh*-movement.)

(78) *Mi nigaSta ito?
who you-met him

'Who did you meet?'

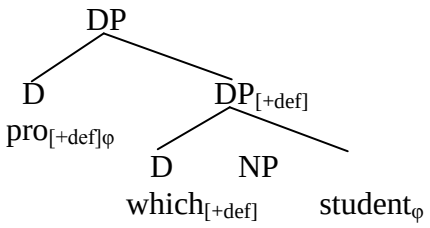
A non-D-linked *wh*-word cannot strand a pronoun, which is a natural consequence of the analysis of resumptive pronouns presented in chapter 2. A pronoun must check its definiteness feature with that of a [+def] head. Moreover, the pronoun must match the embedded N head in reference. Since neither of these two requirements on the pronoun can be met in (78), the structure in diagram (28) must be ungrammatical.

Diagram 28



Since the NP *who* is indefinite, the pronoun, which must be definite, cannot check its definiteness feature. The second requirement also cannot be met, because the NP *who* is unspecified for φ-features in many languages and is unspecified for reference in all languages. Thus the pronoun is unable to check its φ-features, and at LF, the Pronominal Reference Condition (see (45)) cannot be met. The resulting derviation is ungrammatical. A D-linked *wh*-word, on the other hand, is both definite[59] and has an NP complement, allowing the pronoun to check its definiteness feature as well as its reference:

Diagram 29




3.1.1. An Aside on English

English is perhaps unique in having two distinct lexical entries for *who*, just as it has two distinct lexical entries for the pronoun *he*: one is valued positively for definiteness and the other is valued negatively. The interrogative *who* is indefinite, but *who* can also occur as a relativizer: the animate form of *which*.

[59]Boeckx (2003) points out that in many languages (such as Albanian and Portuguese), D-linked *wh*-words are obligatorily marked by a definite determiner.

Cil-ët libra (i) solli Ana?
Which-the books them bought Ana?
'Which books did Ana buy (them)?' Kalluli (1999)

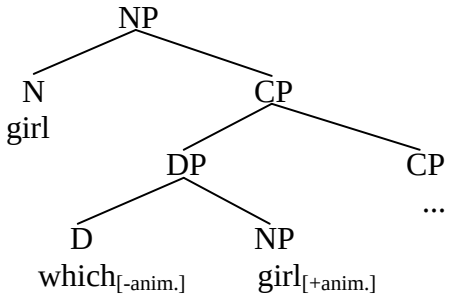
(79) Who ate my cake? (interrogative NP *who*, indefinite)

(80) ?/* The girl which ate my cake is in a lot of trouble. (definite inanimate *wh*-relativizer)

(81) The girl who ate my cake is in a lot of trouble. (definite animate *wh*-relativizer)

In (81), *who* is a D head, essentially the same as *which*, however, English has an additional agreement requirement, according to which a $D^0$ must match its NP sister in animacy in order for Relative Deletion to apply to the NP. In other words, an NP cannot be deleted (presumably due to issues of recoverability) if its sister $D^0$ is inanimate.

Diagram 30




Since *which* is specified as inanimate in English, it does not match the internal relative head for animacy in (80), and thus Relative Deletion cannot apply and the derivation cannot proceed[60].

Slavic languages are quite different from English in this respect. Any instance of the lexical item *who* in Slavic languages is specified as indefinite. For this reason, *who* does not occur in ordinary relative clauses in Slavic, only in free relatives and correlatives. This will be discussed further in chapter 5.

[60]In interrogatives, Relative Deletion does not apply, so there is no requirement on matching animacy. For this reason, (80) is ruled out, while the following sentence is not:

Which girl ate my cake?

3.2. Macedonian Object Clitic Doubling

Macedonian is one of several languages (others include Albanian and Bulgarian) that exhibits object clitic doubling. Clitic doubling describes a phenomenon in which a sentence having a direct or indirect object must additionally include a clitic pronoun matching that object in φ-features and Case.

Macedonian[61]

(82) *(**Go)** vidam Ognen.
**him**$_{\textbf{ACC.SG.MASC.}}$ I-see$_{\text{1st.SG.PRES.}}$ Ognen$_{\text{ACC.SG.MASC.}}$

'I see Ognen.'

(83) *(Ja) pročitav kniga-ta.
**her**$_{\textbf{ACC.SG.FEM.}}$ I-read$_{\text{1st.SG.AOR.}}$ book-the$_{\text{DEF. ACC.SG.FEM.}}$

'I read the book.'

We see from (82) and (83) that a definite object must be doubled by a clitic pronoun. I suggest that the clitic in clitic-doubling is a resumptive pronoun; it is stranded by the movement of its sister DP[62]. This analysis is quite similar to the analysis of Bulgarian clitic doubling proposed by Franks and Rudin (2005) in which the clitic is the head of a K(ase)P and its definite DP associate raises, thereby stranding the pronoun. However, Franks and Rudin take the position that clitic pronouns (particularly in this function) are fundamentally distinct from ordinary pronouns, while I maintain that these clitics are

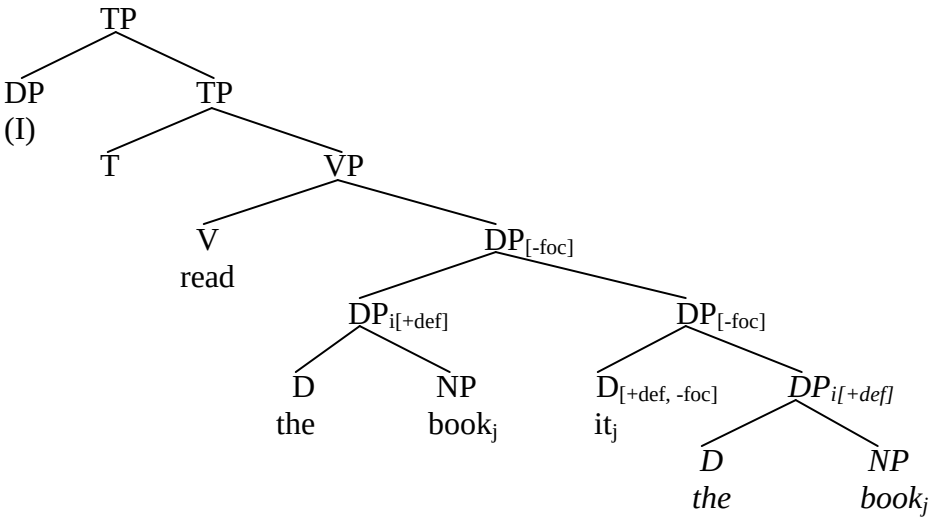
[61]Many thanks to Ognen Vangelov for the data and judgments shown for Macedonian.

[62]Given this proposal, a reasonable question is whether clitic-doubles can take split antecedents. As shown in section 2.2.4, canonical resumptive pronouns cannot take split antecedents, which the analysis predicts. It would also predict that clitic doubling cannot occur with split antecedents, and indeed, the prediction holds:

* Jas im$_{i+j}$ gi$_{x+y}$ dadov ovaa kniga$_x$ na Ognen$_i$ i prativ onaa kniga$_y$ na Biljana$_j$.
I them$_{\text{DAT.PL.}}$ them$_{\text{ACC.PL.}}$ gave this book to Ognen and sent that book to Biljana.
'I gave this book to Ognen and sent that book to Biljana.'

pronominal. The differences between clitic and long-form pronouns are essentially prosodic in nature. Consider diagram (31), which reflects the Spell-Out structure of (83)[63]:

Diagram 31




The NP *book* merges with a definite article, creating the DP *the book*. The clitic pronoun $D^0$ then merges to this DP, thereby forming the stacked-DP. The internal DP then raises to the specifier position of the stacked DP, thus stranding the pronoun.

This derivation invites two questions. The first of these has to do with the movement leading to resumption. The movement of the internal DP into Spec-DP is crucial to this analysis and the natural question is why the internal DP should raise to this position. In fact, this movement does not always occur before Spell-Out. Sportiche (1992) proposed the Clitic Criterion, repeated below (Note that [+F] represents a positively valued focus feature):

[63]The Macedonian definite article is an enclitic. In this derivation *-ta* occurs in $D^0$ while its N host is in a lower position in NP. For this, I adopt the analysis of PF clitic lowering, in which an enclitic will move to a lower position in order to attach to its host. (Halpern 1992 and Izvorski, King, and Rudin 1997).

Clitic Criterion (Sportiche 1992:25)

At LF:

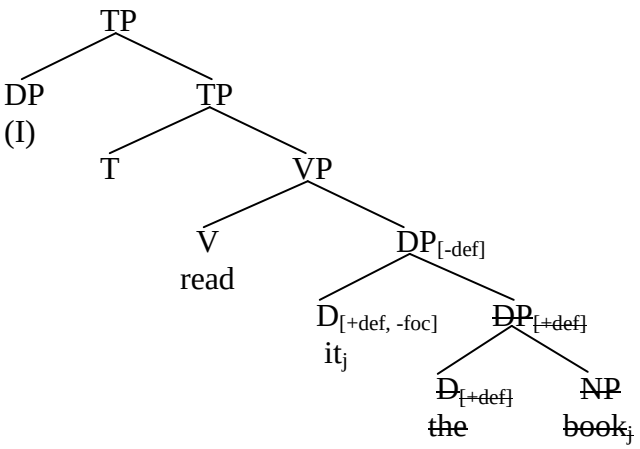
i. A clitic must be in a Spec-Head relationship with a [+F] XP.

ii. A [+F] XP must be in a Spec-Head relationship with a clitic.

When the pronoun is [-foc], the movement of its sister DP into Spec-position may occur either overtly or as covert LF movement. In many languages, such a movement is strictly a last resort LF operation. However, this movement *may* be overt - it is simply a requirement that the movement occur by LF. Thus, in some languages, the movement to Spec of the clitic DP may occur within the narrow syntax, as in derivation (31), thereby giving rise to languages with clitic-doubling[64]. But even in these languages, this movement only occurs prior to Spell-Out if the internal DP is unrecoverable through discourse reference. Otherwise, the movement will occur at LF.

In diagram (32), I show a similar sentence but one in which the movement of the internal DP to the Spec of the stacked DP is covert.

Diagram 32




[64]This is similar to the analysis of clitic doubling in Gierling (1997).

Here the internal DP does not raise until after Spell-Out at LF. Thus, at PF, the internal DP is still a sister to the pronoun, and therefore it is deleted under Pronominal Associate Deletion. This gives the grammatical Macedonian sentence:

(84) Ja pročitav.
her$_{ACC.SG.FEM.}$ I-read$_{1st.SG.AOR.}$

'I read it.'

The second question that the derivation in (31) raises is why the pronominal double must be a clitic form and not a long form. To answer this, we must first look at the data. We see from (85) that an indefinite object cannot be doubled. Only definite DPs may be doubled. This fact falls out naturally from the analysis in which pronouns must check their definiteness against a definite DP.

However, along with clitic doubling of definite R-expressions, we find that a [+foc] (i.e. long form) pronoun must also be doubled. In (86), *nego*, takes contrastive focus. In order to convey the meaning '*I saw him*' without focus on '*him*', a [-foc] pronoun will occur on its own, as in (87).

(85) (*Ja) pročitav (edna) kniga.
**her$_{ACC.SG.FEM.}$** I-read$_{1st.SG.AOR.}$ some$_{INDEF.\ ACC.SG.FEM.}$ book$_{INDEF.\ ACC.SG.FEM.}$

'I read a book.'

(86) (Jas) nego *(go) vidov.
I$_{1st.NOM.SG.}$ him$_{ACC.SG.MASC.}$ him$_{ACC.SG.MASC.}$ I-saw$_{1st.SG.AOR.}$

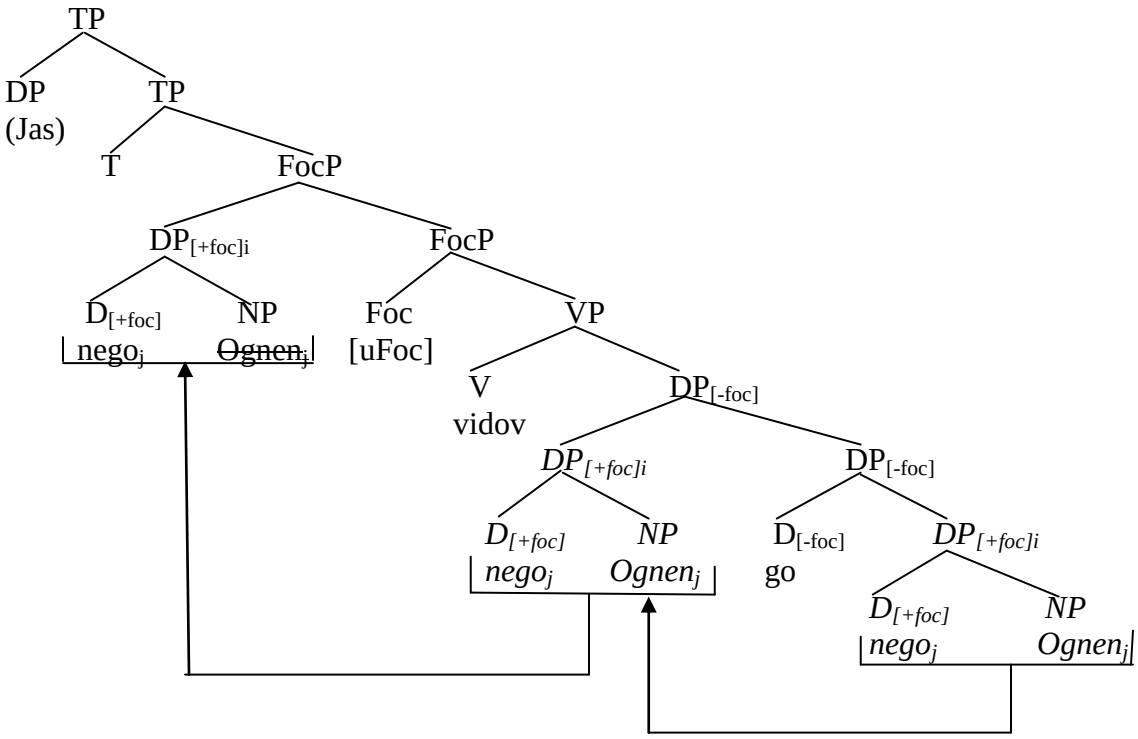
'I saw him.'

(87) Go vidov.
him$_{ACC.SG.MASC.}$ I-saw$_{1st.SG.AOR.}$

'I saw him.'

The descriptive generalization, then, is that accusative and dative case can only be checked on one of two phrase types: either an NP (i.e. an indefinite R-expression) or a DP$_{[-foc]}$ headed by a pronoun. It is unclear precisely why there should be this restriction; it is a question I leave open. Nevertheless, the analysis I have presented is able to capture the data. The derivation of (86) according to this analysis is presented in diagram (33)[65]:

Diagram 33




[65]For these derivations, I use the original Macedonian words in order to distinguish clearly between the long form pronoun and the clitic form.

The [+foc] pronoun *nego* ('*him*'$_{\text{LONG-FORM}}$) merges with its referent NP, *Ognen*. Because *nego* is not a clitic form, the Clitic Criterion does not apply, and the NP *Ognen* need not raise from its merge position as sister to the *nego*. This DP then merges with the [-foc] clitic form *go* ('*him*'$_{CLITIC}$), thus creating the stacked-DP headed by [-foc] $D^0$. The internal DP (containing the NP *Ognen* and the pronoun *nego*) is [+foc] and therefore must be moved into the focus position. Thus it raises successive-cyclically, first into Spec of the stacked-DP, where it satisfies the Clitic Criterion. The V *vidov* ('*saw*') merges and can check accusative case on its sister DP, since it is headed by a [-foc] pronoun. After V merges, a [uFoc] head of the focus projection merges[66]. The DP headed by the [+foc] pronoun *nego* raises once more and lands in a focus position to check the uninterpretable focus feature heading the focus projection. At PF, the clitic pronoun *go* then raises to its fronted position through a linearization rule and the NP *Ognen* is deleted under Pronominal Associate Deletion.

### 3.3. Summary

In this brief chapter, I have introduced two non-canonical instances of resumption: one resulting from interrogative *wh*-movement and the other from overt focus movement (either to check an uninterpretable [+foc] feature or to satisfy the Clitic Criterion). There are still many questions left open regarding these phenomena, particularly clitic-doubling, which arises in many different languages and with many possible cross-linguistically varying limitations. While I do not define these parameters

[66]It is unclear whether the FocP is a projection higher than VP or internal to VP, but its relative position to VP is immaterial to the current analysis.

here, I provide an skeletal analysis of stranding in the contexts of clitic-doubling and interrogative *wh*-movement on which analyses of related structures may be developed.

The primary analytical tools are the definiteness feature, focus feature, and the Pronominal Associate Deletion operation. In addition, I invoke Sportiche's (1992) Clitic Criterion in order to explain the phenomenon of clitic-doubling. The question remains as to the nature of the specific restriction in Macedonian that forbids accusative and dative case from being assigned to $DP_{[+foc]}$ headed by a pronoun. Moreover, clitic doubling differs greatly from language to language; that is, there are a number of language-specific restrictions that will allow clitic doubling to occur only under specific conditions. I leave these issues aside for future research.

# CHAPTER 4

# OPTIONAL CANONICAL RESUMPTION IN B/C/S AND SLOVAK

## 4.1. Introduction

In much of the literature on B/C/S resumptive pronouns (Browne 1986, Goodluck and Stojanović1996), it has been shown that canonical resumptive pronouns can be elided under certain conditions. Browne (1986) pointed out that the optionality related to the animacy of the pronoun's associate; i.e., when the relative head is animate, the resumptive pronoun is obligatory, whereas when the relative head is inanimate, the pronoun may be elided. Example (1) is repeated below as (88).

(88) Čovjek što sam *(ga) video.
man$_{NOM.SG.MASC.ANIM.}$ that AUX$_{1st.SG.}$ him$_{ACC.SG.MASC.ANIM.}$ saw$_{MASC.SG.PAST.}$

sjedi ovdje.
sits$_{3rdSG.PRES.}$ here

'The man that I saw is sitting here.'

(89) Film što sam (ga) gledao.
movie$_{NOM.SG.MASC.INAN.}$ that AUX$_{1st.SG.}$ it$_{ACC.SG.MASC.INAN.}$ watched$_{MASC.SG.PAST.}$

'the movie that I watched'

Bošković (2009) further points out that the gender feature of the relative head plays a role; when the relative head is feminine, the resumptive pronoun is obligatory, regardless of its animacy:

(90) Kniga, što sam *(je) pročitao
book$_{NOM.SG.FEM.INAN.}$ that AUX$_{1st.SG.}$ it$_{ACC.SG.FEM.INAN.}$ read$_{MASC.SG.PAST.}$

'the book that I read'

While the animacy of masculine nouns does play a more salient role in the Slavic languages than the animacy of feminine nouns, it appears that even Bošković's generalization does not capture the full range of data, when it comes to optional resumption in B/C/S.

Gračanin-Yuksek (2010) shows that both gender and animacy are, in fact, unrelated to the optionality of the resumptive pronoun because in some cases, even a masculine animate is optional.

(91) Iva je upoznala čovjeka, što sam
Iva$_{NOM.SG.FEM.}$ AUX$_{3rd.SG.}$ met$_{MASC.SG.PAST.}$ man$_{ACC.SG.MASC.ANIM.}$ that AUX$_{1st.SG.}$

(ga) vidio.
him$_{ACC.SG.MASC.ANIM.}$ saw$_{MASC.SG.PAST.}$

'Iva met the man that I saw.'

The very same facts hold for Slovak: every instance of optional resumption in B/C/S corresponds to an instance of optional resumption in Slovak and every instance of obligatory resumption is B/C/S corresponds to an instance of obligatory resumption in Slovak. This means that the conditions that permit deletion of the canonical resumptive pronoun are not unique to B/C/S but apply more broadly. In this chapter, we will examine what these conditions are and how the analysis of canonical resumption presented in chapter 2 accounts for it.

4.2. Morphological Matching Analysis (Gračanin-Yuksek 2010)

The salient contrast so far is the contrast between sentences (88) and (91). The embedded relative clauses in the two sentences are identical, and thus the difference between the two cannot stem directly from any idiosyncratic attributes of the relative clause (i.e. the properties of the embedded predicate). Moreover, in both sentences, the relative head is formed from the lexeme *čovjek* ('*man*'), which enters the derivation with the same lexical primitives (that is, the φ-features are valued as masculine and animate in both). However, while the resumptive pronoun is obligatory in the relative clause in (88), it is optional in the relative clause in (91). Thus gender and animacy cannot play a role in determining the optionality of the resumptive pronoun. The difference between (88) and (91) (in terms of the optionality of the pronoun) must be syntactic and not simply a consequence of the lexical features on the relative head.

The clearest observable difference between (88) and (91) is that the external relative head in (88) is nominative, while the external relative head in (91) is marked accusative. Gračanin-Yuksek (2010) claims that this is the crucial difference between the two. More precisely, she claims (adopting the Sauerland matching model of relative clauses) that it is by means of a matching effect of the external and internal relative heads that the deletion of the internal relative head is licensed. That is, if the external relative head and the internal relative head are identical, the internal relative head undergoes deletion. Furthermore, she shows that this matching relation is not based upon the identity of the features (e.g. abstract case) of the heads but rather the morphological identity of the two heads, and thus, the matching effect can obtain between two featurally distinct but syncretic relative heads.

(92) Dijete [ što sam (ga) vidio ] voli
child$_{NOM.SG.NEUT.}$ that AUX$_{1st.SG.}$ it$_{ACC.SG.NEUT.}$ saw$_{MASC.SG.PAST.}$ loves$_{3rd.SG.PRES.}$

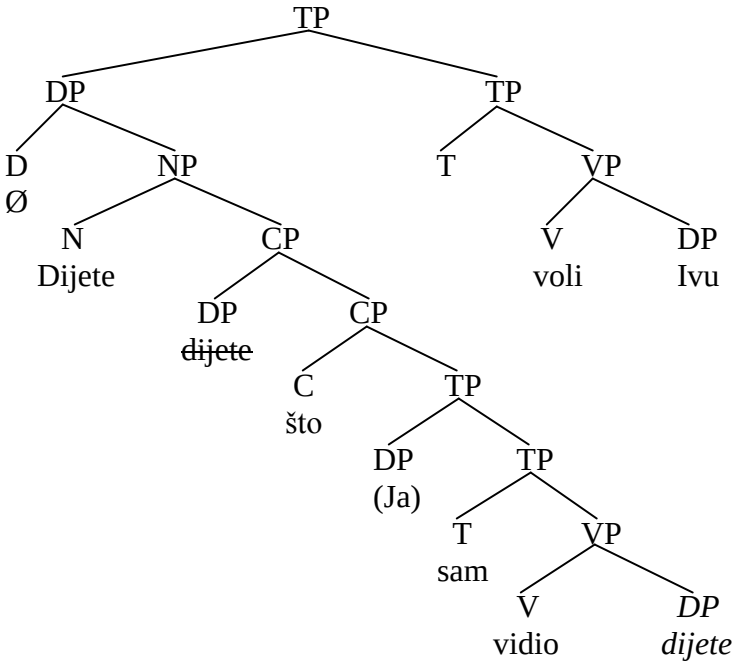
Ivu.
Iva$_{ACC.SG.FEM.}$

'The child that I saw loves Iva.'

While *dijete* (*child*) is nominative case in the matrix clause, the resumptive pronoun is accusative. Nevertheless, the resumptive pronoun is optional. The reason that it is optional, according to Gračanin-Yuksek (2010), is that the form *dijete* is syncretic between nominative and accusative.

Gračanin-Yuksek (2010) develops an analysis in which resumptive pronouns are in free variation with $N^0$ internal relative heads; either a resumptive pronoun may merge or relative head may merge into the relative clause. She proposes that once a resumptive pronoun is merged, there can be no matching relation. If, on the other hand, an internal relative head that matches the external relative head is merged, it can raise and then delete under Relative Deletion. Thus, the derivation of (92) without a resumptive pronoun can, according to Gračanin-Yuksek, be represented as follows in Diagram (34). (Note: the subject of the relative clause is the unpronounced term *Ja*, which is the 1st person singular pronoun, *I*.)

Diagram 34




The word for child in B/C/S is *dijete* for both nominative and accusative. Thus, the internal relative head and the external relative head match in form, although they do not match in case. Gračanin-Yuksek argues that this morphological matching is what ultimately results in those relative clauses that do not contain resumptive pronouns. This also accounts for the data in sentence (89) because *film*, like *dijete*, is syncretic between nominative and accusative. Thus the accusative marked internal relative head can raise and be deleted on morphological identity with the external relative head.

Gračanin-Yuksek also claims that this raising cannot occur with oblique objects. This is a necessary conjecture, given her analysis, because oblique resumptive pronouns are never optional, regardless of whether or not there is a morphologically matching antecedent in the higher clause.

(93) Napisala sam pismo **čovjeku**, što si
wrote$_{FEM.SG.PAST.}$ AUX$_{1st.SG.}$ letter$_{ACC.SG.NEUT.}$ **man$_{DAT.SG.MASC.}$** that AUX$_{2nd.SG.}$

***(mu)** pomogao.
**him$_{DAT.SG.MASC.}$** helped$_{MASC.SG.PAST.}$

'I wrote a letter to the man that you helped.'

Assuming Gračanin-Yuskek's analysis, there should be two initial options available in sentence (93): either the resumptive pronoun could merge or the $N^0$ relative head could merge. If a relative head merges into the derivation instead of a resumptive pronoun, the internal relative head would be identical to the external relative head, as in (94).

(94) Napisala sam pismo **čovjeku**
wrote$_{FEM.SG.PAST.}$ AUX$_{1st.SG.}$ letter$_{ACC.SG.NEUT.}$ **man$_{DAT.SG.MASC.}$**

[$_{CP}$ što si pomogao (**čovjeku)**. ]
that AUX$_{2nd.SG.}$ helped$_{MASC.SG.PAST.}$ **man$_{DAT.SG.MASC.}$**

'I wrote a letter to the man that you helped.'

If the internal relative head were to raise, it would be deleted under Relative Deletion, thus generating the ungrammatical sentence (95), in which there is no resumptive pronoun:

(95) * Napisala sam pismo čovjeku, što si
wrote$_{FEM.SG.PAST.}$ AUX$_{1st.SG.}$ letter$_{ACC.SG.NEUT.}$ man$_{DAT.SG.MASC.}$ that AUX$_{2nd.SG.}$

pomogao.
helped$_{MASC.SG.PAST.}$

'I wrote a letter to the man that you helped.'

Thus, it is critical that Gračanin-Yuksek include in her analysis some way to rule out sentences like (95). She claims that oblique heads cannot raise and supports her claim by showing that in other structures, specifically in Free Relatives, oblique heads cannot raise. The evidence comes from reconstruction effects in free relatives:

(96) Jan$_j$ će pohvaliti [$_{RC}$ koje god svoje$_{i/*j}$
Jan$_{NOM.SG.MASC.}$ will praise which$_{ACC.SG.NEUT.}$ ever self's$_{ACC.SG.NEUT.}$

dijete Ivan$_i$ dovede ].
child$_{ACC.SG.NEUT.}$ Ivan$_{NOM.SG.MASC.}$ brings

'Jan$_j$ will praise whichever of his$_{i/*j}$ children Ivan$_i$ brings.' (Gračanin-Yuksek 2010)

The reflexive possessive pronoun *svoje* in (96) must be anaphoric on *Ivan* and not *Jan*. Since the anaphor is not c-commanded by *Ivan* at PF, it is only through reconstruction of the anaphor into its first merge position that the correct interpretation can be derived. Gračanin-Yuksek demonstrates that reconstruction is not possible when the relative pronoun is oblique.

(97) * Vid$_i$ se sjeća [ kojeg god svog$_{i/j}$
Vid$_{NOM.SG.MASC.}$ REFL remembers which$_{GEN.SG.MASC.}$ ever self's$_{GEN.SG.MASC.}$

psa se Jan$_j$ bojao. ]
dog$_{GEN.SG.MASC.}$ REFL Jan$_{NOM.SG.MASC.}$ feared

'Vid remembers whichever of his dogs Jan feared.'

She claims that because oblique arguments cannot reconstruct, they cannot raise, and she extends this generalization to oblique arguments in relative clauses; i.e., they too are unable to raise.

## 4.3. Slovak

A major impediment to the Gračanin-Yuksek analysis is that Slovak, a language that has the same restrictions on optional resumption as B/C/S, does not have the same restriction on oblique argument reconstruction.

### 4.3.1. Slovak Data Corresponding to B/C/S Data

Slovak, like B/C/S, frequently requires a resumptive pronoun in relative clause CPs headed by an over $C^0$. In (98), which corresponds to the B/C/S sentence in (88), the resumptive pronoun obligatory.

(98) Človek, čo som *(ho) videl sedí
man$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.}$ him$_{ACC.SG.MASC.}$ saw$_{MASC.SG.PAST}$ sits$_{3rdSG.PRES.}$

tu.
here.

'The man that I saw is sitting here.'

Like speakers of B/C/S, speakers of Slovak often have the intuition that the pronoun in (98) is obligatory due to the animacy of the relative head. However, as illustrated by (99), this is not an adequate explanation.

(99) Kúpil som si knihu od **človeka**
bought$_{MASC.SG.PAST.}$ AUX$_{1st.SG.}$ REFL book$_{ACC.SG.FEM.}$ from **man$_{GEN.SG.MASC.}$**

čo si **(ho)** stretol.
that AUX$_{2nd.SG.}$ **him$_{ACC.SG.MASC.}$** met$_{MASC.SG.PAST.}$

'I bought myself a book from the man that you met.'

The resumptive pronoun in (99) is not obligatory, although the relative head is animate. Moreover, the external relative head and the resumptive pronoun are assigned two distinct cases. While the external relative head *človeka* '*man*' has its genitive case checked by the preposition *od* '*from*', the resumptive pronoun *ho* '*him*' checks its structural accusative case as the object of *stretol* '*met*'.

In Slovak, as in most Slavic languages, animate masculine nouns are syncretic between genitive and accusative forms. Thus the form of the internal relative head would be identical to the form of the external relative head. Given Gračanin-Yuksek's analysis, the derivation would be as follows:

(100) Kúpil som si knihu od **človeka**
bought$_{\text{MASC.SG.PAST.}}$ AUX$_{\text{1st.SG.}}$ REFL book$_{\text{ACC.SG.FEM.}}$ from **man$_{\textbf{GEN.SG.MASC.}}$**

[$_{\text{CP}}$ ~~**človeka**~~ [$_{\text{CP}}$ čo si ~~***človeka***~~ stretol. ]]
~~**man$_{\textbf{ACC.SG.MASC.}}$**~~ that AUX$_{\text{2nd.SG.}}$ ***man$_{\textbf{ACC.SG.MASC.}}$*** met$_{\text{MASC.SG.PAST.}}$

'I bought myself a book from the man that you met.'

In (100), the relative head (not the resumptive pronoun) is merged into the derivation. It raises to Spec-CP where it deletes on morphological identity with the external relative head. This corresponds to the B/C/S sentence (92) in which *dijete* '*child*' can be deleted on identity with the external relative head.

Slovak is also like B/C/S insofar as oblique resumptive pronouns are uniformly obligatory, regardless of whether or not they match their external relative heads.

(101) Napísala som list **človekovi**, čo si
wrote$_{FEM.SG.PAST.}$ AUX$_{1st.SG.}$ letter$_{ACC.SG.MASC.}$ **man$_{DAT.SG.MASC.}$** that AUX$_{2nd.SG.}$

***(mu)** pomohol.
**him$_{DAT.SG.MASC.}$** helped$_{MASC.SG.PAST.}$

'I wrote a letter to the man that you helped.'

The external relative head in (101), *človekovi* '*man*', is dative, being the indirect object of V *napísala* '*wrote*'. The resumptive pronoun is direct object of the verb *pomohol* '*helped*', which is a predicate that checks quirky dative case on its object. Thus, the resumptive pronoun and the external relative head are both dative.

If instead of the resumptive pronoun, the R-expression relative head were merged into the relative clause, it would match (both morphosyntactically and morphologically) the external relative head: both would be realized as *človekovi* (*man$_{DAT.SG.MASC.}$*).

According to Gračanin-Yuksek, the problem with merging this oblique internal relative head is that it cannot raise (because it cannot reconstruct) and undergo Relative Deletion. Thus, the derivation is deviant and the only option is to merge a resumptive pronoun. But the only independent evidence she provides for arguing that oblique objects do not raise comes from raising in free relatives.

### 4.3.2. Slovak Free Relatives

While the Slovak data patterns with the B/C/S data with respect to canonical resumptive pronouns, Slovak does not have a restriction on reconstructing oblique objects in free relatives[67].

[67]Some speakers consider the B/C/S analog of (102) to be grammatical. Those who do find it grammatical also affirm that the reflexive possessive pronoun can only be anaphoric on the relative clause internal NP.

(102)Jožo$_{j}$ pomôže ktorýmkoľvek svojím$_{i/*j}$
Jožo$_{NOM.SG.MASC.}$ will-help whichever$_{DAT.PL.MASC.}$ self's$_{DAT.PL.MASC.}$

priateľom Ivan$_{i}$ poslal listy.
friends$_{DAT.PL.MASC.}$ Ivan$_{NOM.SG.MASC.}$ sent$_{MASC.SG.PAST.}$ letters$_{ACC.PL.MASC.}$

'Jožo$_{j}$ will help whichever of his$_{i/*j}$ friends Ivan$_{i}$ sent letters to.'

The relative clause in (102) contains the reflexive possessive pronoun *svojím*, which must be interpreted as anaphoric on the lower NP *Ivan* and cannot be interpreted as anaphoric on the matrix subject NP *Jožo*. Thus the dative case marked phrase *ktorýmkoľvek svojím priateľom* ('*whichever of his friends*') must reconstruct into its first merge position where it is c-commanded by *Ivan*.

Because Slovak allows raising of oblique objects, Gračanin-Yuksek's analysis does not hold, i.e., given her analysis, there is no compelling reason why matching and relative deletion of oblique objects cannot occur in Slovak. Thus, there is no way for Gračanin-Yuksek's analysis to rule out the following ungrammatical sentence:

---

Bogdan$_{j}$ će pomoći kojim god je svojim$_{i/*j}$ prijateljima
Bogdan$_{NOM.SG.MASC.}$ will help which$_{DAT.PL.MASC.}$ ever $AUX_{3rd.SG.}$ self's$_{DAT.PL.MASC.}$ friends$_{DAT.PL.MASC.}$

Ivan$_{i}$ poslal pisma.
Ivan$_{NOM.SG.MASC.}$ sent$_{MASC.SG.PAST.}$ letters$_{ACC.PL.NEUT.}$

'Bogdan$_{j}$ will help whichever of his$_{i/*j}$ friends Ivan$_{i}$ sent letters to.'

Because some speakers do allow for reconstruction of oblique objects even in B/C/S, it is not a strong argument for a general restriction against raising oblique arguments. Many thanks to Muamera Bregović for her insights.

(103) *Napísala som list **človekovi**, čo si
wrote$_{FEM.SG.PAST.}$ AUX$_{1st.SG.}$ letter$_{ACC.SG.MASC.}$ **man$_{DAT.SG.MASC.}$** that AUX$_{2nd.SG.}$

pomohol.
helped$_{MASC.SG.PAST.}$

'I wrote a letter to the man that you helped.'

## 4.4. Optional Resumption under the Stacked-DP analysis

The stacked-DP analysis has some elements in common with Gračanin-Yuksek's analysis: both incorporate the Sauerland matching analysis of relative clauses, in which there are two distinct heads. The crucial difference between the two analyses is that in Gračanin-Yuksek (2010), the resumptive pronoun and the $N^0$ internal relative head occur in free variation. Under the stacked-DP analysis, all relative clauses contain both a pronoun and its associate, which is the internal relative head. In addition, the Gračanin-Yuksek analysis relies on the inertness of oblique objects in order to explain the obligatory presence of oblique case marked resumptive pronouns. In the previous section, I illustrated how her argument that oblique objects are inert is problematic.

### 4.4.1. Optional Non-Oblique Resumptive Pronouns

Gračanin-Yuksek's most striking observation is that it is the form of the relative head that determines whether the resumptive pronoun is optional. Even if the forms are merely syncretic and bear distinct morphosyntactic features (particularly abstract case), the resumptive pronoun is nevertheless optional. This observation indicates that the

mechanism employed to delete the resumptive pronoun operates at the level of PF, where abstract case is illegible and only morphological form is relevant.

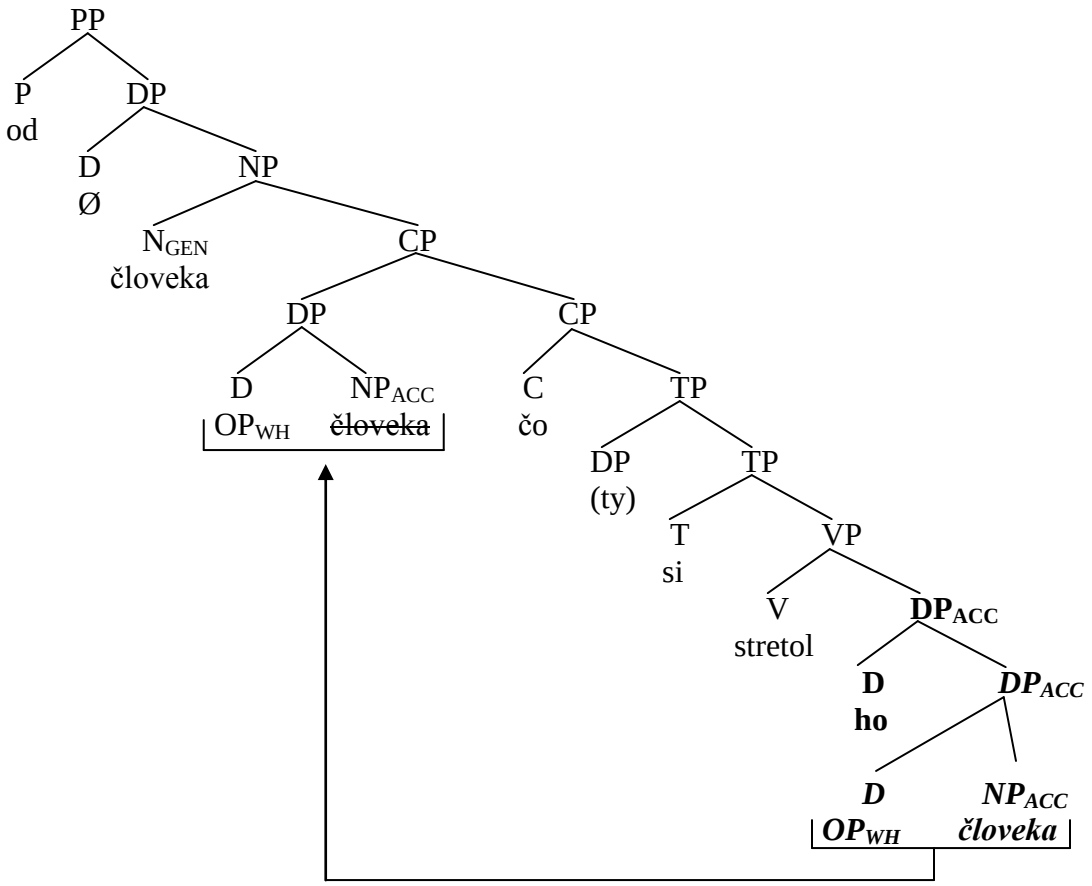
Given the stacked-DP analysis of resumptive pronouns, the relative clause in (100) (repeated below) would be derived as follows:

(100) Kúpil som si knihu od **človeka**
bought$_{MASC.SG.PAST.}$ AUX$_{1st.SG.}$ REFL book$_{ACC.SG.FEM.}$ from **man$_{GEN.SG.MASC.}$**

[$_{CP}$ ~~**človeka**~~ [$_{CP}$ čo si ~~***človeka***~~ stretol. ]]
~~**man$_{ACC.SG.MASC.}$**~~ that AUX$_{2nd.SG.}$ ***man$_{ACC.SG.MASC.}$*** met$_{MASC.SG.PAST.}$

'I bought myself a book from the man that you met.'

Diagram 35



In this model of relative clauses and this analysis of resumptive pronouns, the PF operation that allows optional deletion must apply only when the internal head and the external head are a complete match. However, the raised copy of the internal relative head (the copy in Spec-CP) undergoes relative deletion before Spell-Out. In other words, while Relative Deletion occurs in narrow syntax, the ellipsis of the resumptive pronoun occurs at PF. Because the moved internal relative head (i.e. the highest copy of the internal relative head) is deleted prior to Spell-Out, it is not relevant at PF. Therefore, the PF matching relation is not between the the external head and the highest copy of the internal relative head, but rather the matching relation obtains between the external head and the first merge (i.e. lowest) copy of the relative head.[68]

The PF deletion of the resumptive pronoun operates as follows: if the external head and the internal head match, the pronoun with which the internal head is associated may optionally be deleted. The mechanics of this operation are fairly simple: if there exists a matching relation between the external and internal relative heads, the DP containing the internal relative head is deleted.

However, we see in diagram (35) that the lowest copy of the internal relative head is part of a stacked DP. Thus, given the matching relation between the external and internal relative heads, either the minimal DP containing the internal relative head may be deleted or, alternatively, the maximal DP containing the internal relative head may be

[68]This is not to say that the *derivational* relationship between the two positions of the internal relative head (i.e. first merge and Specifier of the relative CP) is relevant at PF. The Spec-CP of the relative clause is deleted (via Relative Deletion) prior to Spell-Out, so it is, in fact, invisible to PF. It is only the first merge copy that is relevant at PF and only for the deletion of the resumptive pronoun under morphological matching of the external and internal relative heads.

deleted. In the former case, the resumptive pronoun will be pronounced, while in the latter case, it will be elided.

4.4.2. Obligatory Oblique Resumptive Pronouns

Bianchi (2004) argues that while structural case does not necessarily need to be spelled out, inherent case must be spelled out. She offers several pieces of empirical evidence supporting this claim. For example, she cites a phenomenon in Russian involving the genitive of quantification (Babby 1987).

(104) Ja kupila [$_{QP}$ pjat' **knig**. ]$_{ACC}$
I$_{NOM.SG.}$ bought$_{FEM.PAST.}$ ive$_{ACC.}$ **books$_{GEN.PL.FEM.}$**

'I bought five books.'

In (104), the phrase *pjat' knig ' five books*' is a Quantifier Phrase assigned structural accusative case as the direct object of V *kupila* '*bought*'. While the quantifier *pjat'* '*five*' surfaces in the accusative case, the quantified object *knig* '*books*' is assigned genitive by the quantifier. Now see (105).

(105) My razgovaryvali o [$_{QP}$ pjati **knigax** ]$_{LOC}$
We$_{NOM.PL.}$ were-talking$_{PL.PAST.}$ about five$_{LOC.}$ **books$_{LOC.PL.FEM.}$**

'We talked about five books.'

In (105), however, the QP is assigned inherent locative case by the preposition *o* '*about*'. The quantifier cannot assign genitive to the quantified object, because in instances of case conflict, inherent case is favored over structural case (Babby 1987). Thus, a quantified NP will surface as genitive, so long as the QP is assigned structural case, whereas if the

QP is assigned inherent case, the genitive of quantification is blocked and inherent case is pronounced on the NP (Babby 1987).

Because oblique case must be pronounced, oblique case-marked resumptive pronouns cannot be deleted regardless of matching effects. In terms of the structure, this means that even when the external relative head and the internal relative head match at PF, only the minimal DP containing the internal relative head can be elided if the maximal DP headed by the resumptive pronoun is assigned oblique case.

## 4.5. Summary

This chapter concerns the phenomenon of optional canonical resumptive pronouns in B/C/S and Slovak. Both languages exhibit the same patterns in their data with respect to licensing the deletion of resumptive pronouns. As pointed out by Gračanin-Yuksek (2010), the omission of a resumptive pronoun is dependent upon a morphological matching of the internal and external relative head. While I follow the basic insight of Gračanin-Yuksek's analysis (the operations involved are matching and deletion), my analysis is significantly different from hers with regard to how those operations apply.

Gračanin-Yuksek posits a lexical difference between sentences that contain a canonical resumptive pronoun and those that do not; that is, she claims that the numerations for the following two sentences are distinct:

(106) Iva je upoznala čovjeka, što sam
Iva$_{NOM.SG.FEM.}$ AUX$_{3rd.SG.}$ met$_{MASC.SG.PAST.}$ man$_{ACC.SG.MASC.ANIM.}$ that AUX$_{1st.SG.}$

ga vidio.
him$_{ACC.SG.MASC.ANIM.}$ saw$_{MASC.SG.PAST.}$

'Iva met the man that I saw.'

(107) Iva je upoznala čovjeka, što
Iva$_{NOM.SG.FEM.}$ AUX$_{3rd.SG.}$ met$_{MASC.SG.PAST.}$ man$_{ACC.SG.MASC.ANIM.}$ that

sam vidio
AUX$_{1st.SG.}$ saw$_{MASC.SG.PAST.}$

'Iva met the man that I saw.'

This difference has no consequences at LF in either B/C/S or in Slovak. In the analysis I present in section 4.4.1, on the other hand, the difference between (106) and (107) is a purely PF-level phenomenon. Upon the matching of the internal and external relative head, a deletion operation will apply to the DP containing the internal relative head. This operation can either apply to the minimal DP, which will then leave the resumptive pronoun to be pronounced (thus resulting in sentence (106)), or alternatively, it can apply to the maximal DP, which will result in the deletion of both the internal relative head as well as its associated pronoun (thus resulting in sentence (107)).

I also prove that the argument Gračanin-Yuksek offers to explain obligatory oblique resumptive pronouns is inadequate. I propose instead (following Bianchi 2004) that resumptive pronouns are obligatory when they are marked with inherent case. This notion of obligatory pronunciation of inherent case is supported by independent empirical evidence.

# CHAPTER 5
# A FEATURE MISMACH MYSTERY IN SLOVENE

As shown in the previous chapters, many aspects of resumption vary between languages and even within a single language. In some languages, such as Hebrew, the use of canonical resumptive pronouns appears to be optional: their use depends upon whether or not the stacked-DP or the internal DP raises to Spec-CP. In some languages (e.g. Macedonian), resumption occurs as a result of the internal DP movement to Specifier of the stacked-DP, yielding clitic doubles of objects. In short, there is a variety of parameters that cause resumption to be restricted in different ways in different languages. Nevertheless, there are some aspects of resumption that are considered to be universal constants: (1) resumptive pronouns are syncretic with ordinary pronouns, (2) resumptive pronouns are blocked from highest subject position of a relative clause, (3) resumptive pronouns are obligatorily anaphoric on a proximate overt antecedent, and (4) resumptive pronouns share the same φ-features and denotation as their overt antecedent. It is the last of these generalizations and an apparent counter-example to it (introduced in Section 5.2) that will be investigated in this chapter.

## 5.1. A Brief Typology of Slovene Relative Clauses

Slovene, a South Slavic language spoken by just over 2 million people in the northwest region of former Yugoslavia, has a morphologically rich array of relative clause types. In this section, we will examine the distinct strategies of forming relative clauses in Slovene.

5.1.1. *Kateri*-type relatives (*which*-relatives)

Relative clauses headed by a $D^0$ *which* relativizer are widely attested cross-linguistically. In fact, in the analysis I have presented for relative clauses, a *wh*-relativizer is always present (either as the overt lexical item *which* or as a silent *wh*-operator) in all derivations of relative clauses. In Slovene, *kateri* ('*which*') is declined as an adjective, inflecting for case, number, and gender. The table below gives the full declension paradigm of *kateri*.

Diagram 36

| | SG | SG | SG | DU | DU | DU | PL | PL | PL |
|---|---|---|---|---|---|---|---|---|---|
| | MASC | FEM | NEUT | MASC | FEM | NEUT | MASC | FEM | NEUT |
| NOM | *Kateri* | *katera* | *katero* | *katera* | *kateri* | *katera* | *kateri* | *katere* | *katera* |
| ACC | *kateri/ katerega*[69] | *katero* | *katero* | *katera* | *kateri* | *katera* | *kateri* | *katere* | *katera* |
| GEN | *katerega* | *katere* | *katerega* | *katerih* | *katerih* | *katerih* | *katerih* | *katerih* | *katerih* |
| DAT | *kateremu* | *kateri* | *kateremu* | *katerima* | *katerima* | *katerima* | *katerim* | *katerim* | *katerim* |
| LOC | *katerem* | *kateri* | *katerem* | *katerih* | *katerih* | *katerih* | *katerih* | *katerih* | *katerih* |
| INST | *katerim* | *katero* | *katerim* | *katerima* | *katerima* | *katerima* | *katerimi* | *katerimi* | *katerimi* |

Although *kateri* exhibits adjectival morphology, it is, in fact, a determiner head. While adjectives can occur in DPs headed by the [+foc] deictic determiner *ta*, *kateri* cannot.

(108) ta velika hiša
this big house

'this big house'

(109) * ta katera hiša
this which house

[69]For animate masculine nouns, the accusative morphology follows the genitive declension morphological pattern.

The $D^0$ *kateri* can either precede an NP in an interrogative, as in (110), or it can introduce a relative clause, as in (111). In both instances, it is a [+def] determiner.

(110) Katero knjigo si prebral včeraj?
which$_{ACC.FEM.SG.}$ book$_{ACC.FEM.SG.}$ AUX$_{2nd.SG.}$ read$_{MASC.SG.PAST.}$ yesterday$_{ADV.}$

'Which book did you read yesterday?'

(111) Knjiga, ob kateri sem se nasmejala,
book$_{NOM.SG.FEM.}$ about which$_{LOC.SG.FEM.}$ AUX$_{1ST.SG.}$ REFL laughed$_{FEM.SG.PAST.}$

je Moskva 2042.
is$_{3rd.SG.PRES.}$ Moscow 2042.

'The book that I was laughing about was Moscow 2042.'

It is important to note that the *kateri*-type relative is almost exclusively used as the object of a preposition - a position that cannot be occupied by a clitic pronoun (see footnote 31, chapter 2).

### 5.1.2. Free Relatives and Co-Relatives[70]

#### 5.1.2.1. The Morphology of Relative *wh*-pronouns

In most Slavic languages, *wh*-relativizers are morphologically identical to their interrogative *wh* counterparts, as illustrated by the Slovak examples below.

[70]A Free Relative is a relative clause that contains a *wh*-phrase but does not contain an overt relative head, as in the example below:

You reap what you sow.

A Co-relative is a construction related to the free relative (it, too, has no overt relative head), but it contains a demonstrative referring to the *wh*-pronoun.

You reap that, which you sow.

Slovak

(112) **Koho** tu nepoznáš?
who$_{ACC.SG.}$ here you-don't-know$_{2nd.SG.NEG.PRES.}$

'Who don't you know here?'

(113) Nedôveruj (tomu), **koho**
don’t-trust$_{2nd.SG.NEG.IMPERATIVE}$ one$_{DAT.MASC.SG.DEM.PRON.}$ who$_{ACC.SG.}$

nepoznáš.
you-don't-know$_{2nd.SG.NEG.PRES.}$

'Don't trust who you don't know.'

Slovene is different in this respect from the other Slavic languages, since all Slovene relative *wh*-pronouns are morphologically marked with an *-r* affix. They are otherwise similar, if not identical, to their interrogative counterparts. Listed below are some examples of interrogative *wh*-pronouns and their corresponding relative *wh*-pronouns.

Diagram 37

| | Interrogative *wh*-pronoun | Relative *wh*-pronoun |
|---|---|---|
| what$_{NOM./ACC.}$ | *kaj* | *kar* |
| where | *kje* | *kjer* |
| when | *kdaj* | *kadar* |
| how | *kako* | *kakor* |
| who$_{NOM.}$ | *kdo* | *kdor* |
| who$_{ACC./GEN.}$ | *koga* | *kogar* |
| whom$_{DAT.}$ | *komu* | *komur* |
| Whose | *čigav* | *čigar* |

The *-r* morpheme is a reflex of an early Slavic affix *-že*, which also created relative *wh*-pronouns from interrogative ones. In Slovene and B/C/S, an intervocalic *-ž-* sometimes became *-r-*, thus the relative *wh*-pronominal affix became *-re*. Eventually in Slovene, the final vowel was lost (Greenberg 1999)[71].

5.1.2.2. The Function of Relative *wh*-pronouns

Unlike English, Slovene employs *wh*-relatives (with the exception of *kateri*-relatives, i.e. *which*-relatives) in an extremely limited functional capacity. In English, *wh*-relatives may often be used interchangeably with *that*-relatives.[72]

(114) a. the man that I know

(114) b. the man who(m)/*which I know

(115) a. the book that I read

(115) b. the book which I read

(116) a. the reason that I called

(116) b. the reason why/*which/for which I called

(117) a. the place that we went (to)

(117) b. the place where we went (*to)

(117) c. the place which we went *(to).

[71]Many thanks to E. Wayles Browne for bringing to my attention both the evolution of the *-r* morpheme as well as the Greenberg (1999) article on its development.

[72]English is different from Slovene in that the relative *wh*-pronouns of English are essentially amalgamations of a preposition and the word *which*; i.e., the relative *wh*-word *why* is a reduction of the PP *for which*. While I have no formal analysis of this, (117a) - (117c) offer evidence that an analysis along these lines must be correct. While in (117b) the preposition *to* is impossible, in (117c) it is required. This suggests that the preposition *to* is an inherent component in the *wh*-word *where* as it is used here. In other words, the relative *wh*-word *where* is, in some sense, a composite of the items *to* and *which*.

In contrast to the wide application of *wh*-relatives in English, most Slavic languages employ *wh*-relatives (besides *which*-relatives) exclusively in free and co-relatives, as in the Slovene examples below (examples (118)-(120) are from Chidambaram 2007).

Slovene

(118) Kar bo presodilo sodišče, bomo sprejeli.
what will judge/rule court we-will accept.

'Whatever the court will rule, we will accept.' (Free Relative)

(119) Si to, kar ješ.
you-are that$_{DEM.}$ what you-eat

'You are that which you eat.' (Co-Relative)

(120) Vse, kar potrebujejo, je ljubljezen.
everything what they-need is love.

'All (what) they need is love.' (Free Relative)

The *wh*-relative pronoun kar, shown here, cannot occur in an ordinary (restrictive or non-restrictive) relative clause.

(121) * To jabolko, kar ješ ni še zrelo.
that apple what you-eat isn't yet ripe

'That apple which you are eating isn't ripe yet.'

The reason that (121) is ungrammatical in Slovene is that *wh*-pronouns are identical to their interrogative counterparts in their features, including their definiteness feature. Because *wh*-pronouns are indefinite (with the crucial exception of *which)*, they cannot occur in ordinary relative clauses, since ordinary relative clauses require a definite internal relative head. Instead their use is limited to relative clauses in which the internal relative head is a bound variable, i.e. free and co-relative clauses. The only way in Slovene to express the meaning intended in (121) is to use what I will refer to as a *ki*-type relative.

5.1.3. *ki*-type relatives (*that*-relatives)

In Slovene, most subordinate clauses are headed by $C^0$ *da*, which translates as *that*.

(122) Vem, da ideš.
I-know that you-go.

'I know that you are going.'

But unlike English, in which the subordinating complementizer can also be used to head relative clauses, the Slovene $C^0$ *da* can never head a relative clause. Slovene has a specialized complementizer whose unique function is to head restrictive and non-restrictive relative clauses[73].

[73]Sentence (123) is ambiguous, because the relative clause could either be interpreted as restrictive (if the listener thinks I may have more than one sister) or as non-restrictive (if the listener is aware that I have only one sister).

(123) Moja sestra, ki živi v Čikagu,
my$_{NOM.SG.FEM.}$ sister$_{NOM.SG.FEM.}$ that lives$_{3rd.SG.PRES.}$ in Chicago$_{LOC.SG.NEUT.}$

je odvetnica.
is$_{3rd.SG.PRES.}$ lawyer$_{NOM.SG.FEM.}$

'My sister who lives in Chicago is a lawyer.'

'My sister, who lives in Chicago, is a lawyer.'

In the relative clause in (123), there is a gap in the highest subject position of the relative clause. The canonical subject position, Spec-TP, is occupied by an unpronounced copy of the internal relative head that raised to Spec-CP. Since Slovene is a subject pro-drop language, there is never a resumptive pronoun in Spec-TP. However, if the internal relative head raises from any other position within the *ki*-type relative clause, there will be a resumptive pronoun stranded by that movement.

(124) Govorila sem s punco, ki si ***(jo)**
spoke$_{SG.FEM.}$ AUX$_{1st.SG.}$ with girl$_{INST..SG.FEM.}$ that AUX$_{2nd.SG.}$ her$_{ACC.SG.FEM.}$

spoznala včeraj.
met$_{SG.FEM.}$ yesterday

'I spoke with the girl that you met yesterday.'

The resumptive pronoun in (124) is obligatory. It should also be noted that, while their Case features are distinct, all of the φ-features (number and gender) of the pronoun and the external relative head, *punco* '*girl*', match. This comes as no surprise, given both the Pronominal Reference Condition as well as the general condition on relative clauses that the external head and the internal head must be co-referential (Sauerland 1998, 2003).

(125) Kupila sem **ta** **dva** **stola**, ki
bought$_{FEM.PAST.}$ AUX$_{1ST.SG.}$ **those$_{ACC.DU.MASC.}$** **two** **chairs$_{ACC.DU.MASC.}$** that

**ju** je prodajala Ana.
**them$_{ACC.DU.MASC.}$** AUX$_{3rd.SG.}$ sold$_{FEM.PAST.}$ Ana$_{NOM.SG.FEM.}$

'I bought those two chairs that Ana was selling (them).'

In (125) the relative head is a pair of objects, more precisely a pair of chairs (*stol* '*chair*' is masculine in Slovene). The resumptive pronoun, therefore, must have both the dual number feature and the masculine gender feature.

The Slovene *ki*-type relative, with its indeclinable $C^0$ and resumptive pronoun, is typologically common among the world's languages. It follows the same basic pattern occurring in every other language exhibiting canonical resumption: it contains an indeclinable $C^0$ and a resumptive pronoun whose φ-features and reference match those of the external relative head but whose case feature is determined by its grammatical function within the relative clause.

## 5.2. Slovene Superlative Clauses (*kar*-phrases)

The clauses that frequently follow comparative adjectives (i.e. *than*-clauses) and superlative adjectives (i.e. *that*-clauses) are often compared to if not equated with relative clauses (e.g. Andrews 1985, Kennedy 1997, Sauerland 1998). In many languages, such as English, the clause following a superlative is indistinguishable from a relative clause:

(126) The seeker [that played for Hogwarts] caught the Golden Snitch. (relative clause)

(127) The best seeker [that played for Hogwarts] was Harry Potter. (superlative clause[74])

[74]The reasons for distinguishing a superlative clause from a relative clause are identified in section 5.2.2

In (126) and (127) the embedded clauses headed by $C^0$ appear identical. The purpose of the following sections will be to demonstrate, using data from Slovene, that these clauses are actually structurally distinct.

5.2.1. *ki*-type relatives versus *kar*-phrases

In chapter 2, the *ki*-type relative is shown to contain a canonical resumptive pronoun; that is, the pronoun must match the external relative head in φ-features and reference. Any deviation from this will yield an ungrammatical sentence, as shown in example (128):

(128) *Študent$_{\mathbf{i}}$ je videl profesorja$_{\mathbf{j}}$, ki so
student$_{\text{NOM.SG.MASC.}}$ AUX$_{\text{3rd.SG.}}$ saw$_{\text{PAST.SG.MASC.}}$ professor$_{\text{ACC.}\mathbf{SG}\text{.MASC.}}$ that AUX$_{\text{3rd.PL.}}$
**jim$_{\mathbf{*i/*j/*k}}$** dali nagrado.
**them$_{\mathbf{DAT.PL.}}$** gave$_{\text{PAST.PL.}}$ award$_{\text{ACC.SG.FEM.}}$
'The student saw the professor that they gave the award to (them).'

In (128), the number feature mismatch between the resumptive pronoun (plural) and the relative head (singular) causes the sentence to be ungrammatical. Even if there exists a potential antecedent in the higher clause, if that antecedent is not the external relative head, the sentence is still ungrammatical.

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and 5.2.3.

(129) *$\textbf{Študentje}_{\textbf{i}}$ so videli profesorja$_{\textbf{j}}$, ki so
**student**$_{\textbf{NOM.PL.MASC.}}$ AUX$_{\text{3rd.PL.}}$ saw$_{\text{PAST.PL.MASC.}}$ professor$_{\text{ACC.SG.MASC.}}$ that AUX$_{\text{3rd.PL.}}$

**jim**$_{\textbf{*i/*j/*k}}$ dali nagrado.
**them**$_{\textbf{DAT.PL.}}$ gave$_{\text{PAST.PL.}}$ award$_{\text{ACC.SG.FEM.}}$

'The students saw the professor that they gave the award to (them).'

The *kar*-phrase, like a relative clause, is a clausal modifier of a nominal head. Like a *ki*-type relative, it is headed by an indeclinable $C^0$ and obligatorily includes a pronomimal element.

(130) V New-Yorku lahko vidiš **najvišje** **zgradbe**, kar so
In New-York can you-see **tallest**$_{\textbf{ACC.PL.FEM.}}$ **buildings**$_{\textbf{ACC.PL.FEM.}}$ that AUX

**jih** kdaj zgradili v Ameriki.
**them**$_{\textbf{ACC.PL.FEM.}}$ ever they-built in America

'In New York you can see the tallest buildings that they ever built (them) in America.'

Unlike the *wh*-relativizer *kar* in 5.1.2.1., the word *kar* in the embedded clause in (130) is not an inflected form. While it is homophonous with the nominative and accusative case *wh*-relativizer, this instance of *kar* in (130) is not case-marked at all. The form of *kar* in these constructions (that is, ordinary relative clauses, as opposed to free or co-relatives) is independent of case and feature considerations. In sentence (131) below, the case of the *kar*-phrase internal head must be dative, since it is the indirect object of the embedded V *dali* '*gave*'. Nevertheless, the word *kar* maintains its form irrespective of the features or case assignment of the internal head. In fact, it cannot be replaced by the dative *wh*-relativizer.

(131) Tiste so **najboljše** **glasbenice**, kar/*komur so
those are **the-best**$_{\text{NOM.PL.FEM.}}$ **musicians**$_{\text{NOM.PL.FEM.}}$ that/*to-whom AUX

**jim** kdaj dali nagrado.
**to-them**$_{\text{DAT.PL.FEM.}}$ ever they-gave award

'Those are the best musicians that they have ever given (them) the award.'

Given the case assignment restrictions we have posited for Slovene in section 2.2.3, this is entirely predictable. Because case cannot be phonetically realized on more than one $D^0$ in a DP, dative case cannot be assigned to both the pronoun as well as a *wh*-relativizer. Thus *kar* in these constructions cannot be a *wh*-relativizer.

Because *kar* in (130) and (131) behaves so differently from the *wh*-pronoun *kar*, it is reasonable to treat the two as distinct (albeit polysemous) lexical entries. Given that *kar* in (130) and (131) is morphologically invariable and its only function is to introduce a clause, it is reasonable to conclude that, like *ki*, *kar* belongs to the lexical category of complementizers rather than *wh*-pronouns.

In many ways, *kar*-phrases closely resemble *ki*-type relative clauses. Both obligatorily prohibit relative *wh*-pronouns. Both obligatorily contain an indeclinable $C^0$ as well as a pronoun whose interpretation is dependent on an antecedent and whose case is determined by its function in the embedded clause. There are, however, two crucial differences between the *ki*-type relative and the *kar*-phrase:

i. *Kar*-phrases modify only NPs whose heads are also modified by a superlative degree adjective.[75]

[75]There are examples of *kar*-phrases occurring without the presence of a superlative degree adjective, but

ii. The pronoun within the embedded *kar*-CP does not have complete φ-feature agreement with the antecedent NP. Consider sentence (132), in which the (presumed) NP associate, *iskalec* '*seeker*', is singular and the pronoun in the embedded *kar*-phrase, *jih* '*them*' is plural.

(132) Ti si **najboljši** **iskalec**, kar smo **jih** kdaj imeli!
you are **the-best**$_{\text{NOM.SG.MASC.}}$ **seeker**$_{\text{NOM.SG.MASC.}}$ that AUX **them**$_{\text{ACC.PL.}}$ ever we-had

'You are the best seeker that we have ever had (them)!' (Rowling 1999, trans. J. Kenda)

These two defining properties of *kar*-phrases indicate a fundamental difference between their syntax and the syntax of any of the relative clause types mentioned previously.

5.2.2. A Descriptive Overview of the Syntax of *kar*-phrases

The most salient property of *kar*-phrases is that they obligatorily include a pronoun, which is almost always plural[76]. The value of the number feature on the modified $N^0$ has no bearing at all on the value of the number feature on the pronoun in

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rather with a comparative degree adjective taking scope over a universal quantifier (e.g. *better than all*) - the semantics of this, as will be shown later, are identical to that of a superlative degree adjective.

[76]There is one exception in which the pronoun contained in a *kar*-phrase appears in the singular, as in the sentence below.

To je najslabše pivo, kar sem ga kdaj pila.
This is the-worst$_{\text{NOM.SG.NEUT.}}$ beer$_{\text{NOM.SG.NEUT.}}$ that AUX it$_{\text{ACC.SG.NEUT.}}$ ever I-drank
'This is the worst beer that I ever drank (it).' (Chidambaram 2007)

This, as I will discuss later on in the chapter, is a function of the modified $N^0$ being a mass noun.

the embedded CP. In example (133), the $N^0$ is in the dual while the pronoun in the embedded clause must be plural.

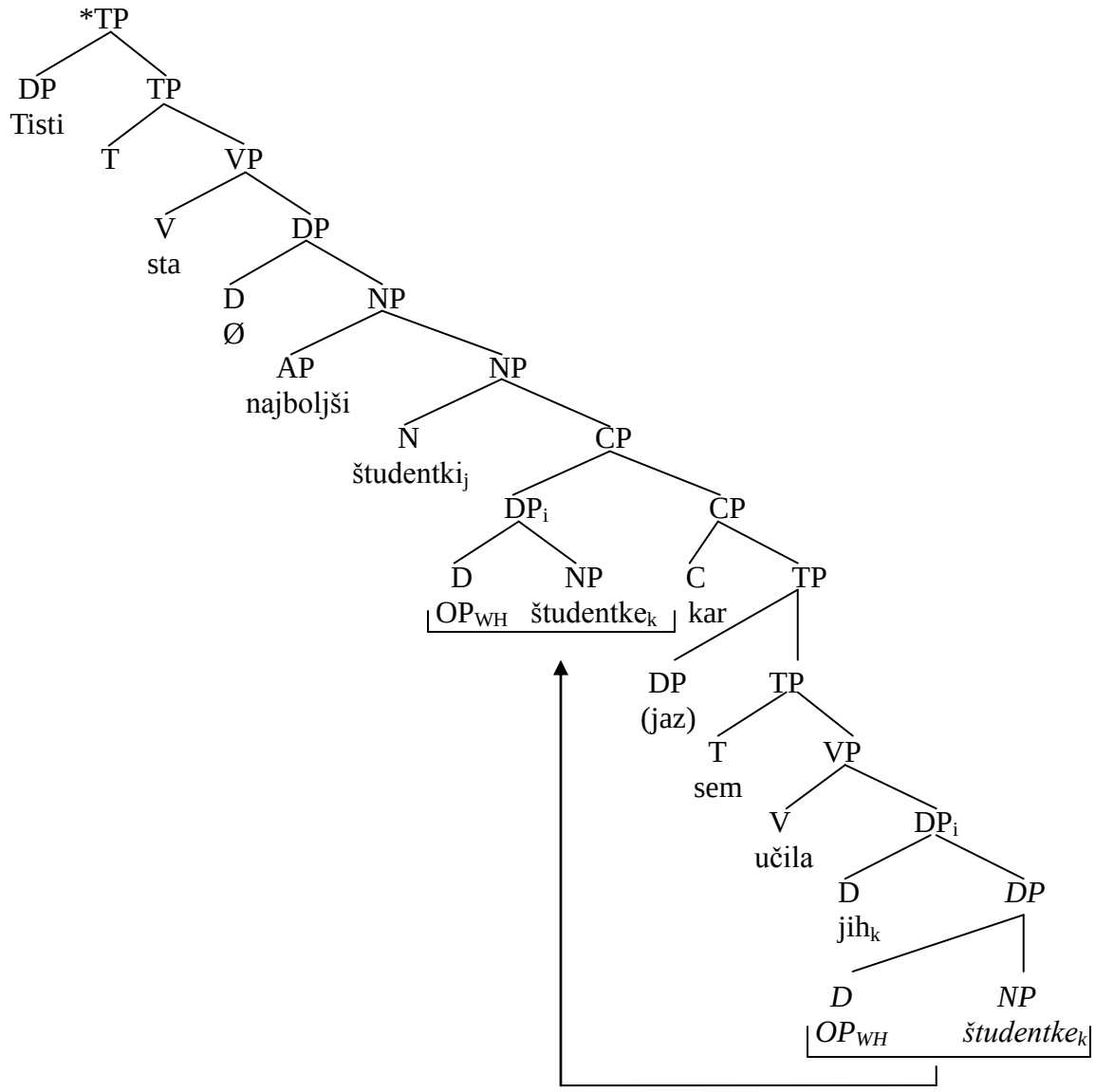
(133) Tisti sta **najboljši studentki**, kar (jaz)
those$_{NOM.DU.FEM}$ are **the-best$_{NOM.DU.FEM.}$ students$_{NOM.DU.FEM.}$** that I

sem **jih / *ju** učila.
AUX$_{1st.SG.}$ **them$_{ACC.PL.FEM.}$ them$_{ACC.DU.FEM.}$** taught$_{SG.FEM.PAST.}$

'Those are the two best students$_{dual}$ that I taught (them$_{plural\ /*dual}$).'

This fact about *kar*-phrases makes it impossible to derive them through the same syntax that we have developed for relative clauses. Consider the following infelicitous derivation of (133), modeled after the *ki*-type relative clause structure. Note that *študentke* is the plural form of the word *študentka* (meaning *student$_{NOM.SG.FEM.}$*), whereas *študentki* is the dual form.

Diagram 38




In this derivation, the plural NP *študentke* '*students*$_{plural}$' merges with a silent *wh*-operator D$^0$. The pronoun then merges to this DP, thereby creating the stacked-DP. After the V$^0$, T$^0$, subject DP, and C$^0$ merge, the internal DP raises to Spec-CP, thereby stranding the pronoun. The external relative head *študentki* '*students*$_{dual}$' is then merged. It is at this point that the derivation runs into trouble. It is a condition on relative clauses that the internal head must be co-referential with the external head; i.e., the external head must be

an antecedent of the internal head. In the structure presented in diagram (38), this condition cannot be met: because the external head and internal head do not share the same number feature (the external head is dual while the internal head is plural), they cannot possibly be co-referential. This means that external relative head cannot be the antecedent of the internal head, and therefore, Relative Deletion will not apply. The resulting sentence would be:

(134) * Tisti sta najboljši študentki,
those$_{NOM.DU.FEM}$ are the-best$_{NOM.DU.FEM.}$ students$_{NOM.DU.FEM.}$

**študentke** kar (jaz) sem **jih** učila.
**students$_{ACC.PL.FEM.}$** that I AUX$_{1st.SG.}$ **them$_{ACC.PL.FEM.}$** taught$_{SG.FEM.PAST.}$

'Those are the two best students that I taught.'

Given the failure of this derivation to converge, the syntax of *kar*-phrases must be different from that of *ki*-type relatives.

### 5.2.3. A Descriptive Overview of the Semantics of *kar*-phrases

The key to understanding the semantics of *kar*-phrases lies in their connection to superlative degree adjectives. While the function of a relative clause is to identify and describe an entity (be it an individual or a group), the function of a superlative clause (i.e. a clause adjoined to an $N^0$ modified by a superlative degree adjective) is to identify a particular group from which the superlative degree adjective isolates a specific entity. Consider again examples (126) and (127), repeated below.

(126) The seeker [that played for Hogwarts] caught the Golden Snitch.

(127) The best seeker [that played for Hogwarts] was Harry Potter.

In these two sentences, the embedded CP contains exactly the same words in exactly the same order. Nevertheless, the two clauses differ in terms of their interpretations. For example, only in (127) is a negative polarity item licensed in the embedded clause.

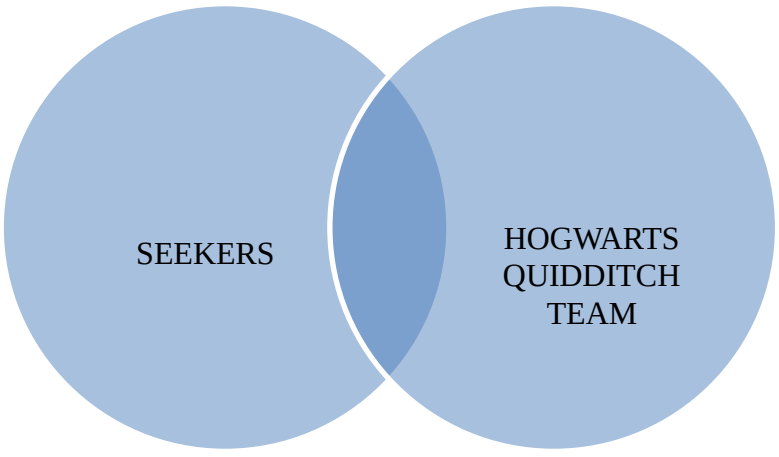
(126) a. * The seeker [ that ever played for Hogwarts] caught the Golden Snitch.

(127) a. The best seeker [ that ever played for Hogwarts] caught the Golden Snitch.

This means that the entailment environments of (126) and (127) are distinct; because the superlative degree adjective quantifies over the left argument, (127) is left downward entailing, whereas (126) is not.

Moreover, the embedded clause in (127) has a distinctly partitive reading.

Diagram 39



Given sentence (126), the intersection of the two categories in diagram (39) would consist of exactly one member. On the other hand, given sentence (127), the intersection of the two categories in the diagram may be any number greater than 1. But in order for the use of the superlative degree adjective not to be trivial, the intersection *must* be greater than 1[77]. That is, if there were only ever one seeker on the Hogwarts quidditch team, then to describe that seeker as "the *best* seeker that played for Hogwarts" is tautological. That seeker will have been, by virtue of his uniqueness as a Hogwarts seeker, both the best and the worst seeker of Hogwarts. Assuming, on the other hand, that the intersection of the categories of seekers and Hogwart quidditch team members is >1, it is the superlative degree adjective in (127) that identifies one particular member within the intersection.

This distinction is significant because it demonstrates unequivocally that the bracketed clause in (127) conveys a partitive meaning, whereas the superficially identical clause in (126) does not. In other words, the bracketed clause in (127) could be paraphrased as [among all the seekers that played for Hogwarts], whereas the same bracketed phrase in (126) could not. The partitive *kar*-phrase in (127) in fact denotes a comparison class from which the modified $N^0$ head is singled out by the superlative degree adjective (Chidambaram 2008). In order to determine how this is represented in the syntax, it is helpful to look first at the derivation of a related construction.

[77]As pointed out to me by Edwin Williams (p.c. 2013), the expectation that the intersection be >1 may only be an implicature of the superlative rather than a genuine requirement, given the following example:
"The smallest positive integer less than n", when n = 2 describes only one possible value, namely 1. However, if the statement were re-phrased not to include a variable, (i.e. "The smallest positive integer less than 2"), the use of the superlative degree adjective would be tautological.

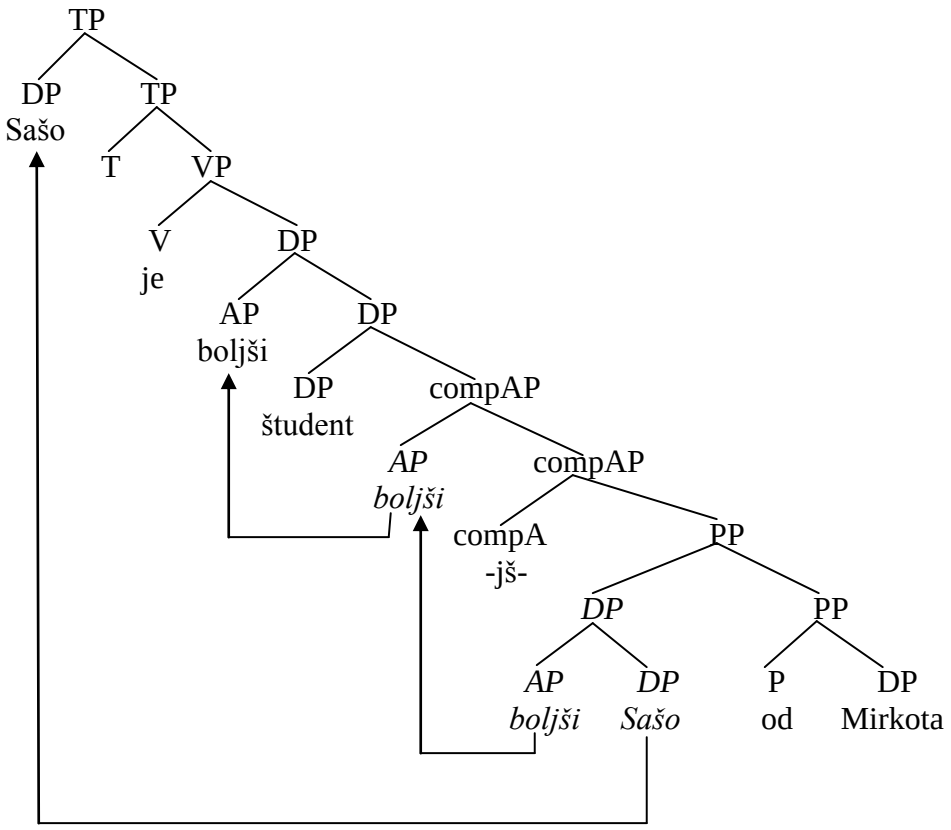
5.3. Comparatives in Slovene

There are two types of phrases that can adjoin to a comparative in Slovene: one is a prepositional phrase headed by P *od* '*from*', which checks accusative case on its object, and the other is the Slovene analog to the English *than*-phrase, headed by C *kot* '*than*'. Diagram (40) represents the derivation of (135).

(135) Sašo je boljši študent od Mirkota.
Sašo$_{NOM.SG.MASC.}$ is better$_{NOM.SG.MASC.}$ student$_{NOM.SG.MASC.}$ from Mirko$_{GEN.SG.MASC.}$

'Sašo is a better student that Mirko.'

Diagram 40



In this derivation, the preposition *od* '*from*' first merges with its object DP, *Mirkota*, where it checks its genitive case. In the Specifier position of this PP is the DP *boljši Sašo*, which contains the adjunct AP *boljši* '*better*' and the DP *Sašo*. The adjunct AP checks its φ-features with those of the DP. Both are masculine singular. The compA head merges to PP. The compA head contains the features of the comparative affix[78]; it is a phonetically null head that has a [+comparative] feature and requires a PP complement headed by the preposition *od*. The AP *boljši* raises into Spec-compAP in order to check its comparative adjectival feature. The DP *študent* then merges and the AP *boljši* raises once more into Spec-DP and checks its φ-features against *študent*. The copula merges followed by $T^0$. The DP *Sašo* then raises into Spec-TP to check its nominative case feature.

Alternatively, the compA head could take a CP headed by *kot* '*than*' as its complement.

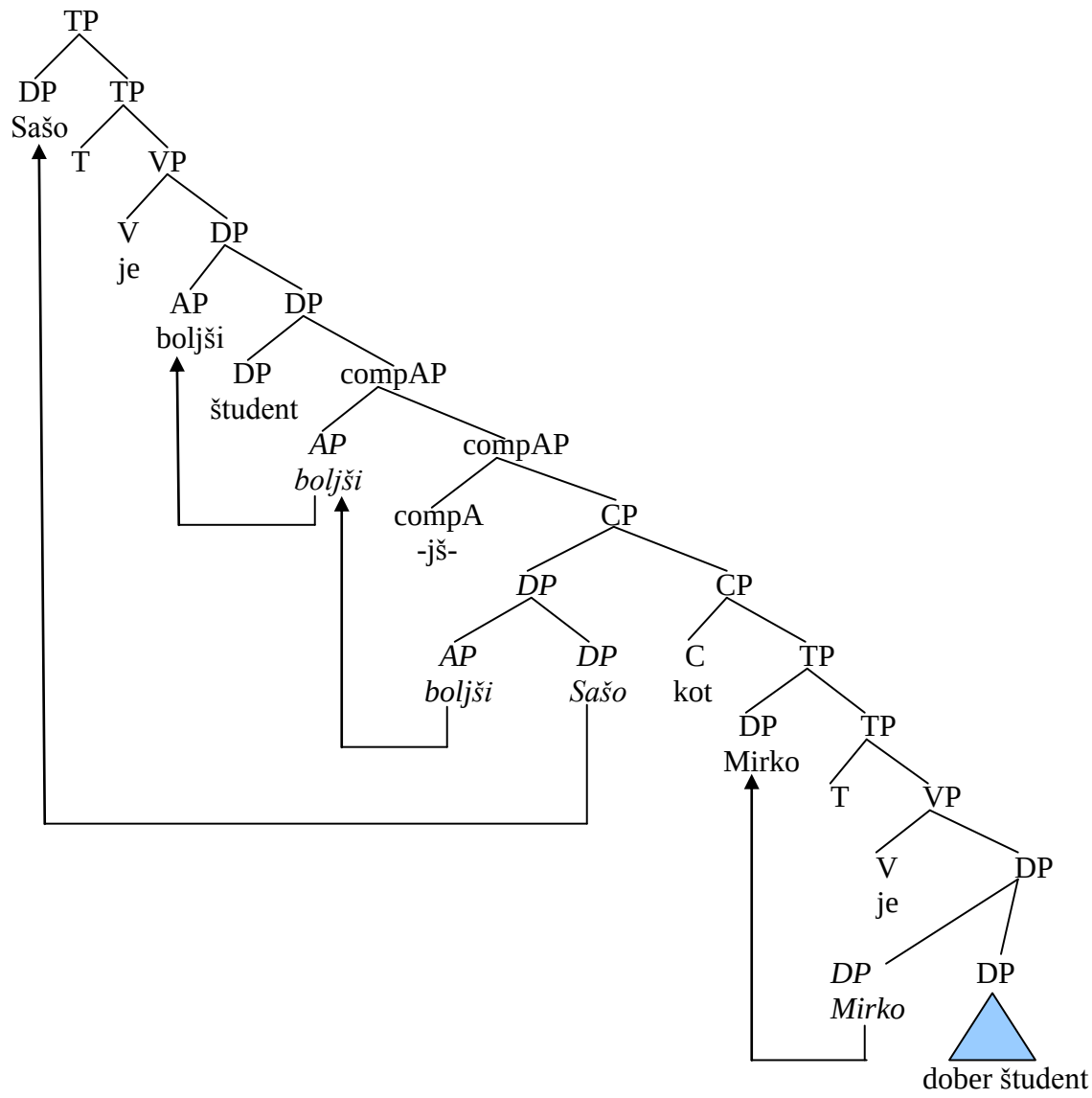
(136) Sašo je boljši študent kot (je)
Sašo$_{NOM.SG.MASC.}$ is better$_{NOM.SG.MASC.}$ student$_{NOM.PL.MASC.}$ than is

Mirko ~~dober~~ ~~študent~~.
Mirko$_{NOM.SG.MASC.}$ good$_{NOM.SG.MASC.}$ student$_{NOM.PL.MASC.}$

'Sašo is a better student than Mirko (is).'

[78]I assume the Strong Lexicalist Hypothesis (Chomsky 1970): all words come into the derivation fully formed but must check their lexical features during the course of the derivation. The affixal projection compAP is not headed by the phonetic affix but rather the features of a comparative adjective that must be checked by the adjective through a Spec-Head relation.

Diagram 41




In this derivation, the DP *Mirko* first merges with an AP adjunct *dober študent* '*good student*'. *Mirko* raises past the copula to Spec-TP. The comparative C *kot* merges to form CP. The DP *boljši Sašo* (containing the AP *boljši* '*better*' and the DP *Sašo*) merges into Spec-CP. From here, the derivation is identical to the previous derivation. The comparative adjective raises to check it [+comp] feature in Spec-compAP then again to

check the φ-features of *študent*. The DP *Sašo* raises to Spec-TP of the matrix clause to receive nominative case. At PF, however, the VP of the embedded clause is deleted by Comparative Deletion (as originally proposed in Bresnan (1975) and elaborated by Kennedy (2002) and Sauerland (2003) among others).

5.3.1. Comparatives and *kar*-phrases

While *kar*-phrases are most frequently found adjoined to $N^0$ modified by a superlative degree adjective, they can also occur with comparative adjectives, but only when the comparison class includes a universal quantifier, as in (137):

(137) Ti si **boljši** **iskalec** **od** **vseh**
you are **better**$_{\text{NOM.SG.MASC}}$ **seeker**$_{\text{NOM.SG.MASC}}$ **from all**$_{\text{GEN.PL.MASC}}$

(iskalcev) kar (mi) smo **jih** imeli.
(seekers$_{\text{GEN.PL.MASC.}}$) that we AUX$_{\text{1st.PL.}}$ **them**$_{\textbf{ACC.PL.}}$ had$_{\text{PL.PAST}}$

'You are a better seeker than all that we have ever had (them).'

There is a striking semantic relationship between sentence (137), containing a comparative and a universal quantifier, and sentence (131), repeated below as (138), which contains a superlative. In fact, the two are synonymous.

(138) Ti si najboljši iskalec, kar smo jih kdaj
you are the-best$_{\text{NOM.SG.MASC.}}$ seeker$_{\text{NOM.SG.MASC.}}$ that AUX them$_{\text{ACC.PL.}}$ ever

imeli!
we-had

'You are the best seeker that we have ever had (them)!'
(Rowling 1999, trans. by J. Kenda)

The fact that these two syntactically distinct sentences have the same meaning indicates that there exists an equivalency between their terms. That is, if we extract from these two sentences the syntactic items that differentiate them (that is, items that occur in (137) but not (138) and vice-versa), those items must be semantically equivalent. The relevant phrases are:

(139) boljši iskalec od vseh
better$_{NOM.SG.MASC.}$ seeker$_{NOM.SG.MASC.}$ of all$_{GEN.PL.MASC.}$

'better seeker than all'

(140) najboljši iskalec
best$_{NOM.SG.MASC.}$ seeker$_{NOM.SG.MASC.}$

'best seeker'

(139) and (140) are semantically equivalent, which must mean that the following equation is true:

*boljši od vseh = najboljši*

'*better of all*' = '*best*'

In order to reduce this equation to its absolute simplest terms, it is useful first to consider the morphology of comparatives and superlatives in Slovene.

5.3.2. The morphology of Slovene Comparatives and Superlatives

Slovene comparatives are typically constructed by the addition of the suffix *-jš* to the adjectival root. The same *-jš* suffix is added even for adjectives that have suppletive stems in the comparative.[79]

(141) pameten → pametne*jši*

'*smart*$_{\text{NOM.SG.MASC.}}$' '*smarter*$_{\text{NOM.SG.MASC.}}$'

(142) dober → bol*jši*

'*good*$_{\text{NOM.SG.MASC.}}$' '*better*$_{\text{NOM.SG.MASC.}}$'

While comparatives are created by adding a suffix to the positive adjectival root, the superlative is formed by adding the prefix *naj-* to the comparative adjectival stem.

(143) pameten → pametne*jš*i → *naj*pametnejši

smart$_{\text{NOM.SG.MASC.}}$ smarter$_{\text{NOM.SG.MASC.}}$ smartest$_{\text{NOM.SG.MASC.}}$

(144) dober → bol*jš*i → *naj*boljši

good$_{\text{NOM.SG.MASC.}}$ better$_{\text{NOM.SG.MASC.}}$ best$_{\text{NOM.SG.MASC.}}$

This is in line with Bobaljik's (2012) universal generalization of degree adjectival morphology, which states that superlatives are universally a product of the morphological Merger of the comparative stem with the superlative morpheme. Bobaljik notes furthermore that even when the comparative form of the adjective is periphrastic (like

[79] The final *-i* is the portmanteau ending for masculine nominative singular attributive adjectives. Positive degree adjectives frequently have a zero ending for masculine singular nominative, particularly when they are understood as indefinite, but all other degree adjectives must have the *-i* suffix.

English, some adjectives in Slovene cannot have a synthetic comparative form), the superlative morpheme merges not with the adjectival root but rather with the comparative adverb:

(145) zaspan → *bolj* zaspan → *naj*-bolj zaspan

sleepy$_{\text{NOM.SG.MASC.}}$ → more sleepy$_{\text{NOM.SG.MASC.}}$ → most sleepy$_{\text{NOM.SG.MASC.}}$

If, following Bobaljik (2012), one concludes that the morphology of comparatives and superlatives in Slovene is agglutinating, then the meaning attributed to each morpheme is transparent. The *-jš* affix carries the meaning *more* and the *naj-* affix carries the meaning *of all*. We can thus reduce the equation in section 5.3.1 to its most basic form:

od vseh = naj-

of all = -est

Intuitively, this seems to be a reasonable reduction, but moreover it is a logical equation (see Chidambaram (2008) for a formal proof illustrating that the definition of a comparative and the definition of a superlative differ only by the inclusion of a universal quantifier in the latter). The link, then, between sentences like (137) and (138) is that they both contain a universal quantifier; in (138), it is inherent in the superlative degree morpheme, while in (137) it is phrased explicitly as a universal quantifier. Given that these are the only conditions that license the *kar*-phrase, it is clear that *kar*-phrases occur as a reflex of the presence of a universal quantifier[80]. This claim is further substantiated by the following data (Chidambaram 2007):

[80]This is consistent with a suggestion made by Edwin Williams (p.c. 2013) that *kar* may be an NPI licenser,

(146) To so vsi iskalci kar smo
that are$_{3rd.PL.}$ all$_{NOM.PL.MASC.}$ seeker$_{NOM.PL.MASC.}$ that AUX$_{1st.PL.}$

jih imeli
them$_{ACC.PL.MASC.}$ had$_{PL.PAST}$

'Those are all the seekers that we have had (them).'

The occurrence of a *kar*-phrase is dependent upon presence of a universal quantifier.

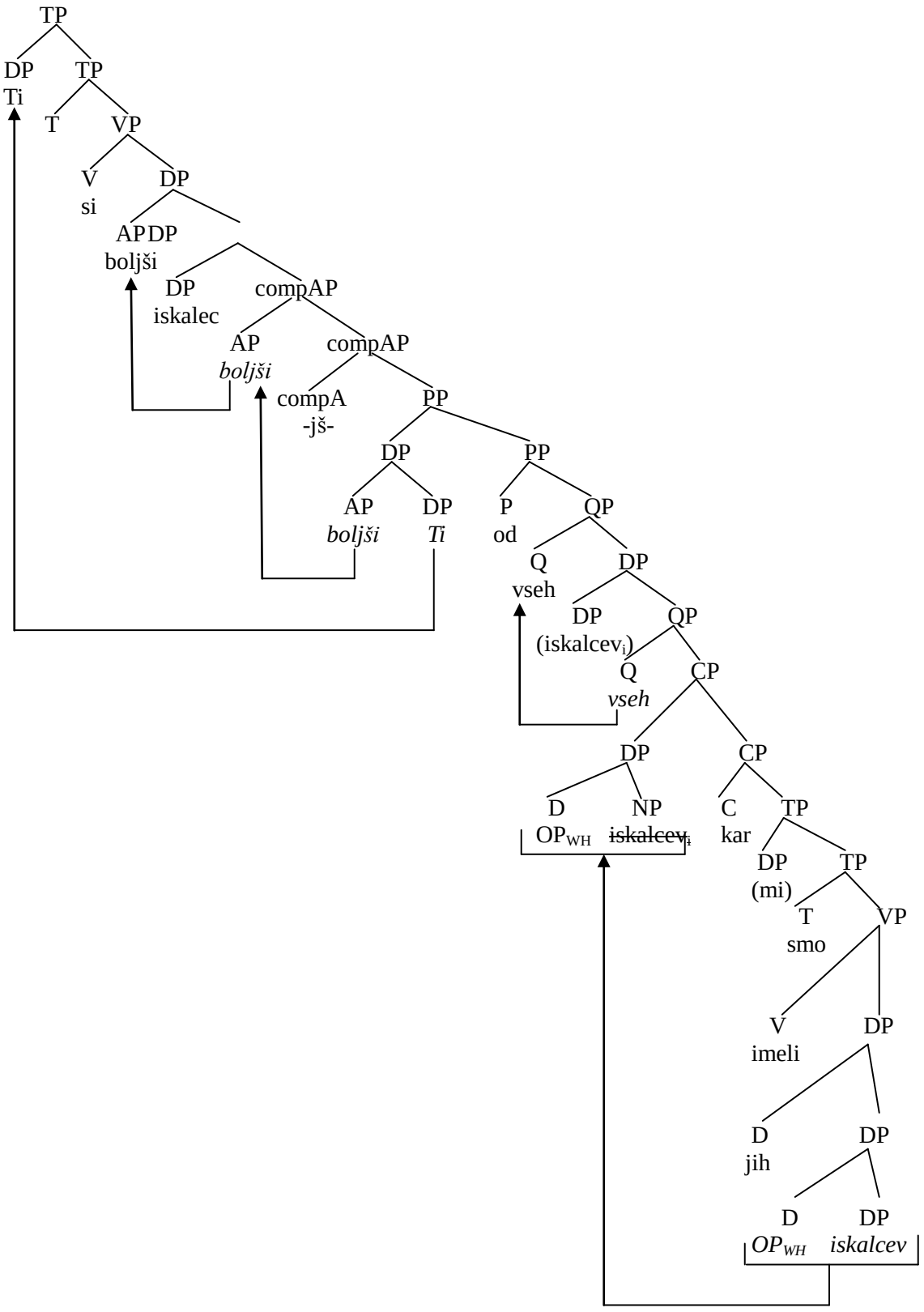
5.3.3. A Formal Analysis of Comparatives and *kar*-phrases

The *kar*-phrase is similar in many ways to a relative clause: it is headed by a $C^0$ and contains a clitic pronoun. In sentence (137) the antecedent of the clitic is the $N^0$ *iskalcev* (seekers$_{GEN.PL.MASC.}$). In the previous section, however, I showed that the *kar*-phrase differs from a typical relative clause in that it can only occur as a complement of a universal quantifier. Assuming, then, that the *kar*-phrase is a specialized partitive clause sister to the universal quantifier, diagram (42) must be the derivation of sentence (137).

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a possibility supported by the fact that *kar*-phrases can follow universal quantifiers such as *every* and *each*. Laka (1990) presents evidence for the existence of other negative complementizers which license polarity items. While I suspect that *kar* may indeed be a negative complementizer, as suggested by Williams, the research needed to confirm the hypothesis extends beyond the reach of this dissertation.

Diagram 42


TP
DP
Ti
TP
T
VP
V
si
DP
AP
boljši
DP
iskalec
compAP
AP
boljši
compA
-jš-
compAP
PP
DP
AP
boljši
DP
Ti
PP
P
od
QP
Q
vseh
DP
DP
(iskalcev$_i$)
QP
Q
vseh
CP
DP
D
OP$_{WH}$
NP
~~iskalcev$_i$~~
CP
C
kar
TP
DP
(mi)
TP
T
smo
VP
V
imeli
DP
D
jih
DP
D
OP$_{WH}$
DP
iskalcev

In this derivation, the NP *iskalcev* (*seekers*$_{ACC.PL.MASC.}$) merges with a silent *wh*-operator. The clitic pronoun *jih* merges with this DP, creating a stacked-DP. The pronoun matches its associate in reference and φ-features and checks its definiteness with its sister DP. The verb, auxiliary, and the subject of the embedded clause then merge. After the $C^0$ *kar* merges to the TP, the internal DP (which contains the *wh*-operator and the pronominal associate *iskalcev*) raises to Spec-CP to check the uninterpretable *wh*-feature on C. This strands the pronoun *jih*. The $N^0$ *iskalcev* (*seekers*$_{GEN.PL.MASC.}$) followed by the universal quantifier *vseh* then merge to the embedded CP. The DP *iskalcev* merges, then the $Q^0$ *vseh* raises to take scope over DP *iskalcev*. The preposition *od* '*from*' merges to form the PP and subsequently the subject DP and the comparative degree adjective merge into Spec-PP. The comparative adjective affixal head then merges, and the comparative adjective raises into Spec-compAP in order to check the affixal features. Then *iskalec* '*seeker*' merges and the comparative adjective raises once more to Spec-DP to check its φ-features. The matrix verb then merges and the subject *Ti* (*You*) raises from Spec-PP to Spec-TP. At PF the NP *iskalcev* within the *kar*-phrase may be deleted via an operation similar to relative deletion; i.e., it is deleted under identity with the DP Spec-QP *iskalcev*. This higher DP may also be elided at PF under near identity with the NP *iskalec*[81].

[81]The occurrence of deletion on near-identity is common, although I do not provide an analysis of it here. It does however occur in a variety of languages. Many thanks to Leonard Babby for the following example from Russian:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ja | vzgljanul | na | te | neskol'ko | stranic | prodšestvujušix | vynutoj (stranice) |
| I | looked | at | those | few | pages$_{GEN.PL.FEM.}$ | preceding | ripped-out$_{DAT.SG.FEM}$ (page$_{DAT.SG.FEM}$) |
| im. | | | | | | | |
| by-them | | | | | | | |

'I looked at those few pages preceding the one ripped out by them.'

This analysis explains the occurrences of a *kar*-phrase with overt universal quantifiers. In sentence (138), however, there is neither an overt universal quantifier nor an overt plural antecedent of the *kar*-phrase internal DP.

## 5.4. A Formal Analysis of Superlatives and *kar*-phrases

As shown above in section 5.3.2, the superlative morpheme itself contains the universal quantifier, which makes it is possible for the *kar*-phrase to occur as the complement of the superlative adjective affixal projection. Moreover, the semantics of the superlative also offers insight into the obligatory plurality of the resumptive pronoun. Because the *kar*-phrase is semantically a partitive CP denoting the domain of the superlative degree quantifier, the requisite plurality on the pronoun is easily explained; as noted in Chidambaram 2008, the plural DP acts as a partitive marker, and therefore, it must be plural (deHoop 2003).

Having derived the syntax of Slovene comparatives, the relationship between comparatives and superlatives, and the restrictions on *kar*-phrases, we are now in a position to propose an explicit syntactic analysis of (138), repeated below.

(138) Ti si najboljši iskalec, kar smo jih kdaj
you are the-best$_{\text{NOM.SG.MASC.}}$ seeker$_{\text{NOM.SG.MASC.}}$ that AUX them$_{\text{ACC.PL.}}$ ever

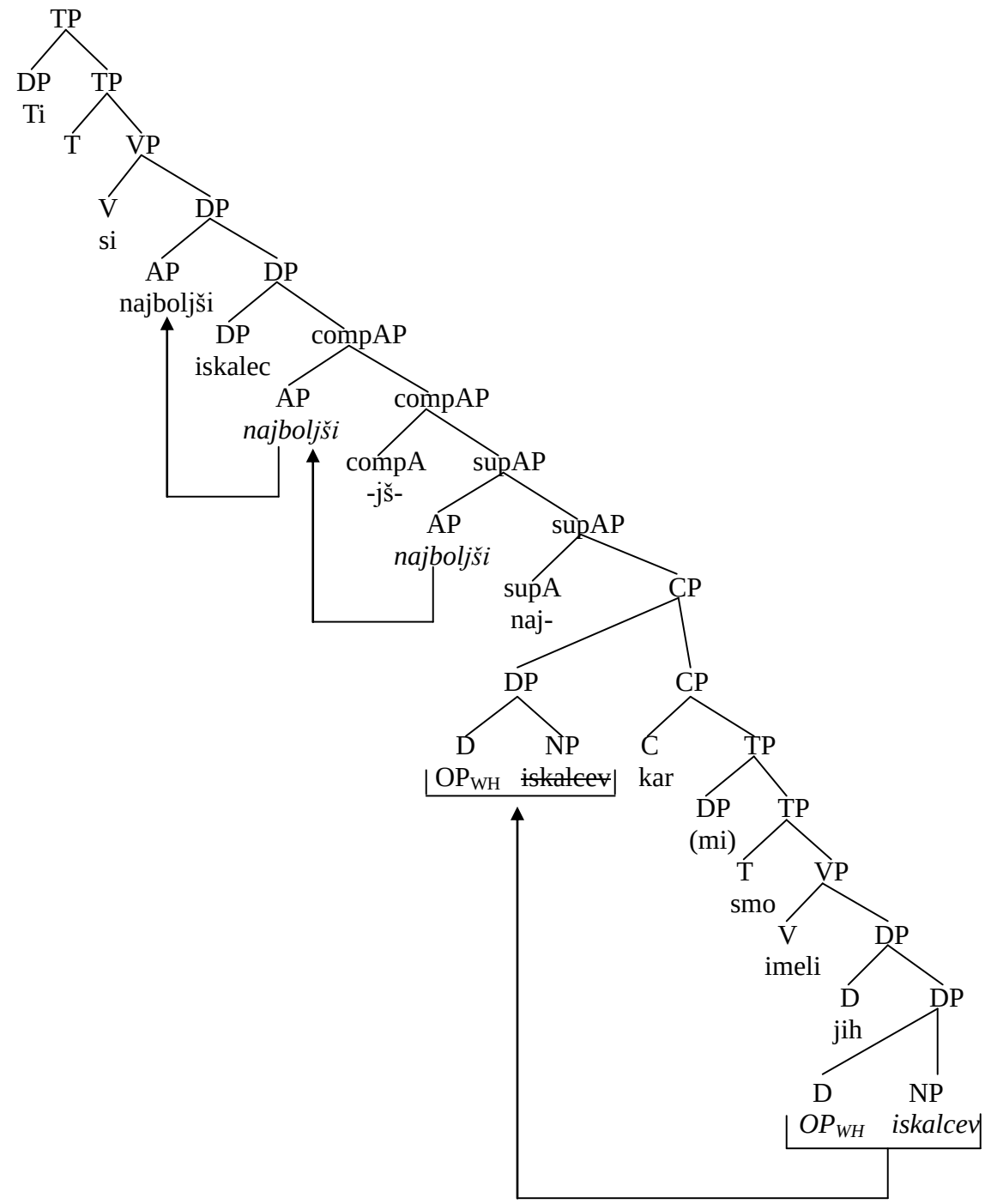
imeli!
we-had

'You are the best seeker that we have ever had (them)!'
(Rowling 1999, trans. by J. Kenda)

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In this example, the singular form of the word *page* (*stranice*) is deleted on near identity with a higher lexical item, namely the plural genitive form *pages* (*stranic*).

Diagram 43


TP
DP
Ti
TP
T
VP
V
si
DP
AP
najboljši
DP
DP
iskalec
compAP
AP
najboljši
compAP
compA
-jš-
supAP
AP
najboljši
supAP
supA
naj-
CP
DP
CP
D
OP$_{WH}$
NP
~~iskalcev~~
C
kar
TP
DP
(mi)
TP
T
smo
VP
V
imeli
DP
D
jih
DP
D
*OP$_{WH}$*
NP
*iskalcev*

This derivation has a great deal in common with the structure of (137) as illustrated in diagram (42): The embedded *kar*-phrase CP here is identical to the one in (137). The chief difference between the two is that the head that merges to the maximal *kar*-CP in (137) is the universal quantifier *vseh* (all) whereas in (138), it is the superlative affixal head that takes the *kar*-CP as its complement[82]. The AP *najboljši* '*best*' then merges as the Specifier of the superlativeAP (i.e. supAP), where it checks its superlative features against the superlative affixal head, *naj-*. The comparative affix then merges and the AP raises to Specifier of compAP to check its comparative features against the comparative affixal head, *-jš-*. The DP *iskalec* then merges and the adjective *najboljši* raises once more to Spec-DP in order to check its φ-features. Finally, the matrix verb and subject merge into the derivation. At PF, the DP *iskalcev* is obligatorily deleted under near identity with the higher DP *iskalec*. This deletion operation could be due to a Distinctness Condition (as proposed by Richards 2000), which does not allow two items of the same label to be in linearly adjacent at PF.

## 5.5. The Resumptive Pronoun in *kar*-phrases

*Kar*-phrases are distinct from relative clauses, since they are not modifiers of an $N^0$ but rather they are partitive CP complements of a universal quantifier, but they nevertheless have have some characteristics in common with relative clauses. Both

[82]The notion that the superlative adjective bears a special relationship to the CP is also supported by Cinque (2010) who shows that a superlative degree adjective always takes scope over the CP, while a modal adjective may not. Compare the following sentences:

a. Harry is the youngest Gryffindor that will enter the Tri-Wizard Tournament.
b. Harry is the probable Gryffindor that will enter the Tri-Wizard Tournament.

While *youngest* necessarily takes scope over the CP *(Gryffindor) that will enter the Tri-Wizard Tournament*, the same is not true for the modal adjective *probable*, which only takes scope over *Gryffindor*. Many thanks to Edwin Williams for pointing out these supporting data.

contain a gap in their English translations (see sentences (126) and (127)), although the gap is not interpreted in the same way for both. I have suggested that both obligatorily contain a pronoun and a *wh*-operator. In the *kar*-CP, the $C^0$ must be pronounced (i.e. *kar* is unrecoverable and thus cannot be deleted), therefore, the *wh*-operator is invariably silent. The operator checks the definiteness on the pronoun and then can raise into Spec-CP, thereby stranding the pronoun.

## 5.6. The Interaction with Mass Nouns

We have seen above that the pronoun in a *kar*-phrase is always marked as plural. The one apparent exception occurs when the associate $N^0$ is a *mass noun*. Only then can the pronoun occur in the grammatical singular:

(147) Najslabše pivo je, kar sem ga kdaj
worst$_{\text{NOM.NEUT.SG.}}$ beer$_{\text{NOM.NEUT.SG.}}$ is that AUX$_{\text{1st.SG.}}$ it$_{\text{ACC.NEUT.SG.}}$ ever

pila.
drank$_{\text{FEM.SG. PAST}}$

'That is the worst beer that I ever drank (it).' (Chidambaram 2007)

Given the analysis presented so far, there is nothing surprising or inexplicable about this. The superlative prefix *naj-* licenses the *kar*-phrase, which is semantically partitive. But because the quantified noun is a mass noun, the result is that the resumptive pronominal paritive marker occurs in the grammatical singular. The associate of the resumptive pronoun is also the grammatical singular *pivo* '*beer*', however it is semantically plural; i.e., in the CP *kar sem ga kdaj pila*, the understanding is that the speaker has in the past consumed many cans/bottles/glasses of beer and the resumptive pronoun *ga* refers to all

the beer she previously consumed. Of all the beer the speaker has consumed, this particular can/glass/bottle of beer is the worst.

If, however, the speaker wanted to indicate that this particular variety/brand of beer was the worst that she ever drank, the sentence would be:

(148) Najslabše pivo je, kar sem jih kdaj
worst$_{NOM.NEUT.SG.}$ beer$_{NOM.NEUT.SG.}$ is that AUX$_{1st.SG.}$ them$_{ACC.PL.}$ ever

pila.
drank$_{FEM.SG.\ PAST}$

'That is the worst (kind of) beer that I ever drank (them).'
(Chidambaram 2007)

As noted in Chidambaram (2007), this "variety/brand" reading is typical of a pluralized mass noun. When someone mentions *beers*, they often mean types or brands of beer, as opposed to the singular *beer*, which could refer to any quantity of beer and the variety/brand is irrelevant. In (129), the associate of the resumptive pronoun would be *piva$_{ACC.PL.NEUT.}$* '*beers*'.

## 5.7. Languages other than Slovene

Slovene appears to be unique among the world's languages in having an overtly plural resumptive pronoun in clauses selected by a universal quantifier. Many other languages, both related and unrelated to Slovene, employ resumption in relative clauses, but none of them has the option of including an overt plural resumptive pronoun in their equivalents of *kar*-phrases. Interestingly, however, it appears that in many languages that exhibit canonical resumption, the equivalent of *kar*-CPs are precluded from containing any sort of resumptive pronoun at all.

As shown in th previous chapter, Slovak has canonical resumption in relative clauses. Consider the following set of Slovak sentences:

(149) Stíhač, čo ho máme, sa volá Harry
seeker$_{NOM.SG.MASC.}$ that him$_{ACC.SG.MASC.}$ we-have REFL call$_{3rd.SG.PRES.}$ Harry

Potter.
Potter

'The seeker that we have (him) is named Harry Potter.'

(150) Si najlepší stíhač, čo sme *ho
you-are the-best$_{NOM.SG.MASC.}$ seeker$_{NOM.SG.MASC.}$ that AUX$_{1st.PL.}$ *him$_{ACC.PL}$

/*ich kedy mali.
/*them$_{ACC.PL.}$ ever we-had

'You are the best seeker that we have ever had *him/*them.'

(151) Si najlepší stíhač, čo sme kedy mali.
you-are the-best$_{NOM.SG.MASC.}$ seeker$_{NOM.SG.MASC.}$ that AUX$_{1st.PL.}$ ever we-had

'You are the best seeker that we have ever had.'

Sentence (149) contains a relative clause with a resumptive pronoun, which as expected, agrees with its overt antecedent in all φ-features as well as its reference. In other words, *ho* in (149) behaves like a typical resumptive pronoun. Resumptive pronouns in Slovak must fully match the antecedent's feature complex, otherwise the sentence is ungrammatical.

(150) contains the Slovak equivalent of a Slovene superlative followed by a *kar*-phrase. Unlike Slovene, however, Slovak does not license the presence of any pronoun as a resumptive within the clause subordinate to the superlative. Neither a singular pronoun

matching the φ-features and reference of the NP in the higher clause nor a plural pronoun can appear in the embedded CP. The only option is (151), in which there is no resumptive pronoun present.

The inability of the embedded clause in (150) to support resumption offers a few insights and invites many questions. First of all, it reveals that while the embedded CP in (150) and (151) appears similar to the relative clause in (149), the two clauses must be distinct. That is, the embedded clause in (150) and (151) cannot be an ordinary relative clause; if it were, it would license a resumptive pronoun. It is crucial to note that (150) and (1151) include a superlative. This leads to the following hypothesis: perhaps Slovene and Slovak are structurally similar in terms of their superlative licensed CPs but differ only in that Slovene allows a resumptive pronoun to be pronounced when its associate is elided at PF and Slovak does not.

The pronunciation of resumptive pronouns in Slovene is obligatory. In *ki*-phrases in which the resumptive functions as anything but the highest subject, the resumptive pronoun must be pronounced. But in many other languages that exhibit resumption, such as Slovak, the use of resumptives is optional under certain conditions. It follows that Slovene has different requirements for the pronunciation of resumptives than Slovak. It is not entirely surprising, then, that the resumptive pronoun in the Slovene *kar*-phrase is obligatorily pronounced while in the equivalent Slovak phrase it cannot be.

The possibility that, in terms of these *kar*-phrases, Slovak is structurally identical to Slovene in all but its PF, gives rise to the hypothesis that all languages are like Slovene, in spite of their surface differences. If we look again at the English sentences in

(126) and (127), repeated here as (152) and (153), there are noticeable differences in the bracketed clauses, although the PF-string seems, at first, to be the same.

(152) The seeker [that played for Hogwarts] caught the Golden Snitch.

(153) The best seeker [that played for Hogwarts] was Harry Potter.

In section 5.2.3, I showed that these two clauses are semantically distinct, but it seems that there is a significant PF-distinction as well: Their intonational patterns are different[83]. In (152) the intonation of the word *Hogwarts* is high, low-rise. The first syllable is heavily accented, i.e. the pitch and volume are high. The second syllable is pronounced low at the onset and the pitch rises near the coda. In (153) the word *Hogwarts* is unstressed. The first syllable has the same pitch and volume as the rest of the embedded clause. Near the coda of the second syllable, the pitch is slightly raised. Put simply, there is contrastive stress on *Hogwarts* in (152) whereas there is no such contrastive stress on the same word in (153)[84].

The evidence from both the semantics of these phrases and their distinct intonational patterns suggests that in English, as in Slovene and Slovak, the two are not structurally identical. While (152) contains an ordinary relative clause, (153) contains the

[83]I ran an short experiment asking speakers to read these sentences among several other sentences as I recorded them. All six speakers come from the mid-Atlantic region of the United States, and thus are from the same dialect group, which may have some effect on the data. All six speakers gave the same results. The experiment, whose specifics are detailed in Appendix A, was informal and thus its results may be flawed, but given the unanimaty of the findings, it is worth mentioning the results and later conducting a more formal experiment.

[84]As pointed out by E. Wayles Browne, contrastive stress can be placed on the word *Hogwarts* even in the English equivalent of the *kar*-phrase, however the contrast must be set up in the discourse - it is not inherently part of the sentence. The inherent contrast being made in the *kar*-phrase is the contrast between this particular seeker and all other seekers at Hogwarts, not between seekers at Hogwarts and seekers at a different school.

English equivalent of a *kar*-phrase. English, unlike Slovak, does not have resumptive pronouns at PF under any conditions[85], therefore no resumption occurs in the English equivalent of a *kar*-phrase.

5.8. *ki*-relatives with superlative modified DPs

Another apparent problem with the analysis of *kar*-phrases presented here is that Slovene has the option of allowing a DP modified by a superlative to take a *ki*-type relative clause. As mentioned in section 5.1.3, the *ki*-type relative obligatorily includes a resumptive pronoun in any position where resumptives are available (except the highest subject position), but that the resumptive must match its antecedent in all its φ-features. In the previous sections, I claimed that *kar*-phrases are, in fact, no different from *ki*-relatives in this regard but differ from them only insofar as their antecedents are unpronounced; while the antecedent of the resumptive in a *ki*-type relative is obligatorily overt, the antecedent of a resumptive in a *kar*-phrase is obligatorily unpronounced. That aside, the two clause types have a similar structure; the primary distinction is that the *kar*-phrase is an argument of *supA*, while a *ki*-relative is an adjunct of N.

The inevitable question, then, is why sentences like (154) are admissible in Slovene:

(154) Ti si najboljši iskalec, ki smo ga imeli.
you are best$_{NOM.SG.MASC.}$ seeker$_{NOM.SG.MASC.}$ that AUX$_{1st.SG.PRES.}$ him$_{ACC.SG.MASC.}$ had

[85]As mentioned in chapter 1, footnote 2, some speakers of English do employ intrusive pronouns, but these are categorically distinct from resumptives.

'You are the best seeker that we have (him).'

If *kar*-phrases are an argument of supA, a syntactic head which is clearly present in (154), and they obligatorily contain a plural resumptive due to the internal structure and semantics of the *kar*-phrase, what are the structure and semantics of the *ki*-relative in (154)? The solution is suggested by the fact that (155) is also grammatical.

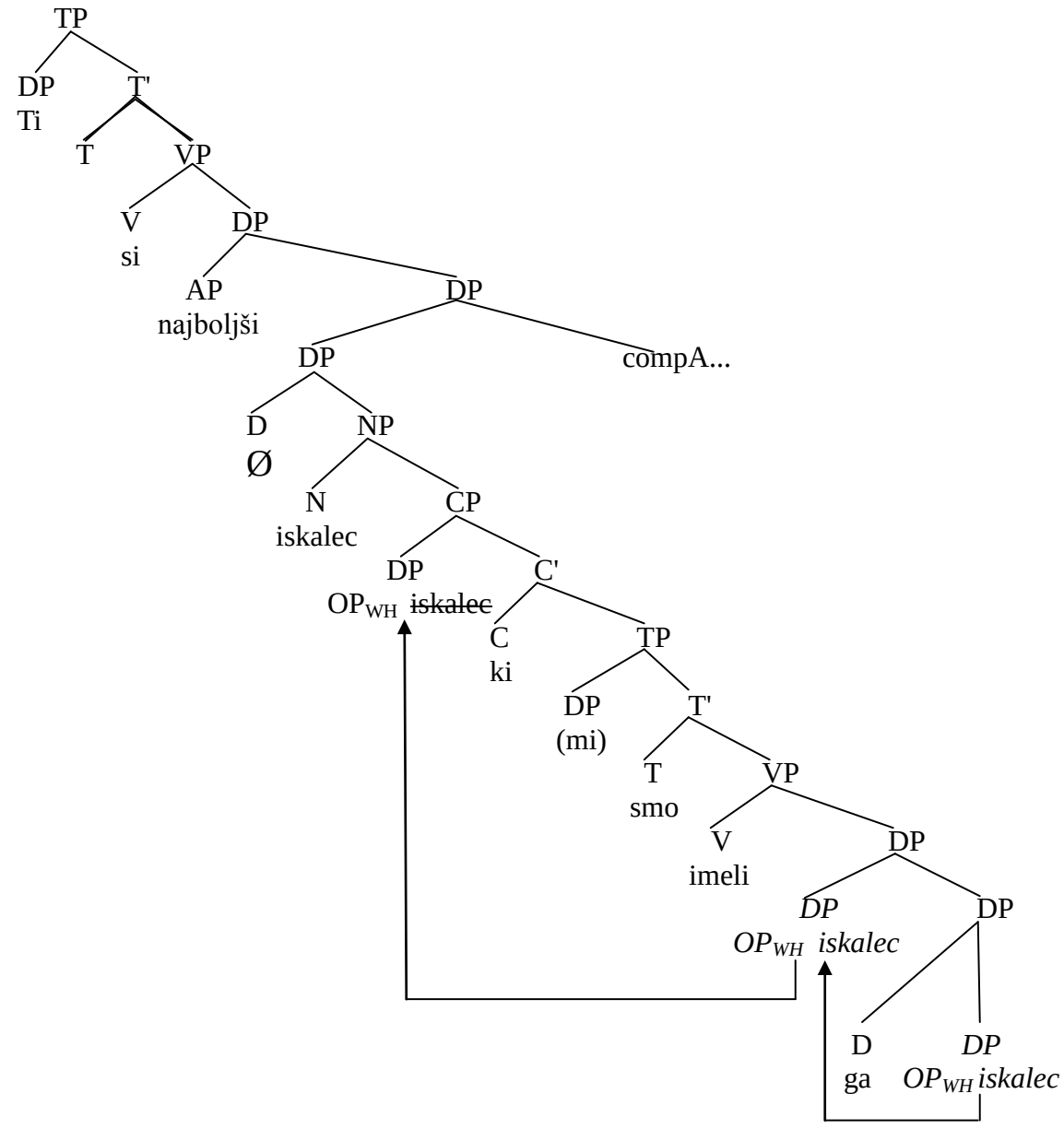
(155) Ti si najboljši iskalec.
you are best$_{\text{NOM.SG.MASC.}}$ seeker$_{\text{NOM.SG.MASC.}}$

'You are the best seeker.'

Given the grammaticality (155), it is clear that the *kar*-phrase is PF-optional: Although at LF there must be a domain over which the superlative quantifies (i.e., a *kar*-phrase must be present at the level of interpretation), there is no need for it to be pronounced.

Thus the answer to the question of what happens when we find a *ki*-relative rather than a *kar*-phrase paired with a superlative is that the *ki*-relative does not replace the *kar*-phrase either in form (as a sister of supA) or in function (as a descriptor of the quantified domain) but rather may occur alongside it, as shown in diagram (44). The *ki*-relative in (154) is, then, no different from any ordinary *ki*-relative and has no special relationship to the superlative degree adjective, whereas the *kar*-phrase has a close relationship (head-complement) with supA. I conclude, therefore, that the derivation of (154) is significantly different from the derivation of (138), in that the *ki*-type relative clause is a canonical relative clause: it is a CP sister to N.

Diagram 44


TP
DP
Ti
T'
T
VP
V
si
DP
AP
najboljši
DP
DP
compA...
D
Ø
NP
N
iskalec
CP
DP
OP$_{WH}$ ~~iskalec~~
C'
C
ki
TP
DP
(mi)
T'
T
smo
VP
V
imeli
DP
*DP*
*OP$_{WH}$ iskalec*
DP
D
ga
*DP*
*OP$_{WH}$ iskalec*

The rest of the derivation (indicated by the ellipsis next to compA) is no different from the one in diagram (43). Slovene allows both the *ki*-relative as well as the *kar*-phrase to be pronounced in a single sentence and they can be pronounced in either order[86].

(156) Ti si najboljši iskalec, ki sem ga osebno
you are the-best seeker that $AUX_{1st.SG.PRES.}$ $him_{ACC.SG.MASC.}$ personally

spoznala, kar smo jih imeli na
$met_{SG.PAST.FEM.}$ that $AUX_{1ST.PL.PRES.}$ $them_{ACC.PL.MASC.}$ $had_{PL.PAST.}$ at

Bradavičarki!
Hogwarts

'You are the best seeker that I have met (him) in person that we have had (them) at Hogwarts!'

(157) Ti si najboljši iskalec, kar smo jih imeli na
you are the-best seeker that $AUX_{1ST.PL.PRES.}$ $them_{ACC.PL.MASC.}$ $had_{PL.PAST.}$ at

Bradavičarki, ki sem ga osebno spoznala!
Hogwarts that $AUX_{1st.SG.PRES.}$ $him_{ACC.SG.MASC.}$ personally $met_{SG.PAST.FEM.}$

'You are the best seeker that we have had (them) at Hogwarts that I have met (him) in person!'

The two syntactic constructions (superlative+*kar*-phrase and superlative+*ki*-relative) have slightly different interpretations, which has to do with contrastive focus: the partitive nature of the *kar*-phrase (i.e., the fact that it inherently contains a comparison domain), makes the *kar*-phrase fundamentally contrastive, whereas the *ki*-relative does not convey strong contrastive focus.

[86]The order shown in (157) is actually preferable to the order shown in (156), even though the order in (156) is the linear order derived in narrow syntax. The reason for this is possibly linked to an issue of information structure; that is, the information is easier to parse when presented in the order shown in (157).

## 5.9. Summary

The clearest and least controversial conclusion drawn in this chapter is that Slovene *kar*-phrases are not the same as ordinary Slovene relative clauses. Given the data alone and without positing any more precise or abstract differences, the claim that the two CPs are different from one another is undeniable. While there are certain similarities between the two constructions, namely, they are both CPs in which *wh*-movement of some DP to Spec-CP is obligatory, the differences between them are significant.

The primary purpose of this chapter was to investigate the properties of the Slovene *kar*-phrase, which is a phrase containing a pronominal element similar to but distinct from a canonical resumptive pronoun, since the pronoun in a *kar*-phrase does not necessarily agree with its overt associate in its number feature. Three natural questions arise: 1) Why is the pronoun in the *kar*-phrase invariably plural?, 2) How does the plurality on the *kar*-phrase pronoun arise?, and 3) Is the *kar*-phrase pronoun a resumptive pronoun? In this chapter, I have answered all of these questions.

In order to answer the first question, we turn to the semantics of the phrase. We find that the semantics of the *kar*-phrase are distinct from those of an ordinary relative clause, and that the *kar*-phrase denotes the class of entities over which the universal quantifier takes scope. In some cases, the universal quantifier is overt, but in many cases, as in superlative degree adjectives, the universal quantifier surfaces as the superlative degree morpheme. It is either the superlative degree morpheme or the universal quantifier that merges with the *kar*-phrase. Because the *kar*-phrase is a partitive CP, the pronoun in it is invariably plural since it is the partitive marker.

The answer to the second question - *how* the plurality of the *kar*-phrase pronoun arises - must lie in the syntax of the phrase. The structure of the *kar*-phrase is similar to that of an ordinary relative clause. The crucial distinction between them is that in a *kar*-CP, the equivalent of the internal relative head DP is not pronounced. The *kar*-phrase is a CP whose head is the invariable/indeclinable C *kar* and which contains an obligatorily plural DP object. The structure of this DP object is the same as the structure which gives rise to canonical resumptive pronouns in ordinary relative clauses; it has the stacked-DP structure including a pronoun, a *wh*-operator, and the pronominal associate. The pronoun is merged as a determiner to the plural DP. The internal DP subsequently raises to Spec-CP of the *kar*-phrase. Following an operation similar to relative deletion, Spec-CP of the *kar*-phrase is obligatorily deleted under near identity with a higher DP. The reasons behind the PF-deletion of the DP Spec-CP are not fully clear; this issue requires further investiagtion.

Nevertheless, it seems that the answer to the third question follows naturally from the answers to the first two questions: the plural pronoun in the *kar*-phrase is indeed a resumptive pronoun whose associate is unpronounced. The *kar*-phrase internal pronoun occurs in the same syntactic environment as a canonical resumptive pronoun; i.e., it merges as a D to its DP associate and must satisfy the Pronominal Reference Condition. The associate raises, thus stranding the pronoun (Boeckx 2003). Given the analysis presented in this chapter, the obligatorily plural pronoun that occurs in the *kar*-phrase is a resumptive pronoun.

Finally, I submit that the Slovene *kar*-phrase is not unique. While its structure does not surface transparently in other languages, both the semantic and phonetic

characteristics of corresponding phrases in other languages suggest that they too are structurally closer to the Slovene *kar*-phrase than to an ordinary relative clause. In this chapter, I have been able to show that, at the very least, these clauses are distinct from ordinary relaive clauses in several languages besides Slovene. In order to prove or disprove this hypothesis (that is, that the structure of all *kar*-phrases cross linguistically is the same), more research must be conducted into the various manifestations of the *kar*-phrase in other languages.

# CONCLUSION

This thesis is a step towards a generalized theory of pronouns. I have developed a theory of pronouns that accounts for the basic binding properties of ordinary pronouns as well as many of the properties of resumptive pronouns. The stacked-DP analysis of pronouns, which combines elements of Boeckx's (2003) analysis of resumptive pronouns and Franks and Rudin's (2005) analysis of clitic doubles, applies to all pronouns. This eliminates one of the chronic problems in previous studies of resumptive pronouns, namely, that resumptive pronouns are treated as lexically and/or syntactically distinct from ordinary pronouns.

The stacked-DP analysis of pronouns is largely based on Freidin and Vergnaud's (2001) analysis of definite pronouns as definite descriptions. From their original concept, I develop a syntactic structure of the pronoun, which is a complex DP, containing the pronoun as a $D^0$ and its definite DP sister, which in turn contains a definite $D^0$ and the pronoun's NP referent.

I present a new strategy for deriving canonical resumptive pronouns that combines the stacked-DP analysis of pronouns with Sauerland's matching model of relative clauses. This analysis differs from all previous analyses of resumptive pronouns and relative clauses in that it introduces the notion that all relative clauses cross-linguistically contain a pronominal element merged at the site of relativization. I advance the possibility that the only difference between languages that have resumptive pronouns and those that do not is that in the latter, the internal DP is of a stacked-DP is inert, i.e., it cannot raise on its own.

I propose two new syntactic rules: a PF deletion rule and an LF interpretation rule. The PF rule is Pronominal Associate Deletion, which deletes the associate of the pronoun at PF when it is sister to the pronominal $D^0$ head. If the associate raises prior to Spell-Out, the conditions for Pronominal Associate Deletion will not be met. This is, ultimately, the source of all resumption. The LF rule I propose is the Pronominal Reference Condition, which forces the co-reference of the pronoun and its associate. Because this rule applies at LF, it is irrelevant whether the associate undergoes movement in the narrow syntax, because the reference can be derived via the relationship of the pronoun and a copy of the associate. In addition to these two rules, I suggest that Relative Deletion is a narrow syntactic operation that deletes any element in the Specifier of a relative CP which takes the external relative head as its antecedent.

These three syntactic requirements (i.e. Relative Deletion, Pronominal Associate Deletion, and the Pronominal Reference Condition) along with the stacked-DP analysis of pronouns and the Sauerland matching model of relative clauses will generate structures containing canonical resumptive pronouns. Furthermore, I show that the three syntactic requirements combined with the stacked-DP analysis can also derive Macedonian clitic-doubling as well as resumptive pronouns at the site of interrogative *wh*-movement. Finally, I also show how this analysis accounts for certain idiosyncratic phenomena, specifically optional deletion of canonical resumptive pronouns in B/C/S and Slovak and resumptive pronouns in superlative clauses (*kar*-phrases) in Slovene.

While the analysis proposed in this thesis accounts for much of the data related to resumption in the Slavic languages, further research is required to show how it accounts for other instances of resumption and how well the stacked-DP analysis can account for

other phenomena related to pronouns (i.e. binding phenomena). The proposal presented here has broad implications: it offers a general structural analysis applying to all definite pronouns and furthermore reduces several phenomena (canonical resumption, clitic-doubling, *wh*-interrogative resumption, superlative clause resumption) to the same basic operations. Precisely because I have attempted to produce a broad analysis, the consequences of my analysis are also necessarily broad; a great deal more research is needed to show how this analysis accounts for all the extensive data to which it is relevant.

# APPENDIX A

**Experiment Title**: The Prosodic Features of the English relative clause vs. the *kar*-phrase[87]

**Objective**: To determine whether there is a difference between the phonetic forms of an English relative clause and the English equivalent of a *kar*-phrase[88].

**Equipment**: Olympus Voice Recorder

**Design**: The participant receives a sheet of paper with 7 sentences. Each sentence is numbered. There are several lines of space between the sentences. The participant is instructed to read each sentence to himself/herself prior to reading the sentence aloud and to wait for two seconds between sentences. The relevant sentences are interspersed with sentences that have no bearing on the experiment so that the participant will not guess at what is being tested. The sentences are randomly ordered.

**Test Subjects**: There are six test subjects: three males and three females. All of them are monolingual native speakers of American English. Two of the subjects (1 male and 1 female) are left-handed. All six live in the Mid-Atlantic region of the United States. They range between the ages of 33 and 70.

[87]This experiment was performed in full compliance with all guidelines required by the Office of Human Subjects Research Protection.
[88]A *kar*-phrase is defined as a CP adjoined to a superlative modified NP. It is a CP possessing the distinctive semantic characteristics of a *kar*-phrase as outlined in section 5.2.3.

**Test Material**: The sentences they were given to read are listed below. The ones that are relevant to the experiment are marked with an asterisk. The sentences were separated from one another by several lines and had no punctuation besides a period at the end of each sentence.

*1) John is the student that I met yesterday.

2) The book that John gave me was *Harry Potter*.

3) The tri-wizard tournament begins tomorrow.

*4) The seeker that played for Hogwarts caught the Golden Snitch.

5) The seeker for Gryffindor is Harry Potter.

*6) John is the smartest student that I met at the conference.

*7) The best seeker that played for Hogwarts was Harry Potter.

**Results**: The clearest results came from comparing the intonation of sentences (4) and (7). For these sentences, and specifically for the intonation on the CP *that played for Hogwarts*, all of the participants followed a similar intonational pattern.

For the CP in sentence (4), the pitch and volume of the word *Hogwarts*, particularly on the first syllable of the word *Hogwarts*, is raised. The second syllable has low rising pitch. The intonation of the same string of words in (7) has noticeably different intonation. The first sylable of *Hogwarts* is spoken at the same pitch and volume as the final syllable of the preceding word - there is no additional stress. The second syllable has low-rising pitch.

**Conclusions**: The term *Hogwarts* in sentence (4) is marked by contrastive stress, while the same term in (7) is not. Thus, the two CPs that appear identical (i.e. *that played for Hogwarts*) are, in fact, distinct both at PF and LF. This suggests that the two actually differ from one another within the narrow syntax; that is they are structurally distinct CPs.

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